

2011-  
2013

# CATALOG





# Welcome to College of DuPage – The Value of a Lifetime



## COLLEGE OF DUPAGE CORE STATEMENTS

- College of DuPage believes in the power of teaching and learning. We endorse the right of each person to accessible and affordable opportunities to learn and affirm the innate value of the pursuit of knowledge and its application to life. Our primary commitment is to facilitate and support student success in learning.
  - College of DuPage is committed to excellence. We seek quality in all that we do. To ensure quality, we are committed to continual assessment and self-evaluation.
  - College of DuPage values diversity. We seek to reflect and meet the educational needs of the residents of our large, multicultural district. We recognize the importance of embracing individual differences and cultures and value the contributions made to the College by people of all ethnic and cultural backgrounds.
- We affirm our role as a catalyst for promoting dialogue and tolerance on issues supporting the common good.
- College of DuPage promotes participation in planning and decision making. We support participatory governance and the involvement of the College community in the development of a shared vision. We believe that all students, staff, and residents can make meaningful contributions within a respectful environment that encourages meaningful discourse. We strive to build an organizational climate in which freedom of expression is defended and civility is affirmed.
  - College of DuPage will be a benefit to students and community. The needs of our students and community are central to all we do.

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## MISSION, VISION AND VALUES

### **Mission**

The mission of College of DuPage is to be a center for excellence in teaching, learning, and cultural experiences by providing accessible, affordable, and comprehensive education.

### **Vision**

College of DuPage will be the primary college district residents choose for high quality education.

### **Values**

#### *Integrity*

We expect the highest standard of moral character and ethical behavior.

#### *Honesty*

We expect truthfulness and trustworthiness.

#### *Respect*

We expect openness to difference and to the uniqueness of all individuals.

#### *Responsibility*

We expect fulfillment of obligations and accountability.



Dr. Robert L. Breuder

## FROM THE PRESIDENT

Welcome to College of DuPage. Since 1967 more than one million people have turned to us for education, job training and cultural enrichment. This remarkable College serves more than 30,000 students every semester, making us the largest single-campus community college in the country outside the state of California and the second largest higher education institution of any kind in the state after University of Illinois-Champaign Urbana.

When students enroll at College of DuPage, they know they will find more than 220 degrees and certificate programs taught in small, personalized classes. Our outstanding faculty and staff are there every step of the way to ensure your time at COD is time well spent.

We have also created myACCESS, a new self-service web application that allows students to register, pay their tuition, view schedules and grades, and check financial aid status. You can find myACCESS at [cod.edu](http://cod.edu).

Rarely has there been a more exciting time to be a student at College of DuPage. Our campus has rapidly expanded with our new cutting edge Health and Science Center, our Technical Education Center, our state-of-the-art Culinary & Hospitality Center and our one-of-a-kind Homeland Security Education Center.

Most recently, our residents showed their commitment to their community college in the form of a \$168 million referendum for continued construction and renovation. This was a humbling gesture of support, and we intend to make good on their investment by continuing to provide one of the most advanced community college experiences in the country.

Whether you are a first-time student seeking an affordable education, in the workforce seeking to improve your job skills, or simply searching for personal enrichment, College of DuPage is truly the best value for your educational investment.

A handwritten signature in black ink, which appears to read "Robert L. Breuder". The signature is written in a cursive style with large, flowing letters.

## BOARD OF TRUSTEES

The Board of Trustees is charged with establishing policy for the financing, governance, operation and administration of College of DuPage. Seven voting members are elected from the district at large and a non-voting student trustee is elected by student referendum during Spring Semester, to serve from April to April. This is one of the truly unique governance experiences available.

Regular Board of Trustee meetings are normally held on the third Thursday of each month. The public is invited to attend the meetings. More information on meeting dates and times is available on the College website: [cod.edu](http://cod.edu).



**Kathy A. Wessel**  
Board Chairman  
Wheaton



**David Carlin**  
Board Vice Chairman  
Naperville



**Sandy Kim**  
West Chicago



**Kim Savage**  
Darien



**Joseph C. Wozniak**  
Naperville



**Allison O'Donnell**  
Winfield

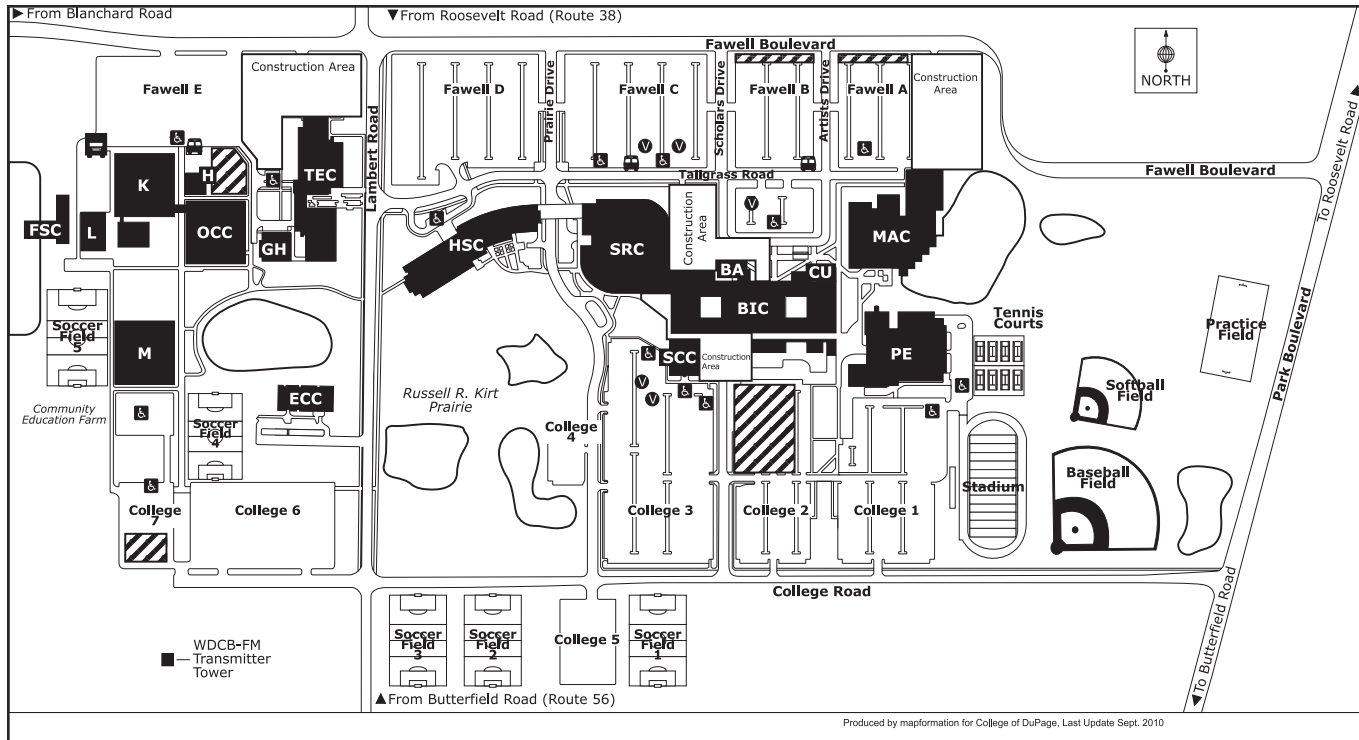


**Nancy Svoboda**  
Downers Grove



**Kristin Lodygowski**  
Student Trustee  
Warrenville

# Glen Ellyn Campus Map and Telephone Guide



**COLLEGE OF DUPAGE .....(630) 942-2800**  
**425 Fawell Boulevard, Glen Ellyn, IL 60137-6599**

(All area codes are 630.)

Admissions and Information .....942-2482  
 Athletic Office .....942-2364  
 Bookstore.....942-2360  
 Cashier .....942-2206  
 Counseling and Advising Services .....942-2259  
 Financial Aid .....942-2251  
 McAninch Arts Center .....942-3008  
 Police Department .....942-2000  
 Records.....942-3838  
 Registration .....942-2377  
 Testing Center .....942-2400

## REGIONAL CENTERS

Addison Center .....942-4600  
 301 S. Swift Road, Addison

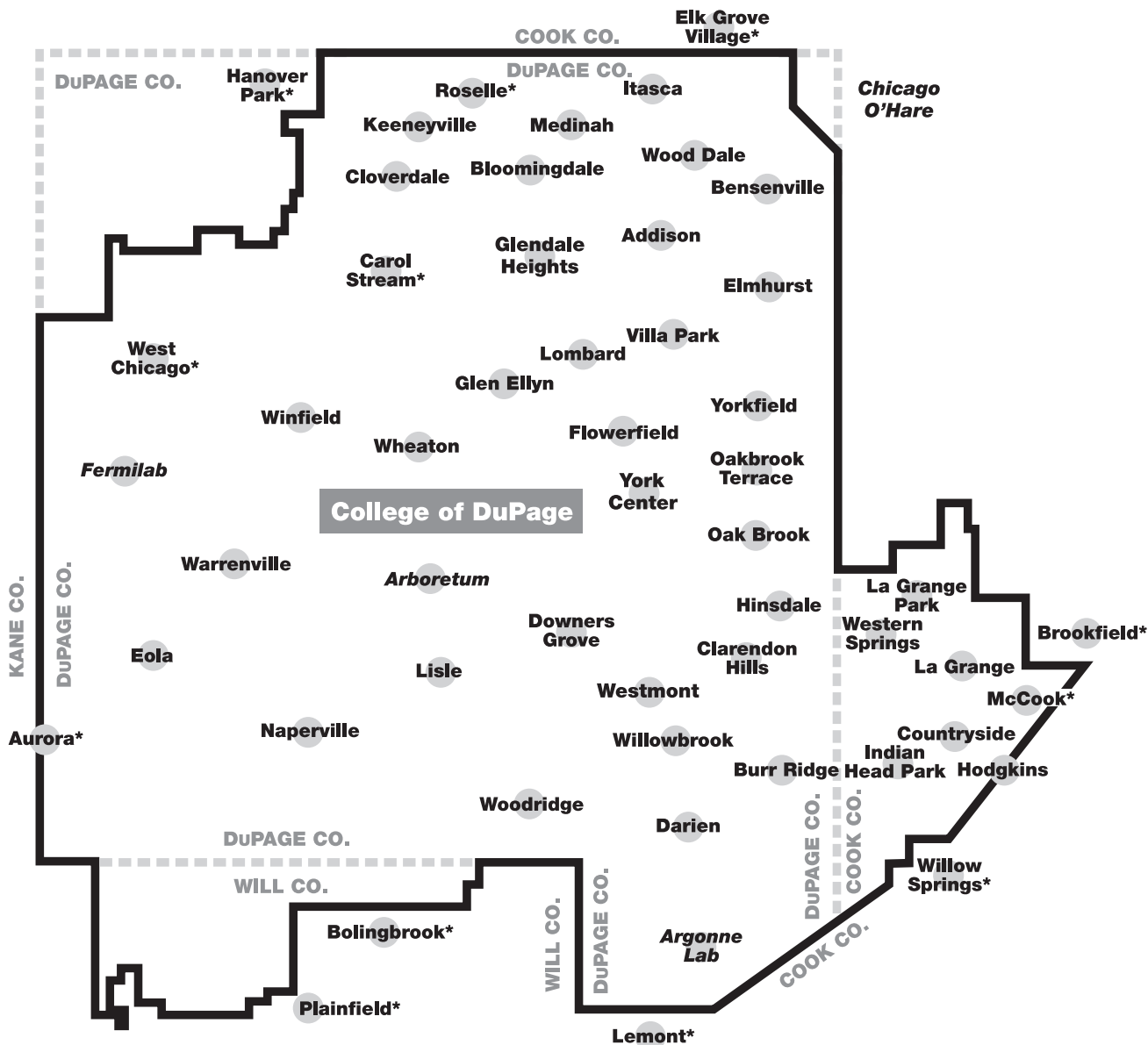
Bloomington Center .....942-4900  
 162 S. Bloomington Road, Bloomington

Carol Stream Center .....942-4888  
 500 N. Kuhn Road, Carol Stream

Naperville Center .....942-4700  
 1223 Rickert Drive, Naperville

West Chicago Center .....231-3348  
 930 E. Roosevelt Road, West Chicago

Westmont Center .....942-4800  
 650 Pasquinelli Drive, Westmont



**———— Community College District**

**- - - - - DuPage County Line**

**\*Only portions of these communities are in District 502.**

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# Calendar 2011-2013

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## FALL SESSION, 2011

Wednesday to Friday, Aug. 17 to 19.....	All Faculty Return / Convocation Days
Monday, Aug. 22.....	16-Week and 1st 8-Week Classes Begin
Monday, Sept. 5.....	Legal Holiday (Labor Day) (No Classes)
Tuesday, Sept. 13.....	12-Week Classes Begin
Monday, Oct. 17.....	End of 1st 8-Week Classes
Tuesday, Oct. 18.....	In-Service Day/Professional Day (No Classes)
Wednesday, Oct. 19.....	2nd 8-Week Classes Begin
Wednesday, Nov. 23.....	College Open; No Classes
Thursday to Sunday, Nov. 24 to 27.....	Thanksgiving Recess
Sunday, Dec. 11.....	End of 12-Week Classes
Saturday to Friday, Dec. 10 to 16.....	Final Evaluations / Culminating Activities
Friday, Dec. 16.....	End of 16-Week and 2nd 8-Week Classes

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## SPRING SESSION, 2012

Monday to Wednesday, Jan. 9 to 11.....	In-Service Days/Professional Days (No Classes)
Thursday, Jan. 12.....	16-Week and 1st 8-Week Classes Begin
Monday, Jan. 16.....	Legal Holiday (M.L. King's Birthday) (No Classes)
Thursday, Feb. 2.....	12-Week Classes Begin
Thursday, March 8.....	End of 1st 8-Week Classes
Friday, March 9.....	In-Service Day/Professional Day (No Classes)
Saturday, March 10.....	2nd 8-Week Classes Begin
Monday to Sunday, April 2 to 8.....	Spring Break
Sunday, April 8.....	No Classes
Thursday, May 3.....	End of 12-Week Classes
Saturday to Friday, May 5 to 11.....	Final Evaluations/Culminating Activities
Friday, May 11.....	End of 16-Week and 2nd 8-Week Classes
Friday, May 11.....	Commencement

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## SUMMER SESSION, 2012

Monday, May 21.....	1st 5-Week and 1st 8-Week Classes Begin
Monday, May 28.....	Legal Holiday (Memorial Day) (No Classes)
Monday, June 4.....	2nd 8-Week Classes Begin
Thursday, June 21.....	End of 1st 5-Week Classes
Monday, June 25.....	2nd 5-Week Classes Begin
Wednesday, July 4.....	Legal Holiday (Independence Day) (No Classes)
Monday, July 16.....	End of 1st 8-Week Classes
Thursday, July 26.....	End of 2nd 8-Week and 2nd 5-Week Classes

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### FALL SESSION, 2012

Wednesday to Friday, Aug. 15 to 17 .....	All Faculty Return / Convocation Days
Monday, Aug. 20 .....	16-Week and 1st 8-Week Classes Begin
Monday, Sept. 3 .....	Legal Holiday (Labor Day) (No Classes)
Tuesday, Sept. 11 .....	12-Week Classes Begin
Monday, Oct. 15 .....	End of 1st 8-Week Classes
Tuesday, Oct. 16 .....	In-Service Day/Professional Day (No Classes)
Wednesday, Oct. 17 .....	2nd 8-Week Classes Begin
Wednesday, Nov. 21 .....	College Open; No Classes
Thursday to Sunday, Nov. 22 to 25 .....	Thanksgiving Recess
Sunday, Dec. 9 .....	End of 12-Week Classes
Saturday to Friday, Dec. 8 to 14 .....	Final Evaluations / Culminating Activities
Friday, Dec. 14 .....	End of 16-Week and 2nd 8-Week Classes

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### SPRING SESSION, 2013

Monday to Wednesday, Jan. 7 to 9 .....	In-Service Days/Professional Days (No Classes)
Thursday, Jan. 10 .....	16-Week and 1st 8-Week Classes Begin
Monday, Jan. 21 .....	Legal Holiday (M.L. King's Birthday) (No Classes)
Thursday, Jan. 31 .....	12-Week Classes Begin
Thursday, March 7 .....	End of 1st 8-Week Classes
Friday, March 8 .....	In-Service Day/Professional Day (No Classes)
Saturday, March 9 .....	2nd 8-Week Classes Begin
Monday to Sunday, March 25 to 31 .....	Spring Break
Sunday, March 31 .....	No Classes
Thursday, May 2 .....	End of 12-Week Classes
Saturday to Friday, May 4 to 10 .....	Final Evaluations/Culminating Activities
Friday, May 10 .....	End of 16-Week and 2nd 8-Week Classes
Friday, May 10 .....	Commencement

---

### SUMMER SESSION, 2013

Monday, May 20 .....	1st 5-Week and 1st 8-Week Classes Begin
Monday, May 27 .....	Legal Holiday (Memorial Day) (No Classes)
Monday, June 3 .....	2nd 8-Week Classes Begin
Thursday, June 20 .....	End of 1st 5-Week Classes
Monday, June 24 .....	2nd 5-Week Classes Begin
Thursday, July 4 .....	Legal Holiday (Independence Day) (No Classes)
Monday, July 15 .....	End of 1st 8-Week Classes
Thursday, July 25 .....	End of 2nd 8-Week and 2nd 5-Week Classes

Please consult the current *Class Schedule* or the college's website for any revisions in the calendar.

\* Refunds for credit classes are based on when a student officially withdraws through the Registration office.  
The refund schedule is printed in the *Class Schedule*.

## ACCREDITATION INFORMATION

*Accredited by*

The Higher Learning Commission; Member, North Central Association of Colleges and Schools  
Academic Quality Improvement Program Participant  
National League for Nursing Accrediting Commission, Inc. (NLNAC)

*Approved by*

Illinois Community College Board  
Illinois Board of Higher Education  
Department of Audit, Vocational and Technical Education  
Illinois Department of Veterans' Affairs

## NON-DISCRIMINATION STATEMENT

The College will not discriminate in its programs and activities on the basis of race, color, religion, creed, national origin, sex, age, ancestry, marital status, sexual orientation, arrest record, military status or unfavorable discharge from military service, citizenship status, use of lawful products while not at work, physical or mental disability or other factors which cannot lawfully be the basis for an employment decision. (Board Policy 15-5)

Non-discrimination applies to all areas of the College, including the following departments: Admissions, Educational Services, Employment, Financial Aid, Placement and Recruitment. The lack of English language skills shall not be a barrier to admission and participation in educational programs. Admissions criteria and descriptions of educational programs are available in the College's printed and online semester Class Schedule and College Catalog.

The following persons have been designated to handle inquiries regarding the non-discrimination policies:

### **Student Inquiries:**

Dean of Student Affairs  
(630) 942-2485

### **Employee and/or Visitor Inquiries:**

Linda Sands-Vankerk  
Vice President, Human Resources/Affirmative Action Officer  
(630) 942-2460  
Fax: (630) 942-4027

### **T.D.D. (Telecommunications Device for the Deaf)**

(630) 858-9692

### **Americans With Disabilities Act accommodations**

(630) 942-2141 (voice)  
(630) 858-9692 (TDD)

## STUDENT RIGHT-TO-KNOW:

### ENROLLMENT, GRADUATION AND TRANSFER

The following provides prospective students, current students and community members with information, facts and figures about College of DuPage. Privacy, right-to-know, crime statistics, special services for disabled students, athletic participation and equity, and other institutional information can be found on the College's website at <http://home.cod.edu/generalInfo/about/yourRight.aspx>.

1. Student Right-to-Know: Enrollment, Graduation and Transfer Rates
2. Campus Crime Statistics
3. Gender Equity in Athletics Programs
4. Privacy of Student Education Records/FERPA
5. Services for Students With Disabilities/Special Student Services
6. Financial Aid
7. Withdrawal Policy
8. Refund Policy
9. Medical Withdrawal
10. Sexual Harassment
11. Non-Discrimination Policy
12. Student Education Records

### **Family Education Rights and Privacy Act (FERPA)**

The Family Educational Rights and Privacy Act of 1974, as amended, sets forth requirements designed to protect the privacy of student education records. FERPA governs (1) release of education records and (2) access to education records. More information regarding this policy can be found on the College's website at <http://home.cod.edu/generalInfo/about/yourRight.aspx>.

### **Drug-Free Environment**

To further the educational aims of the institution, and in accordance with state and federal laws, College of DuPage seeks to improve the educational and work environment in the College and its activities by eliminating drugs in the College.

The use of alcoholic beverages and illegal controlled substances is a major concern on college campuses. There are resources available and current policies at COD regarding the use of drugs and alcohol. The following information is provided in accordance with the Drug-Free Schools and Communities Act (Public Law 101-226) and the Drug-Free Workplace Act (Public Law 100-690) and Board Policy, No. 15-30, Drug and Alcohol Free College.

### **Health Risks**

The consumption of alcohol and drugs at any level may have serious risks. For example: altered mood (anxiety, apathy, paranoia, psychosis); altered behavior (impaired coordination); sleep disorders, addiction; altered breathing and heart rate; communication of infectious disease; distorted senses; unconsciousness leading to coma; and permanent damage to the liver, heart and central nervous system leading to death. For more information, consult a physician or the local or college library.



## ABOUT THE CATALOG

The College *Catalog* is published for informational purposes and provides an overview of educational programs, services, and related requirements at College of DuPage. It is particularly helpful for the academic planning process and individual divisions and offices should be consulted for further information.

The information in the *Catalog* is not an irrevocable contract between the student and the College. The Board of Trustees of College of DuPage reserves the right to change, at any time without notice, the curricula, including course structure and content, graduation requirements, policies and procedures, fees and other charges, and any other matters as may be within its control, notwithstanding any information set forth in this catalog. For the most current version of the *Catalog*, go to [www.cod.edu/Catalog](http://www.cod.edu/Catalog).

## COD AT A GLANCE

### History

On Sept. 25, 1967, College of DuPage opened under the leadership of President Rodney K. Berg and Board of Trustees Chairman George L. Seaton. Classes were held in office trailers and at leased suburban sites throughout the newly formed Community College District 502. Driving from class to class, the students, faculty and staff of this “campus-less” community college became affectionately known as road runners, hence the school’s nickname, “Chaparrals.”

COD’s origins can be traced to two signature events. First was the Illinois General Assembly adoption of the Public Community College Act of 1965. Second was the approval by DuPage high school district voters of a 1965 referendum. Their foresight created a new community college to serve the dynamically growing and prospering DuPage area.

In 1968, a 273-acre Glen Ellyn campus site was acquired, and a year later, three interim buildings were constructed west of Lambert Road. The first permanent building, today’s Berg Instructional Center, opened in 1973. Four years later, the top floor of the BIC was completed. The year 1979 marked the appointment of Harold D. McAninch as COD’s second president, and in 1983 the Student Resource Center (SRC) and Physical Education and Community Recreation Center opened.

Over the next decade, the McAninch Arts Center (1986) and Seaton Computing Center (1990) opened on campus, while new Naperville and Westmont centers (1991) offered an even greater regional presence.

Michael T. Murphy became COD’s third president in 1994. Under President Murphy, COD became America’s largest single-campus community college, a distinction it held through 2003. Today, College of DuPage is the second largest provider of higher education in Illinois and the largest single-campus community college in the nation outside of California.

Capping the 2002 academic year, voters approved a \$183-million bond issue that provided funds for the renovation and rebuilding of the Glen Ellyn campus and several off-campus locations.

The arrival of the College’s fourth president, Dr. Sunil Chand, and the opening of the College’s expanded Bloomingdale Center highlighted 2003. Throughout 2004 and 2005, Chand launched major initiatives for the College’s academic accreditation through the AQIP quality improvement process and curriculum conversion from quarters to semesters that officially began with the Fall 2005 semester.

COD opened its Carol Stream Community Education Center in 2004 and West Chicago Community Education Center in 2005. The year 2006 brought the “Frontier Campus” in Naperville, a

collaboration between COD and Indian Prairie District 204. Year 2007 included completion of the Early Childhood Center, along with construction of efficient new campus roadways and revamped parking lots.

COD in 2008 received a maximum seven-year reaccreditation through the North Central Association of Colleges and Schools Commission on Institutions of Higher Education.

Dr. Robert L. Breuder took over for Interim President Harold McAninch in January 2009, and that summer both the Health and Science Center and Technical Education Center opened on campus. Construction and other physical improvements to the campus, including landscaping and signage, intensified under Dr. Breuder’s leadership, boosted in November 2010 when District 502 voters approved a \$168-million capital referendum initiative.

The funds will be used for construction of the next phase of the Homeland Security Center, and for renovations of the Student Resource Center, McAninch Arts Center and Physical Education Center, among other projects.

The community college district served by College of DuPage has grown significantly over the years. Originally formed from 10 high school districts, District 502 has become the most populous in Illinois, outside of Chicago. More than one million residents from all or part of 51 communities comprise today’s District 502, with boundaries encompassing significant parts of Cook and Will counties, as well as the majority of DuPage County.

College of DuPage’s operating revenue is derived primarily from local taxes, tuition and fees, and state allocations. Special grants from state and federal sources may be acquired, and gifts and grants from foundations and private sources are accepted through the College of DuPage Foundation. COD is recognized by the Illinois Community College Board (ICCB) and governed by a locally elected seven-member Board of Trustees and one elected, non-voting student representative.

Since its humble beginnings in 1967, College of DuPage has grown in breadth and stature to take its place as one of the nation’s finest community colleges.

### Facilities

Located 25 miles west of downtown Chicago at 425 Fawell Blvd., COD’s Glen Ellyn campus included 11 buildings as of spring 2011: the Student Resource Center, Berg Instructional Center, Seaton Computing Center, McAninch Arts Center, Physical Education Center, Early Childhood Center, Health and Science Center, Technical Education Center, Open Campus Center, Building K and Building M.

In 2011, the College was on track to open three new buildings:

- The Culinary & Hospitality Center, a 60,000-square-foot facility housing new and expanded kitchens and bakeshops, two dining facilities, a six-room boutique hotel, culinary amphitheater, culinary market, large meeting rooms, training labs and multimedia center.
- The Homeland Security Education Center, also a 60,000-square-foot building, will include training facilities for Criminal Justice, the Suburban Law Enforcement Academy and Fire Science programs, and high-tech classrooms and unique training labs.
- The Student Services Center, a 65,000-square-foot addition located where the BIC and SRC connect. The new center will act as a front door for the campus, housing such offices as Admissions and Information, Registration, Financial Aid, Counseling and Advising, and Student Life.



# Educational Opportunities

## PROGRAMS OF STUDY FOR COLLEGE CREDIT DEGREES AND CERTIFICATES OFFERED

At press time, degree and certificate information was current. For updates, consult the college website: [www.cod.edu](http://www.cod.edu).

### DEGREES

Nine degrees are granted by College of DuPage:

1. The Associate in Arts degree represents the first two years of study for students who plan to pursue a bachelor's degree in liberal arts.
2. The Associate in Science degree represents the first two years of study for students who plan to pursue a bachelor's degree in science.
3. The Associate in Engineering Science degree is intended for students who wish to prepare for transfer to a baccalaureate-granting school in the field of engineering.
4. The Associate in Applied Science degree represents the completion of study in an occupational/vocational program. Students earning this degree may seek employment following graduation or transfer to a baccalaureate-granting college or university that has articulation agreements with College of DuPage for these programs of study.
5. The Associate in General Studies degree is designed for students who desire to arrange a program of courses to meet their personal interests.
6. The Associate in Fine Arts degree in Art is intended for students who wish to prepare for transfer to a baccalaureate-granting school with a Bachelor in Fine Arts program.
7. The Associate in Fine Arts degree in Music is intended for students who wish to prepare for transfer to a baccalaureate-granting school with a Bachelor in Music program.
8. The Associate in Arts in Teaching Secondary Mathematics is intended for students who wish to prepare for transfer to a baccalaureate-granting school to complete all requirements for a bachelor's degree and teacher certification at the secondary level for mathematics.
9. The Associate in Arts in Teaching Early Childhood Education is intended for students who wish to prepare for transfer to a baccalaureate-granting school to complete all requirements for a bachelor's degree and the Type-04 Teacher Certification for Early Childhood Education.

Degrees are awarded at the close of each semester. However, when a student completes all requirements for a degree, the completion date is recorded on the student's permanent academic record. The requirements for each degree are recommended by the faculty and approved by the president of the College.

### GRADUATION REQUIREMENTS FOR ALL ASSOCIATE'S DEGREES

Students are subject to the degree requirements that are in effect during the academic year in which they originally enroll, as well as subsequent applicable changes. Some state certification programs may require students to be subject to the most current requirements. It is the responsibility of the student to verify the appropriate degree requirements with a program adviser and the Records office. Current degree information is also available on the official College of DuPage website, <http://home.cod.edu/academics/degrees>

Each candidate for a degree shall:

1. Complete at least 64 credits in courses numbered 1000 or above (or equivalent) as specified for each degree.
2. Possess a minimum 2.0 ("C") average in the combined grade point average of all College of DuPage courses numbered 1000 and above and all courses accepted for transfer from other institutions.
3. Complete a minimum of 20 applicable credits toward a degree at College of DuPage, with the final 10 credits at the College.
4. File a petition for Degree/Certificate completion no sooner than one semester before the anticipated completion date. Run a degree audit online to check the status of your progress.
5. Satisfy all financial obligations and other specific requirements.
6. Be in good standing at the time final credits for the degree are earned.

*Note:* Students are subject to degree requirements as stated in the College of DuPage Catalog current at the time of original enrollment, as well as subsequent applicable changes, unless enrollment has been broken for more than three consecutive semesters, including summer semester. When enrollment has been broken for more than three consecutive semesters, the student is subject to degree requirements stated in the College of DuPage Catalog current at the time of re-enrollment.

### ASSOCIATE IN ARTS DEGREE

#### Degree Requirements

(Total Minimum Credits Required: 64)

(A complete list of General Education Core Curriculum transfer courses is available at the Illinois Articulation Initiative website: [www.itransfer.org](http://www.itransfer.org)).

Each candidate for an Associate in Arts (A.A.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. coursework in the Human Relations, Global/ Multicultural Studies, and Contemporary Life Skills categories and
  - c. additional coursework (See Notes at end of A.A. degree) to a minimum of 64 credits.
2. Satisfactorily complete a minimum of 37 credits in General Education Core Curriculum (Illinois Articulation Initiative course codes are listed in parentheses after each course or sequence) in the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories as specified below. (Note: Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....9 credits  
 Written (6 credits) English 1101 (C1 900) and 1102 (C1 901R)  
 (Grade of "C" or higher required for both courses)  
 Oral (3 credits) Speech 1100 (C2 900)  
 (Grade of "C" or higher required)
  - b. **Physical and Life Sciences** .....7 to 10 credits  
 Select one course from Life Sciences and one course from Physical Sciences. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.) At least one course must have a laboratory component.



### Life Sciences

Anatomy and Physiology 1500 (L1 904L), 1551 (L1 904L), 1571 (L1 904L)  
Biology 1100 (L1 900L), 1110 (L1 905L), 1120 (No Lab) (L1 906), 1130 (L1 906L), 1151 (L1 900L)  
Botany 1310 (L1 901L)  
Microbiology 1420 (L1 903L)

### Physical Sciences

Chemistry 1105 (P1 903L), 1211 (P1 902L), 1551 (P1 902L)  
Earth Science 1101 (P1 907L), 1102 (P1 907L), 1110 (P1 905L), 1111 (No Lab) (P1 905), 1115 (P1 905L), 1122 (P1 906L), 1124 (P1 906L), 1126 (P1 906L), 1130 (P1 905L), 1135 (P1 905L), 1140 (P1 905L)  
Physics 1100 (P1 900L), 1201 (P1 900L), 2111 (P2 900L)

### c. Mathematics.....3 to 5 credits

(Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.)  
Mathematics 1218 (M1 904), 1220 (M1 901), 1322 (M1 903), 1533 (M1 906), 1635 (M1 902)\*, 2115 (M1 905), 2134 (M1 900-B), 2231 (M1 900-1), 2232 (M1 900-2), 2233 (M1 900-3)  
Psychology 2280 (M1 902)\*  
Sociology 2205 (M1 902)\*  
(\*Only one from these three courses may count toward overall degree requirement credit.)

### d. Humanities and Fine Arts.....9 credits

Select at least one course from Humanities and at least one course from Fine Arts. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.)

### Humanities

Chinese 2202 (H1 900)  
English 1130 (H3 900), 1150 (H3 901), 1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908)\*, 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)  
French 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
German 2200 (H3 909), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907), 2205 (H2 903N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N)\*, 1110 (HF 906D)\*, 2019 (HF 907D)  
Italian 2202 (H1 900)  
Japanese 2202 (H1 900)  
Korean 2202 (H1 900)  
Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904), 2010 (H4 901), 2011 (H4 902), 1120 (H4 906), 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N)  
Religious Studies 1100 (H5 900), 1110 (H5 901), 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
Russian 2202 (H1 900)  
Spanish 2202 (H1 900), 2206 (H1 900), 2208 (H1 900), 2251 (H1 900), 2252 (H1 900)

### Fine Arts

Art 1100 (F2 900), 2211 (F2 901), 2212 (F2 902), 2213 (F2 902), 2214 (F2 903N)  
English 1135 (F2 908), 1154 (HF 908)\*  
Humanities 1101 (F9 900), 1105 (HF 904N)\*, 1110 (HF 906D)\*  
Music 1100 (F1 900), 1104 (F1 904), 1115 (F1 903N)  
Theater 1100 (F1 907)

*\*Interdisciplinary credit (HF) may be earned as either Fine Arts or Humanities.*

### e. Social and Behavioral Sciences.....9 credits

Courses must be selected from at least two disciplines. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward the degree.)  
Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)  
Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902)  
Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N), 1130 (S4 900N), 1140 (S4 901)  
History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)  
Political Science 1100 (S5 903), 1101 (S5 900), 2203 (S5 905), 2220 (S5 904N)  
Psychology 1100 (S6 900), 2230 (S6 903), 2233 (S6 904), 2235 (S6 905), 2237 (S6 902), 2240 (S8 900)  
Sociology 1100 (S7 900), 1120 (S7 904D), 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)

### 3. Fulfill these requirements in the categories specified

- Complete at least one course from the Human Relations category. Refer to p. 26 for a list.
  - Complete at least one course from the Global/Multicultural Studies category. Refer to p. 26 for a list.
  - Complete at least one course from the Contemporary Life Skills category. Refer to p. 26 for a list.
- Select courses to complete the minimum required 64 credits from General Education Core Curriculum courses, elective courses (refer to p. 27), and up to 10 credits in occupational/vocational courses to a maximum of 10 credits.
  - Satisfy graduation requirements for all associate's degrees (refer to p. 13).
  - Earn no more than 6 credits in History in the Humanities and Fine Arts, and Social and Behavioral Sciences categories combined for general education credit. Additional credits in History from general education or other categories may be earned as elective credit, unless restricted by degree requirements.
  - Earn no more than 4 credits in Physical Education activity courses.
  - Only one of the following courses may count toward the degree: Mathematics 1428 or Mathematics 1431.
  - Earn no more than 16 credits in courses numbered 1800 or 2800, 1840 or 2840, 1820 to 1829, and 2820 to 2829, or labeled as independent study, experimental/pilot, selected topics or field/experiential.
  - Earn no more than 12 credits with a satisfactory/fail grade option in courses counted toward elective credit.
  - Earn General Education Core Curriculum course credit with letter grades, not satisfactory/fail grades.

12. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.
13. Earn the remaining credits in courses that normally apply to a bachelor's degree as indicated in the transfer program guides.

*Notes:* For help in choosing additional coursework beyond the General Education Core to fulfill this degree, students should consult a faculty adviser from their area of interest for suggestions regarding course selection from the range of offerings in a specific field of study.

There is no guarantee that elective or occupational/vocational courses will transfer as specific course equivalents to a baccalaureate-granting institution or other colleges. The transferability of these courses needs to be validated with a transfer institution.

Degree-seeking students should complete the General Education Core Curriculum and required sequence courses before transfer to another participating IAI institution to guarantee the completion of lower division general education coursework.

## ASSOCIATE IN SCIENCE DEGREE

### Degree Requirements

(Total Minimum Credits Required: 64)

(A complete list of General Education Core Curriculum transfer courses is available at the Illinois Articulation Initiative website: [www.itransfer.org](http://www.itransfer.org)).

Each candidate for an Associate in Science (A.S.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. coursework in the Human Relations and Global/ Multicultural Studies or Contemporary Life Skills categories,
  - c. additional mathematics and science requirements, and
  - d. additional coursework

(See Notes at end of A.S. degree) to a minimum of 64 credits.
2. Satisfactorily complete a minimum of 37 credits in General Education Core Curriculum (Illinois Articulation Initiative course codes are listed in parentheses after each course or sequence) in the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories as specified below. (Note: Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....9 credits  
 Written (6 credits) English 1101 (C1 900) and 1102 (C1 901R)  
 (Grade of "C" or higher required for both courses)  
 Oral (3 credits) Speech 1100 (C2 900)  
 (Grade of "C" or higher required)
  - b. **Physical and Life Sciences** .....7 to 10 credits  
 Select one course from Life Sciences and one course from Physical Sciences. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.) At least one course must have a laboratory component.

### Life Sciences

Anatomy and Physiology 1500 (L1 904L), 1551 (L1 904L), 1571 (L1 904L)  
 Biology 1100 (L1 900L), 1110 (L1 905L), 1120 (No Lab) (L1 906), 1130 (L1 906L), 1151 (L1 900L)  
 Botany 1310 (L1 901L)  
 Microbiology 1420 (L1 903L)

### Physical Sciences

Chemistry 1105 (P1 903L), 1211 (P1 902L), 1551 (P1 902L)  
 Earth Science 1101 (P1 907L), 1102 (P1 907L), 1110 (P1 905L), 1111 (No Lab) (P1 905), 1115 (P1 905L), 1122 (P1 906L), 1124 (P1 906L), 1126 (P1 906L), 1130 (P1 905L), 1135 (P1 905L), 1140 (P1 905L)  
 Physics 1100 (P1 900L), 1201 (P1 900L), 2111 (P2 900L)

### c. Mathematics .....3 to 5 credits

(Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.)

Mathematics 1218 (M1 904), 1220 (M1 901), 1322 (M1 903), 1533 (M1 906), 1635 (M1 902)\*, 2115 (M1 905), 2134 (M1 900-B), 2231 (M1 900-1), 2232 (M1 900-2), 2233 (M1 900-3),  
 Psychology 2280 (M1 902)\*  
 Sociology 2205 (M1 902)\*

\* Only one from these three courses may count toward overall degree requirement credit.

### d. Humanities and Fine Arts .....9 credits

Select at least one course from Humanities and at least one course from Fine Arts. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.)

### Humanities

Chinese 2202 (H1 900)  
 English 1130 (H3 900), 1150 (H3 901), 1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908)\*, 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)  
 French 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
 German 2200 (H3 909), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
 History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907), 2205 (H2 903N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
 Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N)\*, 1110 (HF 906D)\*, 2019 (HF 907D)  
 Italian 2202 (H1 900)  
 Japanese 2202 (H1 900)  
 Korean 2202 (H1 900)  
 Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904), 2010 (H4 901), 2011 (H4 902), 1120 (H4 906), 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N)  
 Religious Studies 1100 (H5 900), 1110 (H5 901), 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
 Russian 2202 (H1 900)  
 Spanish 2202 (H1 900), 2206 (H1 900), 2208 (H1 900), 2251 (H1 900), 2252 (H1 900)

*Fine Arts*

- Art 1100 (F2 900), 2211 (F2 901), 2212 (F2 902), 2213 (F2 902), 2214 (F2 903N)
- English 1135 (F2 908), 1154 (HF 908)\*
- Humanities 1101 (F9 900), 1105 (HF 904N)\*, 1110 (HF 906D)\*
- Music 1100 (F1 900), 1104 (F1 904), 1115 (F1 903N)
- Theater 1100 (F1 907)

*\*Interdisciplinary credit (HF) may be earned as either Fine Arts or Humanities.*

**e. Social and Behavioral Sciences** .....9 credits

Courses must be selected from at least two disciplines. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward the degree.)

- Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)
- Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902)
- Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N), 1130 (S4 900N), 1140 (S4 901)
- History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)
- Political Science 1100 (S5 903), 1101 (S5 900), 2203 (S5 905), 2220 (S5 904N)
- Psychology 1100 (S6 900), 2230 (S6 903), 2233 (S6 904), 2235 (S6 905), 2237 (S6 902), 2240 (S8 900)
- Sociology 1100 (S7 900), 1120 (S7 904D), 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)

**3. Fulfill these requirements in the categories specified**

- a. Complete at least one course from the Human Relations category. Refer to p. 26 for a list.
- b. Complete at least one course from the Global/Multicultural Studies or Contemporary Life Skills category. Refer to p. 26 for a list.

**4. Additional Mathematics and Science Requirements**

Select at least two courses from Physical and Life Sciences, and at least one course from Mathematics.

**a. Physical and Life Sciences**

Select at least two courses with a minimum total of 6 credits.

- Anatomy and Physiology 1551, 1571, 1552, 1572
- Biology 1130\*, 1140, 1151\*, 1152, 2150, 2151
- Botany 1320, 2350, 2360
- Microbiology 1420\*
- Zoology 1220, 2250, 2260
- Chemistry 1137, 1212, 2213, 1552, 2551, 2552
- Earth Science 1101\*, 1102\*, 1110\*, 1111\*, 1115\*, 1116, 1117, 1122\*, 1124\*, 1126\*, 1130\*, 1135\*, 1140\*, 2102, 2103, 2110, 2115, 2116, 2117
- Physics 1202, 2111\*, 2112, 2115

**b. Mathematics**

Select at least one course with a minimum total of 3 credits.

- Mathematics 1218,\* 1220\*, 1321, 1322\*, 1340, 1428, 1431, 1432, 1533\*, 1635\*, 2115\*, 2134\*, 2231\*, 2332\*, 2233\*, 2245, 2270, 2300

(\*Courses also meet general education requirements. If any of these courses is chosen to fulfill requirements for the General Education Core Curriculum, choose others to meet the Additional Mathematics and Science Requirements.)

Select courses to complete the required 64 credits from General Education Core Curriculum courses, elective courses (refer to p. 27), and up to 10 credits in occupational/vocational courses.

- 5. Satisfy graduation requirements for all associate's degrees (refer to p. 13).
- 6. Earn no more than 6 credits in History in the Humanities and Fine Arts, and Social and Behavioral Sciences categories combined for general education credit. Additional credits in History from general education or other categories may be earned as elective credit, unless restricted by degree requirements.
- 7. Earn no more than 4 credits in Physical Education activity courses.
- 8. Only one of the following courses may count toward the degree: Mathematics 1428 or Mathematics 1431.
- 9. Complete a minimum of two courses with a minimum of 6 credits in Physical and Life Sciences from the Additional Mathematics and Science Requirements category.
- 10. Complete a minimum of one course with a minimum of 3 credits in Mathematics from the Additional Mathematics and Science Requirements category.
- 11. Earn no more than 16 credits in courses numbered 1800 or 2800, 1840 or 2840, 1820 to 1829, and 2820 to 2829, or labeled as independent study, experimental/pilot, selected topics or field/experiential.
- 12. Earn no more than 12 credits with a satisfactory/fail grade option in courses counted toward elective credit.
- 13. Earn General Education Core Curriculum course credit with letter grades, not satisfactory/fail grades.
- 14. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.
- 15. Earn the remaining credits in courses that normally apply to a bachelor's degree as indicated in the transfer program guides.

*Notes:* For help in choosing additional coursework beyond the General Education Core to fulfill this degree, students should consult a faculty adviser from their area of interest for suggestions regarding course selection from the range of offerings in a specific field of study.

There is no guarantee that elective or occupational/vocational courses will transfer as specific course equivalents to a baccalaureate-granting institution or other colleges.

The transferability of these courses needs to be validated with a transfer institution.

Degree-seeking students should complete the General Education Core Curriculum and required sequence courses before transfer to another participating IAI institution to guarantee the completion of lower division general education coursework.



**ASSOCIATE IN ENGINEERING SCIENCE DEGREE****Degree Requirements**

(Total Minimum Credits Required: 68)

Students should check with an Engineering adviser at College of DuPage and consult the Transfer Guide at <http://home.cod.edu/academics/programsDegrees/engineering/engintrans/engintrans.aspx>

Each candidate for an Associate in Engineering Science (A.E.S.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. essential prerequisite courses,
  - c. engineering specialty courses, and
  - d. elective courses.

to a minimum of 68 credits.
2. **General Education Core Courses** .....9 to 18 credits.  
(Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....6 credits  
Written (6 credits) English 1101 (C1 900) and 1102 (C1 901R)  
(Grade of "C" or higher required in both courses)
  - b. **Humanities and Fine Arts** .....0 to 9 credits  
(Choose courses with different IAI codes.)  
*Humanities*  
Chinese 2202 (H1 900)  
English 1130 (H3 900), 1150 (H3 901), 1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908)\*, 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)  
French 2202 (H1 900), 2251 (H1 900), 2252 (H1 900),  
German 2200 (H3 909), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900),  
History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907), 2205 (H2 903N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N)\*, 1110 (HF 906D)\*, 2019 (HF 907D)  
Italian 2202 (H1 900)  
Japanese 2202 (H1 900)  
Korean 2202 (H1 900)  
Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904), 2010 (H4 901), 2011 (H4 902), 1120 (H4 906), 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N)  
Religious Studies 1100 (H5 900), 1110 (H5 901), 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
Russian 2202 (H1 900)  
Spanish 2202 (H1 900), 2206 (H1 900), 2208 (H1 900), 2251 (H1 900), 2252 (H1 900)
  - Fine Arts*  
Art 1100 (F2 900), 2211 (F2 901), 2212 (F2 902), 2213 (F2 902), 2214 (F2 903N)  
English 1135 (F2 908), 1154 (HF 908)\*  
Humanities 1101 (F9 900), 1105 (HF 904N)\*, 1110 (HF 906D)\*  
Music 1100 (F1 900), 1104 (F1 904), 1115 (F1 903N)  
Theater 1100 (F1 907)

*\*Interdisciplinary credit may be earned as either Fine Arts or Humanities.*

- c. **Social and Behavioral Sciences**.....0 to 9 credits  
(Choose courses with different IAI codes.)  
Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)  
Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902)  
Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N), 1130 (S4 900N), 1140 (S4 901)  
History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)  
Political Science 1100 (S5 903), 1101 (S5 900), 2203 (S5 905), 2220 (S5 904N)  
Psychology 1100 (S6 900), 2230 (S6 903), 2233 (S6 904), 2235 (S6 905), 2237 (S6 902), 2240 (S8 900)  
Sociology 1100 (S7 900), 1120 (S7 904D), 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)
3. **Essential Prerequisite Courses**.....36 to 40 credits
  - a. **Mathematics**.....18 credits  
2231 (M1 900-1), 2232 (M1 900-2), 2233 (M1 900-3), 2270
  - b. **Chemistry**.....5 credits  
1551 (P1 902L)
  - c. **Physics** .....10 credits  
2111 (P2 900L) and 2112
  - d. Optional: Physics 2115 .....0 or 4 credits
  - e. **Computer Information Systems** .....3 credits  
2480 or 2485
4. **Engineering Specialty Courses**.....8 to 23 credits  
*Engineering*  
Choose from 1101, 2201, 2202, 2203, 2205, 2210, 2213  
*Other Sciences*  
Biology 1151 (L1 900L)  
Chemistry 1552, 2551, 2552
5. Select remaining elective courses from IAI General Education, Essential Prerequisite Courses and Engineering Specialty Courses to 68 credits.
6. Satisfy graduation requirements for all associate's degrees (refer to p. 13).
7. Earn no credit with a satisfactory/fail grade option.
8. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.

*Notes:* Courses listed under Essential Prerequisite Courses and Engineering Specialty Courses, as well as the A.E.S. degree, will transfer from COD based on criteria set by each baccalaureate-granting institution. Check with an Engineering adviser both at College of DuPage and your transfer institution.

See an Engineering adviser for the appropriate choices in Humanities, Social and Behavioral Sciences, and Fine Arts for transfer to your chosen program.

Students should complete entire course sequences in calculus and physics at the same school before transfer, since topics are covered in different orders by different schools.

Biology may be required for Bio-Engineering majors. See an Engineering adviser for help in choosing the correct biology course.

## ASSOCIATE IN APPLIED SCIENCE DEGREE

### Degree Requirements

(Total Minimum Credits Required: 64)

Each candidate for an Associate in Applied Science (A.A.S.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. coursework in the Global/Multicultural Studies or Contemporary Life Skills category,
  - c. specific program occupational/vocational required courses, and
  - d. additional coursework if necessaryto a minimum of 64 credits, but due to external licensure and certification, programs may require more than 64 credits. A list of Applied Science degree options can be found in the Associate in Applied Science section of the *Catalog* starting on p. 33.
2. Satisfactorily complete a minimum of 18 credits in general education courses as specified below. (Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....6 credits  
Written (3 credits) English 1101 or 1105  
Oral (3 credits) Speech 1100, 1120 or 1150
  - b. **Physical and Life Sciences** .....3 to 5 credits  
Refer to p. 26 for a list of specific areas in this category. Select at least one course with a laboratory component.
  - c. **Mathematics** .....3 to 5 credits  
Select a minimum of 3 credits (1000 level or above). Select Mathematics 1102, 1104 or 1120 only where required in the degree program. Only one from the following three courses may count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or Mathematics 1431.
  - d. **Humanities and Fine Arts** .....3 credits  
Refer to p. 26 for a list of specific areas in this category.
  - e. **Social and Behavioral Sciences** .....3 credits  
Refer to p. 26 for a list of specific areas in this category.
3. Complete at least 2 credits from the list of courses in the Global/Multicultural Studies or Contemporary Life Skills category. Refer to p. 26 for lists.
4. The minimum number of program-specific credits required for an A.A.S. degree varies with each program, but must total at least 20 credits.
5. Satisfy graduation requirements for all associate's degrees (refer to p. 13).
6. Earn no more than 16 credits in courses numbered 1800 or 2800, 1840 or 2840, 1820 to 1829, and 2820 to 2829, or labeled as independent study, experimental/pilot, selected topics or field/experiential.
7. Earn no more than 4 credits in Physical Education activity courses.
8. Earn no more than 12 credits with a satisfactory/fail grade option.
9. Earn no more than 42 credits by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.

## ASSOCIATE IN FINE ARTS — ART

### Degree Requirements

(Total Minimum Credits Required: 67)

Each candidate for an Associate in Fine Arts — Art degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. coursework in the Human Relations and Global/Multicultural Studies or Contemporary Life Skills categories, and
  - c. specific program required courses and studio electivesto a minimum of 67 credits.
2. Satisfactorily complete a minimum of 32 credits in general education courses as specified below. (Note: Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....9 credits  
Written (6 credits) English 1101 (C1 900), 1102 (C1 901R) (Grade of "C" or higher required in both courses.)  
Oral (3 credits) Speech 1100 (C2 900) (Grade of "C" or higher required.)
  - b. **Physical and Life Sciences** .....7 to 10 credits  
Select one course from Life Sciences and one course from Physical Sciences. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward the degree.)  
  
At least one course must have a laboratory component. Students with sufficient preparation may select from IAI science majors courses. Check with [www.itransfer.org](http://www.itransfer.org). A minimum of eight credits must be selected from the following list:  
  
*Life Sciences*  
Anatomy and Physiology 1500 (L1 904L), 1551 (L1 904L), 1571 (L1 904L)  
Biology 1100 (L1 900L), 1110 (L1 905L), 1120 (No Lab) (L1 906), 1130 (L1 906L), 1151 (L1 900L)  
Botany 1310 (L1 901L)  
Microbiology 1420 (L1 903L)  
  
*Physical Sciences*  
Chemistry 1105 (P1 903L), 1211 (P1 902L), 1551 (P1 902L)  
Earth Science 1101 (P1 907L), 1110 (P1 905L), 1111 (No Lab) (P1 905), 1115 (P1 905L), 1122 (P1 906L), 1124 (P1 906L), 1126 (P1 906L), 1130 (P1 905L), 1135 (P1 905L), 1140 (P1 905L)  
Physics 1100 (P1 900L), 1201 (P1 900L), 2111 (P2 900L)
  - c. **Mathematics** .....3 to 5 credits  
Mathematics 1218 (M1 904), 1220 (M1 901), 1533 (M1 906), 1635 (M1 902)\*, 2115 (M1 905), 2134 (M1 900-B), 2231 (M1 900-1), 2232 (M1 900-2), 2233 (M1 900-3)  
Psychology 2280 (M1 902)\*  
Sociology 2205 (M1 902)\*  
  
(\*Only one from these three courses may count toward overall degree requirement credit. Mathematics 1322 may not be used to meet this requirement.)
  - d. **Humanities and Fine Arts** .....6 credits  
(Select at least one course from Humanities and the required Fine Arts course.)  
*Humanities*  
Chinese 2202 (H1 900)  
English 1130 (H3 900), 1150 (H3 901), 1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908), 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)

French 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
 German 2200 (H3 909), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
 History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907), 2205 (H2 903N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
 Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N), 1110 (HF 906D), 2019 (HF 907D)  
 Italian 2202 (H1 900)  
 Japanese 2202 (H1 900)  
 Korean 2202 (H1 900)  
 Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904), 2010 (H4 901), 2011 (H4 902), 1120 (H4 906), 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N)  
 Religious Studies 1100 (H5 900), 1110 (H5 901), 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
 Russian 2202 (H1 900)  
 Spanish 2202 (H1 900), 2206 (H1 900), 2208 (H1 900), 2251 (H1 900), 2252 (H1 900)

*Fine Arts*

Art 2214 (F2 903N)

e. **Social and Behavioral Sciences**.....6 credits

(Choose courses with different IAI codes from two different subjects.)

Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)

Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902)

Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N), 1130 (S4 900N)

History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)

Political Science 1100 (S5 903), 1101 (S5 900), 2203 (S5 905), 2220 (S5 904N)

Psychology 1100 (S6 900), 2230 (S6 903), 2233 (S6 904), 2235 (S6 905), 2237 (S6 902), 2240 (S8 900)

Sociology 1100 (S7 900), 1120 (S7 904D), 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)

3. a. Complete at least one course from the Human Relations category. Refer to p. 26 for a list.
- b. Complete at least one course from the Global/Multicultural Studies or Contemporary Life Skills category. Art 2214 meets the Global/Multicultural Studies requirement and is required for Art majors.
4. Satisfactorily complete a minimum of 36 credits in Art requirements as specified below:
  - a. **Art History** .....9 credits  
 Art 2211, 2212, 2213  
 (Complete the Art History sequence at College of DuPage before transfer.)
  - b. **Art Core Courses**.....15 credits  
 Art 1101, 1102, 2201, 1151, 1152  
 (Complete the Art Core courses before enrolling in media-specific courses.)
  - c. **Media-Specific Studio Electives**.....9 credits  
 (Select courses from at least two media in consultation with an Art program adviser. A portfolio review usually is required for transfer.)  
 Art 2221 and Art 2222;2241 and 2242; 2231 and 2232;2275 and 2276; 2251 and 2252; 2266 and 2267  
 Graphic Design 1107 and 1108  
 Photo 1100 and 1102
  - d. An additional Art elective at the 2000 level of 3 credits

5. Complete all requirements for all associate's degrees, including the A.F.A., with a minimum of 67 credits.
6. Earn no more than 6 credits in History in the Humanities and Fine Arts, and Social and Behavioral Sciences categories combined for general education credit.
7. Earn no credit with a satisfactory/fail grade option.
8. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.

*Notes:* Although designed to meet transfer requirements, the A.F.A. degree may not complete the requirements of the Illinois Articulation Initiative (IAI) General Education Core Curriculum for lower division general education requirements at participating schools.

Students will need to fulfill the General Education requirements of the school to which they transfer. Transfer admission is competitive. Completion of the A.F.A. does not guarantee admission either to a baccalaureate program or to upper division art courses. Students may be required to demonstrate their skill level through audit, placement test or portfolio review. Most schools require a portfolio review for admission to a bachelor in fine arts program, for registration in a second studio course in a medium, and/or for scholarship consideration. Students are encouraged to complete the A.F.A. degree prior to transferring.

## ASSOCIATE IN FINE ARTS DEGREE — MUSIC

### Degree Requirements

(Total Minimum Credits Required: 64)

Each candidate for an Associate in Fine Arts — Music degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. coursework in the Human Relations and Global/Multicultural Studies or Contemporary Life Skills categories, and
  - c. specific program required courses
 to a minimum of 64 credits.
2. Satisfactorily complete a minimum of 29 credits in General Education Core Curriculum (Illinois Articulation Initiative course codes are listed in parentheses after each course or sequence) in the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories as specified below. (Note: Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....9 credits  
 Written (6 credits) English 1101 (C1 900) and 1102 (C1 901R) (Grade of "C" or higher required for both courses.)  
 Oral (3 credits) Speech 1100 (C2 900) (Grade of "C" or higher required.)
  - b. **Physical and Life Sciences** .....8 to 10 credits  
 Select one course from Life Sciences and one course from Physical Sciences. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward the degree.)  
 At least one course must have a laboratory component.

Students with sufficient preparation may select from IAI science majors courses. Check with [www.itransfer.org](http://www.itransfer.org).

A minimum of 8 credits must be selected from the following list:

*Life Sciences*

Anatomy and Physiology 1500 (L1 904L), 1551 (L1 904L), 1571 (L1 904L)  
 Biology 1100 (L1 900L), 1110 (L1 905L), 1120 (No Lab) (L1 906), 1130 (L1 906L), 1151 (L1 900L)  
 Botany 1310 (L1 901L)  
 Microbiology 1420 (L1 903L)

*Physical Sciences*

Chemistry 1105 (P1 903L), 1211 (P1 902L), 1551 (P1 902L)  
 Earth Science 1101 (P1 907L), 1110 (P1 905L), 1111 (No Lab) (P1 905), 1115 (P1 905L), 1122 (P1 906L), 1124 (P1 906L), 1126 (P1 906L), 1130 (P1 905L), 1135 (P1 905L), 1140 (P1 905L)  
 Physics 1100 (P1 900L), 1201 (P1 900L), 2111 (P2 900L)

**c. Mathematics.....3 to 5 credits**

Mathematics 1218 (M1 904), 1220 (M1 901), 1533 (M1 906), 1635 (M1 902)\*, 2115 (M1 905), 2134 (M1 900-B), 2231 (M1 900-1), 2232 (M1 900-2), 2233 (M1 900-3)  
 Psychology 2280 (M1 902)\*  
 Sociology 2205 (M1 902)\*

(\*Only one from these three courses may count toward overall degree requirement credit. Mathematics 1322 may not be used to meet this requirement.)

**d. Humanities and Fine Arts.....6 credits**

(Select at least one course from Humanities and at least one course from Fine Arts with different IAI codes.)

*Humanities*

Chinese 2202 (H1 900)  
 English 1130 (H3 900), 1150 (H3 901), 1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908)\*, 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)  
 French 2202 (H1 900), 2251(H1 900), 2252 (H1 900)  
 German 2200 (H3 909), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
 History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907), 2205 (H2 903N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
 Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N)\*, 1110 (HF 906D)\*, 2019 (HF 907D)  
 Italian 2202 (H1 900)  
 Japanese 2202 (H1 900)  
 Korean 2202 (H1 900)  
 Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904), 2010 (H4 901), 2011 (H4 902), 1120 (H4 906), 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N),  
 Religious Studies 1100 (H5 900), 1110 (H5 901), 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
 Russian 2202 (H1 900)  
 Spanish 2202 (H1 900), 2206 (H1 900), 2208 (H1 900), 2251 (H1 900), 2252 (H1 900)

*Fine Arts*

Art 1100 (F2 900), 2211 (F2 901), 2212 (F2 902), 2213 (F2 902), 2214 (F2 903N)  
 English 1135 (F2 908), 1154 (HF 908)\*  
 Humanities 1101 (F9 900), 1105 (HF 904N)\*, 1110 (HF 906D)\*  
 Theater 1100 (F1 907)

*\*Interdisciplinary credit may be earned as either Fine Arts or Humanities. No Music courses may fulfill this requirement.*

**e. Social and Behavioral Sciences.....3 credits**

Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)  
 Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902)  
 Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N), 1130 (S4 900N)  
 History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)  
 Political Science 1100 (S5 903), 1101 (S5 900), 2203 (S5 905), 2220 (S5 904N)  
 Psychology 1100 (S6 900), 2230 (S6 903), 2233 (S6 904), 2235 (S6 905), 2237 (S6 902), 2240 (S8 900)  
 Sociology 1100 (S7 900), 1120 (S7 904D), 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)

3. a. Complete one course from the Human Relations category Refer to p. 26 for a list.  
 b. Complete one course from the Contemporary Life Skills or Global/Multicultural Studies category. Refer to p. 26 for lists.
4. Satisfactorily complete a minimum of 35 credits in Music requirements as specified below:
  - a. **Music Core Courses.....20 credits**  
 Music 1101 + 1107 + 1171, 1102 + 1108 + 1172, 2201 + 2207 + 2271, 2202 + 2208 + 2272
  - b. **Music Literature/History Course .....3 credits**  
 Music 1105
  - c. **Music Ensemble Courses .....4 credits**  
 Music 1120, 1125, 1130, 1140, 1141, 1150, 1153, 1180, 1181, 1190, 1191, 1192, 1193
  - d. **Applied Instruction Courses .....8 credits**  
 Music 1185 (Private music lessons I to IV. Take one course each term for a total of 8 credits.)
5. Complete all requirements for all associate's degrees, including a minimum of 64 credits for the A.F.A.
6. Earn no more than 6 credits in History in the Humanities and Fine Arts, and Social and Behavioral Sciences categories combined for general education credit. Additional credits in History from general education or other categories may be earned as elective credit.
7. Earn no credit with a satisfactory/fail grade option.
8. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.
9. Show keyboard competence through one of the following options: Complete either Music 2272, complete four semesters of Music 1185 on piano, or show keyboard proficiency by demonstrated competence through the College of DuPage Proficiency Through an Instructor Program. See a Music adviser for further information.

*Notes:* Although designed to meet transfer requirements, the A.F.A. degree does not complete the requirements of the Illinois Articulation Initiative (IAI) General Education Core Curriculum for lower division general education requirements at participating schools.

Students will need to fulfill the General Education requirements of the school to which they transfer. Completion of the A.F.A. does not guarantee admission either to a baccalaureate program or to upper division music courses. Students may be required to demonstrate their skill level through audit, placement test, audition or review of student recordings. Students are encouraged to complete the A.F.A. degree prior to transferring.



**ASSOCIATE IN GENERAL STUDIES DEGREE****Degree Requirements**

(Total Minimum Credits Required: 64)

Each candidate for the Associate in General Studies (A.G.S.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses,
  - b. coursework in the Global/Multicultural or Contemporary Life Skills category,
  - c. occupational/vocational courses, and
  - d. additional coursework
 to a minimum of 64 credits.
2. Satisfactorily complete a minimum of 27 credits in general education courses as specified below. Note: Refer to p. 25 for a discussion on general education core requirements
  - a. **Communication** .....9 credits  
Written (6 credits) English 1101 and 1102  
Oral (3 credits) Speech 1100, 1120 or 1150
  - b. **Physical and Life Sciences** .....3 to 5 credits  
Select at least one course with a laboratory component.
  - c. **Mathematics** .....3 to 5 credits  
Select a minimum of 3 credits of 1000 level or higher except Mathematics 1102 and 1104 to meet general education requirements. Only one of the following three statistics courses will count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or 1431.
  - d. **Humanities and Fine Arts** .....6 credits  
Select courses from at least two subject areas.
  - e. **Social and Behavioral Sciences** .....6 credits  
Select courses from at least two subject areas.
 Refer to p. 25 for a list of specific subject areas listed in the general education categories above.
3. **Global/Multicultural Studies or Contemporary Life Skills** .....2 credits  
Complete at least two credits from the Global/Multicultural Studies or Contemporary Life Skills category.
4. Select courses to complete the required minimum of 64 credits from general education courses, elective courses and occupational/vocational courses to a maximum of 37 credits.
5. Satisfy graduation degree requirements for all associate's degrees (refer to p. 13).
6. Earn no more than 42 credits by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program.
7. Earn no more than 16 credits in courses numbered 1800 or 2800, 1840 or 2840, 1820 to 1829, and 2820 to 2829, or labeled as independent study, experimental/pilot, selected topics or field/experiential.
8. Earn no more than 4 credits in Physical Education activity courses.
9. Earn no more than 12 credits with a satisfactory/fail grade option.
10. Earn no more than 6 credits History from the Humanities and Fine Arts, and the Social and Behavioral Science categories combined. Additional credits in History may be earned as elective credit.

**ASSOCIATE IN ARTS IN TEACHING SECONDARY MATHEMATICS DEGREE****Degree Requirements**

(Total Minimum Credits Required: 64)

Each candidate for an Associate in Arts in Teaching Secondary Mathematics (A.A.T.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses  
One of these courses must have the IAI program suffix N or D to fulfill state requirements for a global diversity and multiculturalism-related course as part of an education degree program.
  - b. coursework in the Human Relations and Global/ Multicultural Studies categories from courses which also fulfill the general education core requirements and Education 1100 to fulfill the Contemporary Life Skills requirement,
  - c. mathematics specialty courses,
  - d. education specialty courses and
  - e. additional coursework
 to a minimum of 64 credits.
2. Satisfactorily complete a minimum of 40 credits in General Education Core Curriculum (Illinois Articulation Initiative course codes are listed in parentheses after each course or sequence) in the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories as specified below. One of these courses must have the IAI program suffix N or D to fulfill state requirements for a global diversity and multiculturalism-related course as part of an education degree program. (Note: Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....9 credits  
Written (6 credits) English 1101 (C1 900) and 1102 (C1 901R) (Grade of "C" or higher required for both courses.)  
Oral (3 credits) Speech 1100 (C2 900) (Grade of "C" or higher required.)
  - b. **Physical and Life Sciences** .....8 to 10 credits  
Select one course from Life Sciences and one course from Physical Sciences. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.) At least one course must have a laboratory component.  
*Life Sciences*  
Anatomy and Physiology 1500 (L1 904L),  
1551 (L1 904L), 1571 (L1 904L)  
Biology 1100 (L1 900L), 1110 (L1 905L),  
1120 (No Lab) (L1 906), 1151 (L1 900L)  
Botany 1310 (L1 901L)  
Microbiology 1420 (L1 903L)  
  
*Physical Sciences*  
Chemistry 1105 (P1 903L), 1211 (P1 902L), 1551 (P1 902L)  
Earth Science 1101 (P1 907L), 1102 (P1 907L),  
1110 (P1 905L), 1111 (No Lab) (P1 905), 1115 (P1 905L), 1122 (P1 906L), 1124 (P1 906L), 1126 (P1 906L),  
1130 (P1 905L), 1135 (P1 905L), 1140 (P1 905L)  
Physics 1100 (P1 900L), 1201 (P1 900L),  
2111 (P2 900L) (Recommended because of applied calculus content)

- c. **Mathematics**.....5 credits  
Mathematics 2231 (M1 900-1)
- d. **Humanities and Fine Arts**.....9 credits  
Select at least one course from Humanities and at least one course from Fine Arts. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.)

*Humanities*

Chinese 2202 (H1 900)  
English 1130 (H3 900), 1150 (H3 901),  
1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908)\*, 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)  
French 2202 (H1 900), 2251(H1 900), 2252 (H1 900)  
German 2200 (H3 909), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907), 2205 (H2 903N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N)\*, 1110 (HF 906D)\*, 2019 (HF 907D)  
Italian 2202 (H1 900)  
Japanese 2202 (H1 900)  
Korean 2202 (H1 900)  
Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904), 2010 (H4 901), 2011 (H4 902), 1120 (H4 906), 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N)  
Religious Studies 1100 (H5 900), 1110 (H5 901), 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
Russian 2202 (H1 900)  
Spanish 2202 (H1 900), 2206 (H1 900), 2208 (H1 900), 2251 (H1 900), 2252 (H1 900)

*Fine Arts*

Art 1100 (F2 900), 2211 (F2 901), 2212 (F2 902), 2213 (F2 902), 2214 (F2 903N)  
English 1135 (F2 908), 1154 (HF 908)\*  
Humanities 1101 (F9 900), 1105 (HF 904N)\*, 1110 (HF 906D)\*  
Music 1100 (F1 900), 1104 (F1 904), 1115 (F1 903N)  
Theater 1100 (F1 907)

*\*Interdisciplinary credit (HF) may be earned as either Fine Arts or Humanities.*

- e. **Social and Behavioral Sciences**.....9 credits  
Courses must be selected from at least two disciplines. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward the degree.)  
Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)  
Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902)  
Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N), 1130 (S4 900N), 1140 (S4 901)  
History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)  
Political Science 1100 (S5 903), 1101 (S5 900), 2203 (S5 905), 2220 (S5 904N)  
Psychology 1100 (S6 900), 2230 (S6 903), 2233 (S6 904), 2235 (S6 905), 2237 (S6 902), 2240 (S8 900)  
Sociology 1100 (S7 900), 1120 (S7 904D), 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)
3. **Mathematics Specialty Courses**.....13 credits  
Mathematics 2232 (M1 900-2), 2233 (M1 900-3), 2245

4. **Education Specialty Courses** .....9 credits  
Education 1100 Required. To complete the 9 credits, choose from Education 1150 , 2201  
Psychology 2220, 2230, 2233 or 2237
5. Fulfill these requirements in the categories specified
- a. Complete at least one course from the Human Relations category which also fulfills General Education Core Requirements:  
Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1130 (S1 904D)  
Art 1100 (F2 900)  
English 1160 (H3 910D), 1161 (H3 910D), 1165 (H3 911D)  
Geography 1130 (S4 900N)  
Humanities 1110 (HF 906D)  
Philosophy 1110 (H4904), 2010 (H4 901), 2011 (H4 902)  
Psychology 2235 (S6 905), 2240 (S8 900)  
Sociology 1100 (S7 900), 1120 (S7 904D), 2215 (S7 903D)
- b. Complete at least one course from the Global/Multicultural Studies category which also fulfills General Education Core Requirements.  
Anthropology 1100 (S1 901N), 1101 (S1 900N), 1105 (S1 904D), 1125 (S1 902), 1130 (S1 904D);  
Art 1100 (F2 900), 2214 (F2 903N)  
Chinese 2202 (H1 900)  
English 1160 (H3 910D), 1161 (H3 910D), 2226 (H3 907), 2227 (H3 907)  
French 2202 (H1 900), 2251 (H1 900), 2252 (H1 900);  
Geography 1100 (S4 901), 1105 (S4 902N), 1120 (S4 903N)  
German 2200 (H1 900), 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
History 2205 (H2 903N), 2210 (S2 907N), 2215 (S2 916N), 2220 (H2 903N), 2225 (H2 908), 2230 (H2 908), 2235 (H2 903N)  
Humanities 1105 (HF 904N)  
Italian 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
Japanese 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
Korean 2202 (H1 900)  
Music 1104 (IAI F1 904), 1115 (F1 903N)  
Philosophy 1110 (H4 904), 1116 (H4 904), 1150 (H5 904N)  
Political Science 2203 (S5 905), 2220 (S5 904N)  
Religious Studies 1100 (H5 900), 1150 (H5 904N), 1155 (H4 903N), 2160 (H5 901)  
Russian 2202 (H1 900)  
Sociology 2210 (S7 901), 2220 (S7 902)  
Spanish 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)
- c. Complete this course from the Contemporary Life Skills category which also fulfills Education Specialty Course Requirements: Education 1100.
6. Select courses to complete the minimum required 64 credits from General Education Core Curriculum courses, elective courses (refer to p. 27), and occupational/vocational courses.
7. Satisfy graduation requirements for all associate's degrees (refer to p. 13).
8. Earn no credit with a satisfactory/fail grade.
9. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program. However, policies on acceptance of AP, CLEP, and Proficiency by Instructor credits vary among academic programs and from institution to institution. Be sure to consult Education and Mathematics advisers as to the transferability of these credits to a specific baccalaureate-granting institution.

Notes: See Education and Mathematics advisers for the appropriate choices in Mathematics, Physical and Life Sciences, Humanities, Social and Behavioral Sciences, and Fine Arts for transfer to your chosen program.

## ASSOCIATE IN ARTS IN TEACHING EARLY CHILDHOOD EDUCATION DEGREE

### Degree Requirements

(Total Minimum Credits Required: 64)

Each candidate for an Associate of Arts in Teaching Early Childhood Education (A.A.T.) degree shall:

1. Select courses to complete the required credits from:
  - a. general education core requirement courses; one of these courses must have the IAI program suffix N or D to fulfill state requirements for a global diversity and multiculturalism-related course as part of an education degree program,
  - b. coursework in the Human Relations and Global/Multicultural Studies categories from courses which also fulfill the general education core requirements and Education 1100 to fulfill the Contemporary Life Skills requirement,
  - c. professional education courses,
  - d. early childhood education specialty courses and
  - e. elective courses.

to a minimum of 64 credits.
2. Satisfactorily complete a minimum of 41 credits in General Education Core Curriculum (Illinois Articulation Initiative course codes are listed in parentheses after each course or sequence) in the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories as specified below. At least one of these courses must have the IAI program suffix N or D to fulfill state requirements for a global diversity and multiculturalism-related course as part of an education degree program (Note: Refer to p. 25 for a discussion of general education core requirements)
  - a. **Communication** .....9 credits  
 Written (6 credits) English 1101 (C1 900) and 1102 (C1 901R) (Grade of "C" or higher required for both courses.)  
 Oral (3 credits) Speech 1100 (C2 900) (Grade of "C" or higher required.)
  - b. **Physical and Life Sciences** ..... 7 to 10 credits  
 Select one course from Life Sciences and one course from Physical Sciences. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.) At least one course must have a laboratory component.

#### Life Sciences

Anatomy and Physiology 1500 (L1 904L), 1551 (L1 904L)  
 Biology 1100 (L1 900L), 1110 (L1 905L),  
 1120 (No Lab) (L1 906), 1151 (L1 900L)  
 Botany 1310 (L1 901L)  
 Microbiology 1420 (L1 903L)

#### Physical Sciences

Chemistry 1105 (P1 903L), 1211 (P1 902L), 1551 (P1 902L)  
 Earth Science 1101 (P1 907L), 1102 (P1 907L), 1110 (P1 905L), 1111 (No Lab) (IAI P1 905), 1115 (P1 905L), 1122 (P1 906L), 1124 (P1 906L), 1126 (P1 906L), 1130 (P1 905L), 1140 (P1 905L)  
 Physics 1100 (P1 900L), 1201 (P1 900L), 2111 (P2 900L)

- c. **Mathematics** .....7 credits  
 Mathematics 1321  
 Mathematics 1322 (M1 903)
- d. **Humanities and Fine Arts** .....9 credits

Select at least one course from Humanities and at least one course from Fine Arts. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward your degree.)

#### Humanities

Chinese 2202 (H1 900)  
 English 1130 (H3 900), 1150 (H3 901),  
 1151 (H3 901), 1152 (H3 903), 1153 (H3 902), 1154 (HF 908)\*, 1158 (H5 901), 1159 (H9 901), 1160 (H3 910D),  
 1161 (H3 910N), 1165 (H3 911D), 2220 (H3 912), 2221 (H3 913), 2223 (H3 914), 2224 (H3 915), 2226 (H3 907), 2227 (H3 907), 2228 (H3 905), 2262 (H3 908N)  
 French 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)  
 German 2200 (H3 909), 2202 (H1 900),  
 2251 (H1 900), 2252 (H1 900)  
 History 1110 (H2 901), 1120 (H2 902), 1160 (H2 907),  
 2205 (H2 903N), 2220 (H2 903N), 2235 (H2 903N)  
 Humanities 1102 (H9 900), 1103 (H9 901), 1105 (HF 904N)\*,  
 1110 (HF 906D)\*  
 Italian 2202 (H1 900)  
 Japanese 2202 (H1 900)  
 Korean 2202 (H1 900)  
 Philosophy 1100 (H4 900), 1110 (H4 904), 1116 (H4 904),  
 2010 (H4 901), 2011 (H4 902), 1120 (H4 906),  
 1125 (H4 906), 2150 (H4 905), 1150 (H5 904N)  
 Religious Studies 1100 (H5 900), 1110 (H5 901),  
 1120 (H5 901), 1150 (H5 904N), 1155 (H4 903N),  
 2160 (H5 901)  
 Russian 2202 (H1 900)  
 Spanish 2202 (H1 900), 2251 (H1 900), 2252 (H1 900)

#### Fine Arts

Art 1100 (F2 900), 2211 (F2 901), 2212 (F2 902),  
 2213 (F2 902), 2214 (F2 903N)  
 English 1135 (F2 908), 1154 (HF 908)\*  
 Humanities 1101 (F9 900), 1105 (HF 904N)\*, 1110 (HF 906D)\*,  
 2019 (HF 907D)  
 Music 1100 (F1 900), 1104 (F1 904), 1115 (F1 903N)  
 Theater 1100 (F1 907)

\* *Interdisciplinary credit may be earned as either Fine Arts or Humanities.*

- e. **Social and Behavioral Sciences** .....9 credits  
 Courses must be selected from at least two disciplines. (Choose only one course from the list of same IAI codes for general education credit. Additional courses with the same IAI code will count as elective credit toward the degree.)

Anthropology 1100 (S1 901N), 1105 (S1 904D),  
 1200 (S1 903), 1125 (S1 902), 1130 (S1 904D)  
 Economics 2200 (S3 900), 2201 (S3 901), 2202 (S3 902),  
 Geography 1100 (S4 901), 1105 (S4 902N),  
 1120 (S4 903N), 1130 (S4 900N), 1140 (S4 901)  
 History 1130 (S2 900), 1140 (S2 901), 2210 (S2 907N), 2215 (S2 916N), 2260 (S2 901)  
 Political Science 1100 (S5 903), 1101 (S5 900),  
 2203 (S5 905), 2220 (S5 904N)  
 Psychology 1100: required if students want to take  
 Psychology 2220 under ICCB Professional Education Requirements (S6 900), 2230 (S6 903),  
 2233 (S6 904), 2235 (S6 905), 2237 (S6 902),  
 2240 (S8 900)  
 Sociology 1100 (S7 900), 1120 (S7 904D),  
 2210 (S7 901), 2215 (S7 903D), 2220 (S7 902)



3. **Professional Education Courses** .....6 to 9 credits  
Required: Education 1100, Early Childhood Education and Care 1101  
May choose additional coursework from Education 1150, 2201; Psychology 2220
4. **Early Childhood Education Specialty Courses** .....15 credits  
Early Childhood Education and Care 1100, 1130, 1140, 2251, 2252
5. Fulfill these requirements in the categories specified
  - a. Complete at least one course from the Human Relations category which also fulfills General Education Core Requirements. (Anthropology 1100, 1101, 1105, 1130; Art 1100; English 1160, 1161, 1165; Geography 1130; Humanities 1110; Philosophy 1110, 2010, 2011; Psychology 2235, 2240; Sociology 1100, 1120, 2215)
  - b. Complete at least one course from the Global/Multicultural Studies category which also fulfills General Education Core Requirements.  
(Anthropology 1100, 1101, 1105, 1125, 1130; Art 1100, 2214; Chinese 2202; English 1160, 1161, 2226, 2227, 2262; French 2202, 2251, 2252; Geography 1100, 1105, 1120; German 2200, 2202, 2251, 2252; History 2205, 2210, 2215, 2220, 2225, 2230, 2235; Humanities 1105; Italian 2202, 2251, 2252; Japanese 2202, 2251, 2252; Korean 2202; Music 1104, 1115; Philosophy 1110, 1116, 1150; Political Science 2203, 2220; Religious Studies 1100, 1150, 1155, 2160; Russian 2202; Sociology 2210, 2220; Spanish 2202, 2251, 2252)
  - c. Complete this course from the Contemporary Life Skills category which also fulfills Professional Education Course Requirement: Education 1100.
6. Select courses to complete the minimum required 64 credits from General Education Core Curriculum courses, elective courses (refer to p. 27), and occupational/vocational courses.
7. Satisfy graduation requirements for all associate's degrees (refer to p. 13).
8. Earn no more than 6 History credits in the Humanities and Fine Arts, and Social and Behavioral Sciences categories combined for general education credit. Additional credits in History from general education or other categories may be earned as elective credit.
9. Earn no credit with a satisfactory/fail grade option.
10. Earn no more than 42 credits for the Communication, Physical and Life Sciences, Mathematics, Humanities and Fine Arts, and Social and Behavioral Sciences categories by demonstrated competence through the Advanced Placement Program (AP), designated course-specific subject examinations of the College Level Examination Program (CLEP), and the College of DuPage Proficiency Through an Instructor Program. However, policies on acceptance of AP, CLEP, and Proficiency by Instructor credits vary among academic programs and from institution to institution. Be sure to consult Education and Mathematics advisers as to the transferability of these credits to a specific baccalaureate-granting institution.
11. Successfully pass the Illinois Test of Enhanced Basic Skills.
12. Maintain a grade point average (GPA) of 2.5 or higher.
13. Develop a portfolio.

*Notes:* See Early Childhood Education adviser for the appropriate choices in Mathematics, Physical and Life Sciences, Humanities, Social and Behavioral Sciences, Fine Arts, Professional Education and Early Childhood Education specialty classes for transfer to your chosen program.

## GENERAL EDUCATION

General Education refers to a broad body of knowledge and skills common to all educated people, regardless of their profession. A strong general education curriculum includes courses in the arts; the humanities which include literature, history, philosophy, and foreign languages; mathematics, natural sciences, and the social sciences. In 2009, College of DuPage Faculty ratified the following General Education Student Learning Outcomes for students enrolled in all associate degree programs.

### General Education Student Learning Outcomes

Each of these eight outcomes can be described by a corresponding list of measurable skills. The outcomes should be considered to be satisfied when each measurable skill has been demonstrated.

#### *Critical Thinking*

- a. Identify and challenge assumptions, including one's own
- b. Develop and present solutions to problems or issues
- c. Evaluate practical and ethical implications
- d. Provide a researched, logically structured argument
- e. Apply scholarly methodology

#### *Information Literacy*

- a. Explain the need for information
- b. Develop a plan for finding the needed information
- c. Locate information effectively and efficiently
- d. Evaluate information and its sources critically
- e. Use information effectively, ethically, and legally to accomplish a specific purpose

#### *Knowledge Integration*

- a. Evaluate contemporary social issues in scientific, historical, ethical, or aesthetic terms
- b. Make connections between subject areas
- c. Critically evaluate opinions
- d. Use interdisciplinary thinking in everyday life

#### *Effective Communication*

- a. Analyze the context of a speaker's or writer's message or argument
- b. Analyze the language of a text as well as visual and non-verbal elements of a presentation
- c. Critically evaluate and discuss ideas in speeches and texts
- d. Formulate coherent, well-supported arguments in speech or writing using appropriate oral and written conventions
- e. Use language and rhetoric appropriate to the setting, purpose, and audience

#### *Mathematical Reasoning*

- a. Discover the validity or invalidity of mathematical arguments
- b. Employ appropriate strategies to model and find solutions to problems
- c. Interpret mathematical models and identify their limitations
- d. Use appropriate terminology to represent and communicate mathematical information

#### *Scientific Reasoning*

- a. Use generally accepted scientific means such as lab or field methods to collect data or conduct controlled experiments
- b. Use generally accepted scientific procedures and tools to analyze data
- c. Make inferences by synthesizing analytical results with fundamental concepts and theoretical perspectives or integrate existing knowledge based on scientific evidence



- d. Use appropriate terminology to clearly communicate solutions to problems

#### *Cultural Comprehension*

- a. Demonstrate an understanding of events, values, and ideas rooted in human experience.
- b. Critically analyze issues from a cultural, historical, artistic, or philosophical context
- c. Make informed judgments of works of art

#### *Social Awareness*

- a. Apply historical, ethical and scientific reasoning to social concerns
- b. Recognize social responsibilities, ethics, and individual rights of others in a global society
- c. Identify causes and variations of social diversity

To meet these aims of general education, some flexibility exists for each student to select courses. The requirements for each associate's degree determine specific choices in each category. General Education requirements for the Associate in Arts, Associate in Science, Associate in Engineering Science, Associate in Fine Arts, and Associate in Arts in Teaching degrees are in compliance with the Illinois Articulation Initiative standards.

## **CURRICULUM DISTRIBUTION CATEGORIES FOR GENERAL EDUCATION REQUIREMENTS**

### **Communication**

Communication includes studies in English and Speech. These disciplines provide an educational framework within which students may develop their abilities to think independently and to express themselves clearly, effectively and creatively. Instructors focus on the skills of communication and the contexts in which human expression occurs. Educational opportunities are provided that:

- develop, through practice, the student's abilities in observing, listening, reading, speaking and writing effectively.
- develop the student's skills in obtaining, interpreting and evaluating information and ideas.
- encourage the student's creative expression.
- enhance the student's awareness of and respect for personal, social and cultural diversity.
- allow for the student's exploration of various methods and technologies in communication.

### **Humanities and Fine Arts**

Humanities and Fine Arts include subject areas that address the meaning of being human. They provide the student with a basis for value judgment and a context for thoughtful action. The study of the humanities frees the student to think beyond personal and cultural limitations, to relate present experiences to human traditions and to consider and choose constructive action in the present and for the future.

Courses in Humanities and Fine Arts are designed to:

- develop the student's skills in study, analysis, synthesis and evaluation.
- provide the student the opportunity to develop original ideas and to create works of art.
- develop the student's understanding of history, philosophy, and the fine and performing arts.
- develop the student's awareness of the nature of being human, social issues and spiritual aspirations.
- develop the student's insight into various cultures through the study of the arts, literature, history and foreign languages.
- develop, through study and participation, the student's insight and abilities in the visual and performing arts.
- provide the framework for an understanding of cultural, political and intellectual heritage.

The subject areas include Foreign Languages (Chinese, French, German, Spanish, etc.), certain English and History courses, Humanities, Philosophy, Religious Studies, Art, Theater and Music.

### **Social and Behavioral Sciences**

Social and Behavioral Sciences courses provide students with a broad perspective on human behavior, our cultural heritage, our relationships with others, our social institutions, and the environment. The subject areas include Anthropology, Economics, Geography, History, Political Science, Psychology, Social Science and Sociology.

### **Physical and Life Sciences**

Physics, Chemistry and Earth Science deal with natural laws and theories and their application to human needs. Universal phenomena are studied and analyzed. The Life Sciences (Biology, Botany, Anatomy & Physiology, Microbiology, and Zoology) examine the components of the living world and their interactions with the physical and chemical world.

### **Mathematics**

Mathematics provides the tools and skills to organize our thoughts and apply problem-solving techniques. The study of mathematics helps students understand the quantitative relationships found in business, technology, and the physical, natural and social sciences.

### **Human Relations**

The Human Relations category has been designed in accordance with the requirements of Illinois Public Act 87-581 to include coursework on improving human relations with an emphasis on issues of race, ethnicity, gender and other concerns related to improving human relations. Courses also may focus on non-Western and American diversity.

### **Global/Multicultural Studies**

The College of DuPage faculty has made an educational commitment to international/intercultural studies. The purpose of this category is to enhance student capacity to:

- conceptualize and understand the complexity of an international system (economics, government, politics, etc.)
- understand world cultures and international events.
- appreciate the diversity as well as commonality of human values, beliefs and behaviors.
- understand and apply the principles of intercultural communication.
- broaden student perspective by exposure to a culture different from the student's own.

### **Contemporary Life Skills**

Courses in this category are intended to help students use creative expression, problem solving, interpersonal communication, health and body, computers/ technology, and personal development to function in a changing, technological and complex society.

### **General Education Categories**

For the Associate in Applied Science and Associate in General Studies degrees, general education and elective courses are organized under the following categories of general education.

Electives for the A.A.S. degree vary, depending on the program of study. Check with program adviser(s) for a list of electives.

Any course, 1000 level or higher, can be taken as an elective for the A.G.S. degree.

### **Communication**

English 1101, 1102, 1105  
Speech 1100, 1120, 1150

**Physical/Life Sciences\***

Anatomy and Physiology  
 Biology  
 Botany  
 Chemistry  
 Earth Science  
 Microbiology  
 Physics  
 Zoology

\*Course selection must include at least one course with a laboratory component.

**Mathematics**

Select mathematics course(s) consistent with specific and general degree requirements. Includes Psychology 2280 and Sociology 2205.

**Humanities/Fine Arts**

Art  
 Chinese  
 English (except 1101, 1102, 1105, 1110, 1115 and 2100)  
 French  
 German  
 History (except 1130, 1140, 2210, 2215 and 2260)  
 Humanities  
 Italian  
 Japanese  
 Korean  
 Music  
 Philosophy  
 Religious Studies  
 Russian  
 Spanish  
 Speech 1110, 2210  
 Theater

**Social and Behavioral Sciences**

Anthropology  
 Economics (except 1110)  
 Education 1100, 1101  
 Geography  
 History 1130, 1140, 2210, 2215, 2260  
 Political Science  
 Psychology (except 1140 and 2280)  
 Social Science  
 Sociology (except 2205 and 2290)

**Human Relations**

Anthropology 1100\*, 1101\*, 1105\*, 1130\* (T)  
 Art 1100\*  
 Education 1101, 1105, 1110 (T)  
 English 1160\*, 1161\*, 1165\* (T)  
 Geography 1130\* (T)  
 History 2242  
 Human Services 1113 (O)  
 Humanities 1110\* (T)  
 Management 2220 (T)  
 Office Technology Information 2600 (O)  
 Philosophy 1110\*, 1112, 1114, 2010\*, 2011\* (T)  
 Psychology 1150, 2235\*, 2240\* (T)  
 Sociology 1100\*, 1120, 2215\*, 2225, 2290 (T)  
 Speech 1120 (T)

(O) Occupational/Vocational credit

(T) General Elective credit

**Global/Multicultural Studies**

This list of courses is subject to change at the beginning of each Fall Semester. Check with the Counseling and Advising Center for an updated Student Planning Worksheet at [cod.edu/advising/studplan.htm](http://cod.edu/advising/studplan.htm)

Anthropology 1100\*, 1101\*, 1105\*, 1125\*, 1130\*  
 Art 1100\*, 2214\*  
 Business 2255  
 Chinese 1100, 1101, 1102, 2201, 2202\*  
 Economics 2220  
 English 1160\*, 1161\*, 2226\*, 2227\*, 2262  
 French 1100, 1101, 1102, 2201, 2202\*, 2251\*, 2252\*  
 Geography 1100\*, 1105\*, 1120\*, 2205, 2235  
 German 1100, 1101, 1102, 2200\*, 2201, 2202\*, 2251\*, 2252\*  
 History 2205\*, 2210\*, 2215\*, 2220\*, 2225\*, 2230\*, 2235\*, 2240, 2242  
 Human Services 1121 (O)  
 Humanities 1105\*  
 Interior Design 1153  
 Italian 1100, 1101, 1102, 2201, 2202\*, 2251\*, 2252\*  
 Japanese 1100, 1101, 1102, 2201, 2202\*, 2251\*, 2252\*  
 Korean 1101, 1102, 2201, 2202\*  
 Music 1104\*, 1115\*  
 Philosophy 1110\*, 1116\*, 1150\*  
 Political Science 2203\*, 2220\*, 2221  
 Religious Studies 1100\*, 1150\*, 1155\*, 2160\*  
 Russian 1101, 1102, 2201, 2202\*  
 Social Science 1110  
 Sociology 2210\*, 2220\*  
 Spanish 1100, 1101, 1102, 2201, 2202\*, 2251\*, 2252\*, 2820  
 Travel, Tourism and Event Planning 2221 (O)

\* Conforms to Illinois Articulation Initiative general education standards.

**Contemporary Life Skills**

This list of courses is subject to change at the beginning of each Fall Semester. Check with the Counseling and Advising Center for an updated Student Planning Worksheet at [cod.edu/advising/studplan.htm](http://cod.edu/advising/studplan.htm)

Accounting 1110 (O), 1140 (T)  
 Air Conditioning 1110 (O)  
 Architecture 1100 (O), 1105 (O) and 1121 (O)  
 Art 1101 (T), 1105 (T), 1140 (T), 1151 (T)  
 Automotive Service Technology 1040 (O), 1110 (O)  
 Business 1100 (T)  
 Computer and Internetworking Technology 1100 (O), 1121 (O)  
 Computer Information Systems 1110 (O), 1120 (O), 1130 (O), 1150 (T), 1400 (T)  
 Criminal Justice 1100 (T)  
 Early Childhood Education and Care 1110 (O)  
 Economics 1110 (T)  
 Education 1100 (T), 1105 (T), 1110 (T), 1115 (T)  
 Electro-Mechanical Technology 1101 (O), 1120 (O), 1130 (O), 1300 (O)  
 English 2251 (T), 2252 (T), 2253 (T), 2261 (T)  
 Foodservice Administration 1110 (O)  
 Graphic Arts Technology 1101 (O), 1102 (O)  
 Graphic Design 1102 (O)  
 Health Sciences 1110 (O), 1150 (O)  
 Human Services 1113 (O), 1115 (O)  
 Journalism and Mass Communication 1100 (T), 1110 (T)  
 Interior Design 1151 (O), 1153 (O)  
 Library Technology 1101 (O)  
 Manufacturing Technology 1171 (O), 1180 (O), 1190 (O), 2280 (O)  
 Mathematics 1100 (T), 1220 (T)  
 Motion Picture/Television 1011(O), 1020 (O), 1220 (O)  
 Office Technology Information 1100 (O), 1200 (O), 1210 (O)

Photography 1100 (O)  
 Physical Education 1101 to 1932, except 1800, 1820 and  
 1840 (T), 2244 (T), 2251 (T), 2254 (T)  
 Psychology 1140 (T), 1150 (T)  
 Sociology 2290 (T)  
 Speech Communication 1110 (T), 1120 (T), 2210 (T)  
 Theater 1105 (T), 1111 (T), 2230 (T)  
 Travel, Tourism and Event Planning 1121 (O), 1122 (O)  
 Any discipline's Coop/Internship courses

(O) Occupational/Vocational credit  
 (T) General Elective credit

## ELECTIVES

### Associate in Arts and Associate in Science Degrees

In addition to the courses specified as part of the General Education Core Curriculum, students may select electives from the following areas. Students can earn a maximum of 10 credits in occupational/vocational areas for elective credit. Students are strongly advised to consult with a faculty adviser and/or the transfer institution in selecting elective courses.

Accounting (except 1110)  
 Anatomy and Physiology  
 Anthropology  
 Art  
 Biology  
 Botany  
 Business  
 Business Law  
 Chemistry  
 Criminal Justice 1100, 1130, 1151, 1152, 2240, 2250\*  
 Computer Information Systems 1150, 1400\*  
 Earth Science  
 Economics  
 Education  
 Engineering  
 English  
 Foreign Language: Chinese, French, German, Italian,  
 Japanese, Korean, Russian, Spanish  
 Geography  
 History  
 Humanities  
 Journalism and Mass Communication  
 Management  
 Marketing  
 Mathematics  
 Microbiology  
 Music  
 Philosophy  
 Physical Education  
 Physics  
 Political Science  
 Psychology  
 Religious Studies  
 Social Science  
 Sociology  
 Speech Communication  
 Theater  
 Zoology

\*All other courses in this subject are assigned to the occupational/vocational category.

## ELIGIBILITY FOR AWARDING OF A SECOND DEGREE

A student meeting specific qualifications may earn two or more different degrees from College of DuPage. Credits earned for degrees already completed may apply toward subsequent degrees. However, a minimum of 10 additional credits must be earned at College of DuPage for each degree sought after the first degree is awarded.

## CERTIFICATE REQUIREMENTS

Each candidate for a certificate shall:

1. Satisfactorily complete all course requirements for the specific certificate.
2. Possess a minimum of 2.0 (C) average in the combined grade point average of all College of DuPage courses numbered 1000 and above on all courses.
3. Complete a minimum of one-half the applicable credits at College of DuPage.
4. Earn the final applicable credits at College of DuPage:
  - a. If the program requirement is 20 credits or more, earn the final 10 credits at College of DuPage.
  - b. If the program requirement is less than 20 credits, earn one-half the total required credits as the final applicable hours at College of DuPage.
5. File a petition for the certificate at least one semester before the anticipated completion date.
6. Satisfy all financial obligations and other specific requirements.
7. Be in good standing at the time final credit for the certificate is earned.

## REMINDERS

1. When students break enrollment for more than three consecutive semesters, including summer semester, they are then subject to the degree requirements as stated in the College of DuPage Catalog that is current at the time of re-entry, subject to changes.
2. Courses numbered below 1000 represent courses not usually found in the curriculum of a baccalaureate-granting institution and, therefore, may not transfer. They do not apply to any College of DuPage degree or certificate.
3. Students are responsible for proper registration each semester. The planning of courses relevant to future goals and degree requirements is the responsibility of the student.
4. Students should contact a faculty adviser for advice regarding degree requirements, transfer requirements and achievement of educational goals.
5. Students with special problems related to degree requirements may appeal to the Academic Regulations Committee. For more information, contact the Vice President for Student Affairs.
6. All students intending to transfer are encouraged to plan their programs according to the requirements of the transfer institution.
7. Degree and major requirements at baccalaureate-granting institutions may require more than two academic years of study after completion of an associate's degree at College of DuPage.
8. Some College of DuPage courses have been designed for two-year curricula. Although they are considered college level, they may not meet the objectives of a bachelor's degree program and, therefore, may not be transferable.

## **CAREER CLUSTERS AT COLLEGE OF DUPAGE**

College of DuPage participates in the national initiative of Career Clusters, intended to help states and educational institutions organize their programs and career exploration activities around theme/skill/knowledge-based continuity concerns. This allows students to explore like-kind occupational/vocational and career possibilities with a focus on opportunities. The 16-Cluster format used by the U.S. Department of Education encompasses all 970-plus occupations.

Using the Career Clusters, COD offers direction to students who may not yet know what they want to do but have an idea of their academic strengths and interests. It allows students, prospective and current, along with the community at-large to see the similarity between different fields. It also focuses on promoting the seamless transition of coursework between areas of studies and progression from high school to COD and through COD to a college or university.

### **Agriculture, Food and Natural Resources**

Horticulture

Sustainable Landscapes Certificate

Hospitality Management

Pre-Veterinary

### **Architecture and Construction**

Architecture

Construction Management

Heating, Air Conditioning and Refrigeration

### **Arts, Audio/Video Technology and Communication**

Art

Fashion Merchandising and Design

Graphic Arts Technology

Graphic Design

Interior Design

Sustainable Interiors Certificate

Motion Picture/Television

Music

Photography

Theater

English

Journalism and Mass Communication

Technical Communication

Speech Communication

### **Business Management and Administration**

Business

Facility Management

Management

Office Technology Information

Administrative Assistant/Event Planner

### **Education and Training**

Humanities

Library and Information Technology

Physical Education

Fitness Instructor

Teacher Preparation

Mathematics

Teaching-Secondary Mathematics

Early Childhood Education and Care

Assistant Teacher (ECEC)

### **Finance**

Accounting

### **Government and Public Administration**

Political Science

### **Health Science**

Health Sciences

Certified Nursing Assistant (CNA)

Medical Assistant

Non-Invasive EKG

Pharmacy Technician

Phlebotomy/EKG

Health Information Technology

Physician Office Coding and Billing

Long-Term Care Administration

Practical Nursing (PN)

Nursing

(ADN)

(Pre-BSN)

Physical Therapist Assistant

Pre-Physical Therapy

Diagnostic Medical Imaging Nuclear Medicine

Diagnostic Medical Imaging Sonography

Vascular Sonography

Diagnostic Medical Imaging Radiography

Mammography

Respiratory Care

Surgical Technology

Speech-Language Pathology Assistant

Pre-Medicine

Pre-Pharmacy

Dental Hygiene

Pre-Dentistry

### **Hospitality and Tourism**

Culinary Arts

Hospitality Management

Travel, Tourism and Event Planning

### **Human Services**

Cosmetology

Early Childhood Education and Care

ECEC Assistant

Human Services

Psychology

Religious Studies

Social Sciences

Sociology

### **Information Technology**

Computer Information Systems

Computer and Internetworking Technologies

### **Law, Public Safety, Corrections and Services**

Criminal Justice

Homeland Security

Fire Science

Emergency Medical Technician

Paramedic

Paralegal Studies

### **Manufacturing**

Manufacturing Technology

Manufacturing Skills Standards Certificate

Integrated Engineering Technology

Welding

### **Marketing, Sales and Service**

Fashion Merchandising and Design

Marketing

Real Estate



**Science, Technology, Engineering and Mathematics**

Electro-Mechanical Technology  
 Advanced Multi-Skilled Technician Certificate  
 Electronics Technology  
 Renewable Energy Certificate  
 Electricity and Electronics Technology Certificate  
 Digital Logic Device Programming Certificate  
 Integrated Engineering Technology  
 Engineering  
 Mathematics  
 Biotechnology  
 Anthropology  
 Biology  
 Botany (Biology)  
 Chemistry  
 Clinical Laboratory Science  
 Earth Science  
 Physics  
 Zoology (Biology)  
 History  
 Languages  
 Philosophy  
 Geography  
 Economics

**Transportation, Distribution and Logistics**

Automotive Service Technology

**ASSESSMENT OF STUDENT LEARNING IN DISCIPLINES/PROGRAMS**

The wide variety of disciplines and career and technical education programs administer meaningful, action-oriented assessments of their curricular effectiveness through Academic Program Review. The crux of COD's Academic Program Review process is a discipline-wide student outcomes assessment project developed by each discipline/program. The type of assessment varies from one discipline/program to another and is reflective of its needs. For example, disciplines/programs with capstone courses may use a portfolio as their project; whereas, those with large-enrollment introductory courses may use a multiple-choice exam that is given to all sections. Additionally, program accreditation bodies may have competency-based instruments that are used by the College to assess student learning. The assessment results are evaluated and used by the discipline/program to develop plans for improvement in student learning.

**PLACEMENT TESTING FOR MATH, READING AND WRITING**

Tests in the area of reading, writing, math, writing essay and English as a Second Language are given to students to determine the appropriate course placement and satisfy course prerequisites. Scores from COMPASS placement tests are used to prepare a course of study that will be relevant and meaningful for students as they work toward successful completion of their educational goals. For more information about placement testing, go to [www.cod.edu/testing](http://www.cod.edu/testing).

**Reading Placement Testing**

The Reading Placement Test assesses a student's readiness for the demands of college-level reading. Upon completion of the test, students will receive a score that places them in one of five categories. These categories are used as prerequisites for most college-level courses at College of DuPage. Students do not need to take this test to qualify as "Reading Category 1" (college-ready) if they meet ONE of the following conditions:

- College-level credit totaling 12 semester hours with at least a "C" average.

- ACT composite score of 20. (Proof of score must be provided.)
- SAT verbal/critical score of 500. (Proof of score must be provided.)
- A score of 550 paper/pencil, 213 computer-based, or 79 Internet-based on the Test of English as a Foreign Language (TOEFL). (Proof of score must be provided.)

**Writing Placement Testing**

The Writing Placement Test assesses a student's readiness for college-level writing. To place into English 1101 or 1105, students must fulfill ONE of the following two options:

*Option 1*

ACT Composite Score of 20 or higher

*Option 2*

1. Reading Category 1 (college ready)  
AND
2. Compass Writing Category 1  
OR  
Compass e-Write Category 1

**Mathematics Placement Testing**

Students who intend to enroll in Mathematics 0481, 0482, 1100, 1102, 1115, 1218, 1220, 1428, 1431, 1432, 2134 or 2231 as their first math course at College of DuPage are required to take a Math Placement Test before enrolling. This test is one component of placement in an appropriate math course. Verification of successful completion of any prerequisite courses is the second component. (Prerequisites are listed by individual course in the mathematics section of the college *Catalog*.) For further math advising, contact the Math and Physical Sciences subdivision (630) 942-2010, the Math Assistance Center, (630) 942-3339, or the Centers for Independent Learning – Math area, (630) 942-3354.

**COLLEGE ARTICULATION AND TRANSFER OPPORTUNITIES**

The Office of Academic Partnerships (Transfer/Articulation Unit) works with the Academic Divisions to develop Articulation Agreements and transfer guides to benefit College of DuPage students interested in transferring to colleges and universities to complete the requirements for a bachelor's degree. The number of courses and credits transferable to receiving colleges and universities varies by academic discipline/program of study and institution. The College has Articulation Agreements with public and private colleges and universities in Illinois and other states. A 2+2 Articulation Agreement provides an opportunity for students to complete their first two years of study at COD before transferring as juniors to another college or university. A 3+1 Articulation Agreement allows students to complete the first three years of study at COD before transferring as seniors to institutions that award the bachelor's degree. Formal transfer guides identify courses by their official name and number and the specific college credit hours earned for transferring from COD to other institutions.

The transferability of COD courses is determined by the receiving college or university. Generally, COD courses numbered 1100 and above are accepted by other institutions when these courses are part of, or applicable to, a degree at that institution. College of DuPage is also a participant in the Illinois Articulation Initiative (IAI), a statewide agreement that allows the transfer between participating colleges and universities of selected general education courses and lower-division major courses. For more information on IAI, check their website at [www.itransfer.org](http://www.itransfer.org).

Students may pursue transfer opportunities on their own with bachelor's degree-granting institutions; however, following a formal transfer guide will provide a more efficient and effective transfer of credits earned at COD. Students planning to transfer their COD credits should:

1. Begin early to explore possible transfer institutions that meet their educational goals for a specific program of study.
2. Contact the transfer institution for detailed information regarding specific degree requirements, transfer student policies and procedures, and opportunities for special scholarships available for transfer students.
3. Confer with a COD faculty advisor or counselor concerning transfer plans.

For more information on Articulation Agreements, transfer guides, and special partnerships with bachelor's degree-granting institutions, check the College of DuPage transfer information website at <http://home.cod.edu/academics/transferinfo> or contact COD's Transfer Coordinator at (630) 942-2776.

## COOPERATIVE EDUCATION, INTERNSHIPS, AND SERVICE LEARNING

### Cooperative Education and Internship Program

The Cooperative Education and Internship program prepares students to pursue and succeed at internships and co-ops. Students obtaining work-integrated learning positions, who meet college prerequisites, may enroll for academic credit. Students in academic co-ops and internships are mentored by a COD faculty advisor and worksite supervisor, which creates an ideal learning partnership leading to career and workforce development. Benefits of the Cooperative Education and Internship Program include:

- An opportunity to develop job search and success skills.
- Relevant on-the-job experience that puts classroom knowledge into practice.
- The possibility of earning academic credit and a paycheck while increasing career competencies and building a professional network.

For more information about Cooperative Education and Internships, call (630) 942-2611.

### Service Learning

Service Learning is a teaching and learning methodology that integrates community service with academic instruction, connecting theory to practice. It focuses on critical and reflective thinking, develops civic and social responsibility, and connects students with their communities.

Service Learning staff assists students with placement, provides technical support, offers appropriate training, and serves as the bridge to the community.

- Students become enthusiastic learners.
- Students connect theory to practice in the real world.
- Establishes partnerships between the College and the community.
- Service Learning fosters personal growth, career development, academic achievement and encourages respect for diversity.

For more information about Service Learning, call (630) 942-2230.

## HIGH SCHOOL PARTNERSHIPS – DUAL CREDIT, DUAL ENROLLMENT AND HIGH SCHOOL ARTICULATION

Dual Credit is a formal agreement with a high school where an academically qualified high school student enrolls in a college-level course and, upon successful course completion, concurrently earns both college credit and high school credit. Dual Enrollment allows high school students to enroll in college-level courses while still in high school. The student only receives college credit.

High School Articulation is a formal agreement with the high school for specific courses. Articulation allows a high school graduate to receive college credit for articulated high school courses. Dual Credit and Dual Enrollment course offerings and the articulation of high school courses are coordinated by the Office of High School Partnerships. For more information, check the College of DuPage High School Partnerships website <http://cod.edu/academics/specialprograms/ohsp/dualcredit> or contact the Office of High School Partnerships at (630) 942-2880.

## COOPERATIVE AGREEMENTS FOR INSTRUCTIONAL PROGRAMS

The following selected programs are available at in-district rates at other community colleges. Prior to registration at the cooperating colleges, students should complete approval forms from the College of DuPage Admissions Office.

Elgin Community College  
 Clinical Lab Technology  
 Dental Assisting  
 Histotechnology  
 Truck Driving

William Rainey Harper College  
 Banking, Finance and Credit  
 Building Codes and Enforcement  
 Cardiac Technology  
 Commercial Credit Management/Insurance  
 Dietetic Technician  
 Financial Management  
 Human Resource Management  
 Interpretation/Translation  
 NetPrep Network Specialist  
 Supply Chain Management

Joliet Junior College  
 Agricultural Production and Management  
 Agricultural Supply–Business

Kishwaukee College  
 Collision Repair  
 Diesel Power Technology  
 Equine Science  
 Power Equipment Repair/Advanced Power Equipment Repair  
 Power Equipment Technology

Moraine Valley Community College  
 Aircraft Inspection  
 Recreation Therapy/Management

Oakton Community College  
 Financial Services  
 International Trade

Waubensee Community College  
 Auto Body Painting and Repairing

## Learning for Life

Continuing Education/Extended Learning serves a diverse cross section of District 502 residents through the Youth Academy, Adult Enrichment and Business Solutions (Career and Professional Development) units. Continuing Education/Extended Learning starts at 15 months of age in the state-of-the-art, fully functioning daycare/kindergarten and journeys with its learning partners through older adulthood. Continuing Education seeks to connect the College to the larger community, leveraging human and capital resources in support of innovative teaching/learning, to enhance academic and career pathways, while positively contributing to regional economic development and the overall quality of life through dynamic programs and services.





Associate in  
Applied Science



ICCB Codes throughout this section of the *Catalog* represent the codes filed with the Illinois Community College Board.

At press time, program information was current. For updated information, consult the College website: [www.cod.edu](http://www.cod.edu).

## ACCOUNTING

### AAS DEGREE, THREE CERTIFICATES

#### AAS DEGREE

The **Accounting degree** program is designed to provide the theoretical and practical background necessary for supervisory and administrative careers in accounting and accounting-related areas. This degree program requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3203 | Field of Study Code: ACCOU.AAS

#### Program Requirements

Accou	1140	Financial Accounting	4
Accou	1150	Managerial Accounting	4
Accou	2205	Federal Taxation I	3
Accou	2241	Intermediate Accounting I	4
Accou	2242	Intermediate Accounting II	4
Accou	2251	Cost Accounting	3
Busin	1100	Introduction to Business	3
Cis	1150	Introduction to Computer Information Systems	3
		OR	
Cis	1110	Using Computers: An Introduction	2
Econo	2201	Macroeconomics and the Global Economy	3
Ofti	1100	Introduction to Computer Keyboarding	2
		OR	
Ofti	1210	Word Processing I	3
Philo	1114	Business Ethics	3

35 to 37

#### Program Electives

Select at least 17 credits from below.			
Accou	1175	Microcomputer Accounting	2
Accou	2200	Income Tax Return Preparation	3
Accou	2206	Federal Taxation II	3
Accou	2260	Advanced Accounting	3
Accou	2265	Governmental and Not-for-Profit Accounting	3
Accou	2271	Auditing I	3
Accou	2272	Auditing II	3
Accou	2860	Cooperative Education/Internship (Occupational)	1 to 4
Buslw	2211	Business Law I	3
Cis	1221	Introduction to Spreadsheets	3
Econo	2202	Macroeconomics and the Global Economy	3

17

General Education.....12 to 16  
(In addition to the courses listed above)

Total Credits Required .....64 to 70

#### CERTIFICATES

The **Clerical Accounting certificate** requires a minimum of 15 credits in the courses listed below.

ICCB Code 4205 | Field of Study Code: ACCOU.CER.CLER

Accou	1110	Accounting Procedures	3
		OR	
Accou	1140	Financial Accounting	4
Accou	1175	Microcomputer Accounting	2
Cis	1150	Introduction to Computer Information Systems	3
		OR	
Cis	1110	Using Computers: An Introduction	2

Engli	1101	English Composition 1	3
Math	1100	Business Mathematics	3
Ofti	1100	Introduction to Computer Keyboarding	2

The **Accounting certificate** requires a minimum of 32 credits in the courses listed below.

ICCB Code 4207 | Field of Study Code: ACCOU.CER.

Accou	1140	Financial Accounting	4
Accou	1150	Managerial Accounting	4
Accou	1175	Microcomputer Accounting	2
Accou	2205	Federal Taxation I	3
		OR	
Accou	2251	Cost Accounting	3
		OR	
Accou	2200	Income Tax Return Preparation	3
Busin	1100	Introduction to Business	3
Cis	1150	Introduction to Computer Information Systems	3
		OR	
Cis	1110	Using Computers: An Introduction	2
Cis	1221	Introduction to Spreadsheets	3
Engli	1101	English Composition 1	3
Math	1100	Business Mathematics	3
Ofti	1100	Introduction to Computer Keyboarding	2
Ofti	1210	Word Processing I	3

#### Advanced Accounting certificate

The Advanced Accounting Certificate is designed for CPA Examination candidates who have already earned a baccalaureate degree. The Advanced Accounting certificate requires 34 credits in the courses listed below.essential.

ICCB Code 4209 | Field of Study Code: ACCOU.CER.ADV

Accou	1140	Financial Accounting	4
Accou	1150	Managerial Accounting	4
Accou	2205	Federal Taxation I	3
Accou	2206	Federal Taxation II	3
Accou	2241	Intermediate Accounting I	4
Accou	2242	Intermediate Accounting II	4
Accou	2271	Auditing I	3
Accou	2272	Auditing II	3

28

#### Program Electives

Select six credits from the following courses:			
Accou	2251	Cost Accounting	3
Accou	2260	Advanced Accounting	3
Accou	2265	Governmental and Not-for-Profit Accounting	3

## HEATING, AIR CONDITIONING AND REFRIGERATION

### THREE AAS DEGREES, THREE CERTIFICATES

#### AAS DEGREES

The **Heating, Air Conditioning and Refrigeration Service Technician degree** program offers training in current technology for diagnosing, servicing, repairing, installing and managing heating, air conditioning and refrigeration energy systems.

This degree requires a minimum of 64 credits in program requirements, program electives, electives and general education courses as listed below.

ICCB Code 3902 | Field of Study Code: AIRC.AAS.HVAC

#### Program Requirements

Airc	1100	Refrigeration Principles	3
Airc	1105	Introduction to Safety, Materials and Equipment	3
Airc	1108	Refrigerant Certification	1
Airc	1110	Introduction to Controls	3
Airc	1180	Introduction to Heating	5

Airc	1186	Introduction to Hydronics .....	2
Airc	2201	Residential Air Conditioning .....	3
Airc	2202	Commercial Air Conditioning.....	3
Airc	2210	Commercial Refrigeration .....	5
Airc	2225	Troubleshooting Systems .....	3
Airc	2240	Load Calculations and Duct Design.....	5
			<u>36</u>

Electives .....5  
 Select 5 credits from any 1000- or 2000-level courses.

Program Electives .....5  
 Select at least 5 credits from the courses below.

Airc	1112	Residential Refrigeration .....	3
Airc	1161	Introduction to Sheet Metal.....	2
Airc	1187	Central Heating Plants .....	3
Airc	2205	Heat Pumps.....	2
Airc	2220	Installation.....	3
Airc	2230	Advanced Controls.....	3
Airc	2236	Central Cooling Plants .....	3
Airc	2241	Industrial Air Conditioning Design.....	3
Airc	2250	System Balancing .....	2
Airc	2860	Cooperative Education/Internship (Occupational).....	1 to 4

General Education.....18 to 22  
 (In addition to the courses listed above)

Total Credits Required ..... 64 to 68

The **Contractor degree** provides the technical and business skills requisite to be successful as an HVAC contractor. This degree requires 66 credits in program requirements, electives and general education as listed below.

ICCB Code 3905 | Field of Study Code: AIRC.AAS.CONTRA

Program Requirements

Airc	1100	Refrigeration Principles.....	3
Airc	1105	Introduction to Safety, Materials and Equipment...3	
Airc	1108	Refrigerant Certification.....	1
Airc	1110	Introduction to Controls .....	3
Airc	1180	Introduction to Heating .....	5
Airc	2201	Residential Air Conditioning .....	3
Airc	2225	Troubleshooting Systems .....	3
Airc	2240	Load Calculations and Duct Design.....	5
Airc	2260	Heating and Air Conditioning Contracting .....	3
Busin	1100	Introduction to Business .....	3
Manag	2210	Principles of Management .....	3
			<u>35</u>

Electives .....12  
 Select up to 12 credits from the courses listed below.

Accou	1140	Financial Accounting.....	4
Airc	2862	Cooperative Education/Internship (Occupational) ..2	
Cis	1110	Using Computers: An Introduction.....	2
Manag	2240	Human Resource Management .....	3
Marke	2220	Principles of Selling.....	3

General Education .....19  
 (In addition to the courses listed above.)

Total Credits Required .....66

The **Building Environmental degree** is designed for the individual seeking a career in stationary operations and management. In addition to technical skills, this degree provides requisite business skills considered essential for career advancement. This degree requires a minimum of 65 credits in program requirements, electives and general education as listed below.

ICCB Code 3906 | Field of Study Code: AIRC.AAS.ENVIR

Program Requirements

Airc	1100	Refrigeration Principles.....	3
Airc	1105	Introduction to Safety, Materials and Equipment...3	

Airc	1108	Refrigerant Certification.....	1
Airc	1110	Introduction to Controls .....	3
Airc	1180	Introduction to Heating .....	5
Airc	1187	Central Heating Plants .....	3
Airc	2202	Commercial Air Conditioning.....	3
Airc	2230	Advanced Controls.....	3
Airc	2231	Direct Digital Control of HVAC Systems.....	3
Airc	2236	Central Cooling Plants .....	3
Airc	2250	System Balancing .....	2
Busin	1100	Introduction to Business .....	3
Manag	2210	Principles of Management .....	3
Ofti	1200	MS Office for Professional Staff .....	3
			<u>41</u>

Electives .....6  
 Select at least 6 credits from the courses listed below.

Airc	2862	Cooperative Education/Internship (Occupational) ..2	
Manag	2170	Project Management.....	3
Manag	2240	Human Resource Management .....	3

General Education.....18 to 22  
 (In addition to the courses listed above.)

Total Credits Required .....65 to 69

CERTIFICATES

The **Stationary Operator certificate** requires 34 credits in the courses listed below.

ICCB Code 4901 | Field of Study Code: AIRC.CER.STATOP

Airc	1100	Refrigeration Principles.....	3
Airc	1105	Introduction to Safety, Materials and Equipment...3	
Airc	1108	Refrigerant Certification.....	1
Airc	1110	Introduction to Controls .....	3
Airc	1180	Introduction to Heating .....	5
Airc	1186	Introduction to Hydronics .....	2
Airc	1187	Central Heating Plants .....	3
Airc	2202	Commercial Air Conditioning.....	3
Airc	2230	Advanced Controls.....	3
Airc	2231	Direct Digital Control of HVAC Systems.....	3
Airc	2236	Central Cooling Plants .....	3
Airc	2250	System Balancing .....	2

The **Service Technician certificate** requires 34 credits in the courses listed below.

ICCB Code 4902 | Field of Study Code: AIRC.CER.HVAC

Airc	1100	Refrigeration Principles.....	3
Airc	1105	Introduction to Safety, Materials and Equipment...3	
Airc	1108	Refrigerant Certification.....	1
Airc	1110	Introduction to Controls .....	3
Airc	1161	Introduction to Sheet Metal.....	2
Airc	1180	Introduction to Heating .....	5
Airc	2201	Residential Air Conditioning .....	3
Airc	2202	Commercial Air Conditioning.....	3
Airc	2210	Commercial Refrigeration .....	5
Airc	2220	Installation.....	3
Airc	2225	Troubleshooting Systems .....	3

The **Energy Audit and Analysis certificate** is designed for Heating, Ventilation and Air Conditioning (HVAC) and building inspection contractors to expand their services to include residential and light commercial energy audits and additional services. This certificate requires 10 credits in the courses listed below.

ICCB Code 4903 | Field of Study Code: AIRC.CER.ENERG

Airc	2232	Energy Audits/Economics .....	2
Airc	2240	Load Calculations and Duct Design .....	5
Airc	2260	Heating and Air Conditioning Contracting .....	3

## ANTHROPOLOGY

### CERTIFICATE

The Business Anthropology certificate is designed to increase the marketability of individuals interested in working in cross-cultural and international work environments by sharpening interpersonal and critical-thinking skill-sets as it relates to working in these environments. In addition, the Business Anthropology Certificate will provide a competitive advantage for students seeking placement in a four-year college for applied anthropology. The four classes will cover a broad range of anthropological topics including methods, business anthropology, and cultural anthropology, with a focus on holism (understanding how various aspects of a society are integrated such as family, gender roles, economics, religion and politics), critical thinking and problem solving. The program emphasizes a practical, interdisciplinary, real world approach to anthropology with the purpose of attaining employment outside of academia. This certificate requires 14 credits in the courses listed below.

ICCB Code 4301 | Field of Study Code: ANTHR.CER.BUSIN

Anthr	1100	Cultural Anthropology	.....3
Anthr	1110	Business Anthropology	.....3
Anthr	2100	Introduction to Anthropological Methods	.....4
Anthr	2210	Field Experience in Applied Anthropology	.....4

## ARCHITECTURE

### THREE AAS DEGREES, THREE CERTIFICATES

#### AAS DEGREES

The **Architectural Technology – CADD degree** includes the core group of architecture courses as well as courses designed to prepare students for immediate entry into the workplace as a drafter. This degree requires 67 credits program requirements, program electives and general education as listed below.

ICCB Code 3921 | Field of Study Code: ARCH.AAS.CADD

#### Program Requirements

Arch	1100	Introduction to Architecture	.....3
Arch	1101	Basic Architectural Drafting	.....2
Arch	1111	Building Materials	.....4
Arch	1121	Architectural Design Communication	.....4
Arch	1131	Introduction to Architectural Design	.....4
Arch	1211	Basic Computer-Aided Drafting — AutoCAD	.....3
Arch	1212	Advanced Computer-Aided Drafting — AutoCAD	.....3
Arch	2102	Detailing and Construction Documents	.....5
Arch	2210	Mechanical, Electrical and Plumbing Systems	.....3
Arch	2220	Architectural Computer Modeling	.....2
Arch	2230	Structural Systems	.....3
Arch	2240	Codes, Specifications and Contracts	.....3
Engli	1101	English Composition 1	.....3
Math	1431	Precalculus I	.....5
Physi	1201	General Physics I	.....5
			52

Program Electives .....6

Select 6 credits from the following courses.

Arch	2260	Construction Estimating	.....3
Arch	2840	Architectural Experimental/Pilot Class	.....1 to 6
Cit	1121	Networking Fundamentals	.....3
Inter	1120	Interior Systems	.....2
Inter	1170	Environmental Materials and Applications	.....3
Photo	1101	Foundations of Digital Photography	.....3

General Education .....9

Speech, Humanities and Social/Behavioral Science  
(In addition to the courses listed above)

Total Credits Required .....67

The **Pre-Architecture Technology degree** includes the core group of architecture courses as well as courses designed to prepare students for transfer to baccalaureate or professional programs. The second year curriculum emphasizes portfolio production while the electives allow students to customize their curriculum to match the transfer institution. This degree requires a minimum of 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3922 | Field of Study Code: ARCH.AAS.PRE

#### Program Requirements

Arch	1100	Introduction to Architecture	.....3
Arch	1111	Building Materials	.....4
Arch	1121	Architectural Design Communication	.....4
Arch	1131	Introduction to Architectural Design	.....4
Arch	1211	Basic Computer-Aided Drafting — AutoCAD	.....3
Arch	2201	Architectural Design I	.....5
Arch	2202	Architectural Design II	.....5
Arch	2203	Introduction to Architectural Theory	.....3
Arch	2220	Architectural Comp. Modeling	.....2
Arch	2250	Architectural Presentation and Portfolio	.....3
Engli	1101	English Composition 1	.....3
Math	1431	Precalculus I	.....5
Speec	1100	Fundamentals of Speech Communication	.....3
			OR
Speec	1120	Small-Group Communication	.....3
			OR
Speec	1150	Introduction to Business Communication	.....3
			47

Electives .....9

Nine credits in any 1000- or 2000-level courses

General Education .....9 to 10

Natural Science, Humanities and Social/Behavioral Science requirements (In addition to the courses listed above)

Total Credits Required .....65 to 66

The **Construction Management degree** combines a variety of architecture and business classes to prepare students for entry level positions in construction management and construction firms or for transfer to other institutions. This degree requires a minimum of 67 credits in program requirements, program electives and general education as listed below.

ICCB Code 3924 | Field of Study Code: ARCH.AAS.CONST

#### Program Requirements

Arch	1111	Building Materials	.....4
Arch	1130	Blueprint Reading	.....2
Arch	1141	Construction Methods I	.....2
Arch	1301	Introduction to Construction Management	.....3
Arch	2142	Construction Methods II	.....2
Arch	2150	Basic Surveying	.....2
Arch	2240	Codes, Specifications and Contracts	.....3
Arch	2260	Construction Estimating	.....3
Arch	2270	Construction Scheduling	.....3
Accou	1140	Financial Accounting	.....4
Cis	1150	Introduction to Computer Information Systems	.....3
Engli	1101	English Composition 1	.....3
Manag	1100	Supervision	.....3
Manuf	2280	Industrial Safety	.....2
Math	1115	Technical Mathematics I	.....3
			OR
Math	1431	Precalculus I	.....5
			OR
Math	1533	Finite Mathematics I	.....4
Philo	1114	Business Ethics	.....3
Physi	1100	Physics	.....4
			OR
Physi	1161	Technical Physics I	.....4
			49 to 51

Program Electives.....	12
Students must take 12 credits in the following classes. Only one Math or English class listed below may contribute to the 12 credits.	
Arch 1100 Introduction to Architecture .....	3
Arch 1101 Basic Architectural Drafting .....	2
Arch 1211 Basic Computer-Aided Drafting — AutoCAD.....	3
Arch 1212 Advanced Computer-Aided Drafting — AutoCAD.....	3
Arch 2102 Detailing and Construction Documents .....	5
Arch 2210 Mechanical, Electrical and Plumbing Systems.....	3
Arch 2230 Structural Systems .....	3
Engli 1102 English Composition 2.....	3
Engli 1105 Introduction to Tech. Writing.....	3
Manuf 1160 Technical Static and Strength of Material .....	4
Math 1635 Statistics .....	4
	12

General Education .....	6
Speech and Social/Behavioral Science (In addition to the courses listed above)	
Total Credits Required .....	67 to 69

#### CERTIFICATES

The **Architectural Rendering certificate** gives students specific skills for preparing professional architectural presentations in a variety of media. Students should have a background in architecture or art. This certificate requires 18 credits in the courses listed below.

ICCB Code 4919 | Field of Study Code: ARCH.CER.REND

Arch 1121 Architectural Design Communication.....	4
Arch 1212 Advanced Computer-Aided Drafting — AutoCAD.....	3
Arch 2220 Architectural Comp. Modeling.....	2
Arch 2250 Architectural Presentation and Portfolio.....	3
Art 2221 Painting I.....	3
Photo 1101 Foundations of Digital Photography.....	3

The **Pre-Architecture certificate** provides students with the group of classes commonly required for transfer to an architectural program. This certificate requires a minimum of 34 credits in program requirements, program electives and general education as listed below.

ICCB Code 4920 | Field of Study Code: ARCH.CER.PRE

#### Program Requirements

Arch 1100 Introduction to Architecture .....	3
Arch 1121 Architectural Design Communication.....	4
Arch 1131 Introduction to Architectural Design .....	4
Arch 2201 Architectural Design I.....	5
Arch 2250 Architectural Presentation and Portfolio.....	3
	19

#### Program Electives.....5 to 8

Select two of the following courses based on transfer institution requirements. Requires approval by architecture adviser.

Arch 1211 Basic Computer-Aided Drafting — AutoCAD.....	3
Arch 1212 Advanced Computer-Aided Drafting — AutoCAD.....	3
Arch 2202 Architectural Design II.....	5
Arch 2203 Introduction to Architectural Theory .....	3
Arch 2220 Architectural Comp. Modeling.....	2

#### General Education.....10

Ten credits minimum based on transfer institution requirements. Requires approval by architecture adviser.

Total Credits Required .....	34 to 37
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The **Architectural Technology certificate** prepares students for entry-level positions as drafters in architectural or construction firms. This certificate requires 32 credits in the courses listed below.

ICCB Code 4921 | Field of Study Code: ARCH.CER.ARCH

Arch 1101 Basic Architectural Drafting .....	2
Arch 1111 Building Materials.....	4
Arch 1211 Basic Computer-Aided Drafting — AutoCAD.....	3
Arch 1212 Advanced Computer-Aided Drafting — AutoCAD .....	3
Arch 2102 Detailing and Construction Documents .....	5
Arch 2110 Advanced Architectural CADD.....	3
Arch 2210 Mechanical, Electrical and Plumbing Systems .....	3
Arch 2230 Structural Systems .....	3
Arch 2240 Codes, Specifications and Contracts.....	3
Arch 2260 Construction Estimating.....	3

## AUTOMOTIVE SERVICE TECHNOLOGY

AAS DEGREE, CERTIFICATE

#### AAS DEGREE

The **Automotive Service Technology program** is designed to prepare students for career entry or career advancement in the automotive field. Students will learn skills in diagnosing, servicing and maintaining today's sophisticated vehicles. This program is NATEF-certified. This degree program requires a minimum of 68 credits in program requirements, electives and general education as listed below.

ICCB Code 3909 | Field of Study Code: AUTO.AAS

#### Program Requirements

Auto 1110 Engine Design and Operation .....	3
Auto 1120 Manual Drive Train and Axles .....	4
Auto 1131 Automotive Basic Electricity.....	4
Auto 1140 Suspension, Steering and Alignment.....	3
Auto 1232 Automotive Engine Electricity .....	4
Auto 1240 Braking Systems .....	4
Auto 1250 Automotive Air Conditioning and Heating.....	4
Auto 1261 Engine Controls and Emissions I .....	4
Auto 2120 Automatic Transmission.....	3
Auto 2133 Automotive Body Electricity .....	3
Auto 2162 Engine Controls and Emissions II .....	4
Auto 2220 Advanced Automotive Drivetrains .....	3
Auto 2280 Automotive Service .....	6
	49

#### Program Electives.....1

Select one or more credits from the following courses.

Auto 1040 Automotive for Non-Majors .....	3
Auto 1840 Independent Study – Individualized.....	1 to 4
Auto 2345 Automotive Hybrid Technology .....	2
Auto 2365 Introduction to Diesel Fuel Systems and Emissions .....	2
Auto 2370 A.S.E. Certification Analysis and Technology Update .....	2
Auto 2840 Experimental/Pilot Class.....	1 to 6
Auto 2860 Cooperative Education/Internship (Occupational).....	1 to 4

#### Electives.....2

Two credits required from Global Studies or Contemporary Life Skills (Auto 1110 fulfills this requirement)

#### General Education.....18 to 22

(In addition to the courses listed above)

Total Credits Required .....	68 to 72
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#### CERTIFICATE

The **Automotive Service Technology certificate** requires 50 credits in the courses listed below.

ICCB Code 4909 | Field of Study Code: AUTO.CER

Auto 1110 Engine Design and Operation .....	3
Auto 1120 Manual Drive Train and Axles .....	4



Auto	1131	Automotive Basic Electricity.....	4
Auto	1140	Suspension, Steering and Alignment.....	3
Auto	1232	Automotive Engine Electricity .....	4
Auto	1240	Braking Systems .....	4
Auto	1250	Automotive Air Conditioning and Heating.....	4
Auto	1261	Engine Controls and Emissions I .....	4
Auto	2120	Automatic Transmission.....	3
Auto	2133	Automotive Body Electricity .....	3
Auto	2162	Engine Controls and Emissions II .....	4
Auto	2220	Advanced Automotive Drivetrains .....	3
Auto	2280	Automotive Service .....	6
Program Electives.....			1
Select one or more credits from the following courses.			
Auto	1040	Automotive for Non-Majors.....	3
Auto	1840	Independent Study – Individualized.....	1 to 4
Auto	2345	Automotive Hybrid Technology .....	2
Auto	2365	Introduction to Diesel Fuel Systems and Emissions .....	2
Auto	2370	A.S.E. Certification Analysis and Technology Update .....	2
Auto	2840	Experimental/Pilot Class.....	1 to 6
Auto	2860	Cooperative Education/Internship (Occupational).....	1 to 4

## COMPUTER INFORMATION SYSTEMS (CIS)

FOUR AAS DEGREES, 14 CERTIFICATES

### AAS DEGREES

The **Computer Information Systems program** prepares students to work in the field of computer technology. The **Application and Technical Support Specialist degree** requires a minimum of 64 credits in program requirements, program electives, and general education as listed below.

ICCB Code 3216 | Field of Study Code: CIS.AAS.TECH

#### Program Requirements

Cis	1150	Introduction to Computer Information Systems.....	3
Cis	1160	Windows Command Line .....	2
Cis	1180	Introduction to Networking.....	3
Cis	1205	Office Suite Software and Integration.....	3
Cis	1310	HTML and CSS .....	3
Cis	1400	Programming Logic and Technique .....	4
Cis	1450	Introduction to Linux/Unix Operating Systems .....	3
Cis	1610	Windows Client OS .....	3
Cis	2770	Introduction to System Analysis and Design .....	3
Busin	1111	Customer Service.....	3
Cit	1100	PC Maintenance and Upgrading.....	2
Engli	1105	Introduction to Technical Writing .....	3
			35

Program Electives.....14 to 18  
Select 14 to 18 hours from any Cis courses except Cis 1110.

General Education.....15  
(In addition to the courses listed above)

Total Credits Required.....64 to 68

The **Software Development degree** program prepares students to work in the field of computer technology. This degree program requires 64 credits in program requirements, program electives, electives and general education as listed below.

ICCB Code 3222 | Field of Study Code: CIS.AAS.SOFTW

#### Program Requirements

Cis	1150	Introduction to Computer Information Systems.....	3
Cis	1160	Windows Command Line .....	2
Cis	1180	Introduction to Networking .....	3
Cis	1230	Microcomputer Database Application.....	3

Cis	1310	HTML and CSS .....	3
Cis	1400	Programming Logic and Technique .....	4
Cis	1450	Introduction to Linux/Unix Operating Systems .....	3
Cis	2330	Introduction to XML.....	3
Cis	2770	Introduction to System Analysis and Design .....	3
Cis	2790	Systems Analyst Simulation .....	3
Engli	1105	Introduction to Technical Writing .....	3
			33

**Emphases Courses**.....16  
Choose One of the following Emphases: Software Development: C++ , Java, Visual Basic (VB) or .NET

**C++ Emphasis**.....8  
This emphasis focuses on the creation, maintenance, and support of software applications in the C++ environment.  
Cis 2541 C++ Language Programming.....4  
Cis 2542 Advanced C++ with Data Structure Applications ...4

**Java Emphasis**.....8  
This emphasis focuses on the creation, maintenance, and support of software applications in the Java environment.  
Cis 2571 Introduction to Java ..... 4 || Cis | 2572 | Collections in Java ..... | 4 |

**Visual Basic Emphasis**.....8  
This emphasis focuses on the creation, maintenance, and support of software applications in the VB environment.  
Cis 1510 Graphical User Interface Programming ..... 4 || Cis | 2510 | Advanced Graphical User Interface Programming .. | 4 |

**.NET Emphasis**.....12  
This emphasis focuses on the creation, maintenance, and support of software applications in the .NET environment.  
Cis 1510 Graphical User Interface Programming ..... 4 || Cis | 2350 | Introduction to ASP.NET ..... | 4 |
| Cis | 2561 | Introduction to C# .NET ..... | 4 |

Program Electives.....4 to 8  
Only for the following emphases: Software Development: C++ Option, Java Option, or VB Option: (8 credits in single programming sequence)  
Cis 1510 Graphical User Interface Programming ..... 4 || Cis | 2510 | Advanced Graphic User Interface Programming...4 |  |
Cis	2541	C++ Language Programming.....	4
Cis	2542	Advanced C++ Programming with Data Structure Applications .....	4
Cis	2571	Introduction to Java .....	4
Cis	2572	Collections in Java .....	4

General Education.....15  
(In addition to those listed above)

Total Credits Required.....64

The **Game Programming and Development degree** prepares the student to create and develop computer games using programming languages and development tools used in the game industry. This degree requires a minimum of 64 credits in program requirements, program electives, and general education as listed below.

ICCB Code 3226 | Field of Study Code: CIS.AAS.GAMEP

#### Program Requirements

Cis	1150	Introduction to Computer Information Systems.....	3
Cis	1199	Introduction to Game Industry.....	3
Cis	1200	Game Design .....	3
Cis	1211	2D Game Development .....	3
Cis	1400	Programming Logic and Technique .....	4
Cis	2212	3D Game Development .....	3
Cis	2220	Game Programming Using C++ .....	4

Cis	2250	XNA Game Programming	4
Cis	2260	Game Programming Cross-Platform	3
Cis	2420	Microprocessor Assembly Language	4
Cis	2541	C++ Language Programming	4
Cis	2542	Advanced C++ with Data Structure Applications	4
Physi	1100	Physics	4
Program Electives			3
Select three additional credits in any 2000-level CIS courses.			

General Education .....15 to 17  
(In addition to the courses listed above)

Total Credits Required .....64 to 66

The **Game Design and Development degree** prepares the student to design and develop computer games through application of game design elements and development tools used in the game industry. This degree requires a minimum of 64 credits in program requirements, electives, and general education as listed below.

ICCB Code 3224 | Field of Study Code: CIS.AAS.GAMED

**Program Requirements**

Cis	1150	Introduction to Computer Information Systems	3
Cis	1199	Introduction to Game Industry	3
Cis	1200	Game Design	3
Cis	1201	Advanced Game Design	3
Cis	1211	2D Game Development	3
Cis	1400	Programming Logic and Technique	4
Cis	2212	3D Game Development	3
Cis	2230	Simulation and Serious Game Design	3
Cis	2240	Cross-Platform Game Design	3
Cis	2541	C++ Language Programming	4
Cis	2770	Introduction to Systems Analysis and Design	3
Cis	2790	Systems Analyst Simulation	3
Physi	1100	Physics	4
			42

Electives .....7  
Select seven additional credits from any 1000- or 2000- level courses.

General Education .....15 to 17  
(In addition to the courses listed above)

Total Credits Required .....64 to 66

**CERTIFICATES**

The **Business Productivity Software certificate** requires 19 credits in the courses listed below.

ICCB Code 4924 | Field of Study Code: CIS.CER.BUSPRO

Cis	1130	Windows Basics	2
Cis	1150	Introduction to Computer Information Systems	3
Cis	1205	Office Suite Software and Integration	3
Cis	1221	Introduction to Spreadsheets	3
Cis	1230	Microcomputer Database Application	3
Cis	1240	Presentation Graphics — Windows Based	2
Cis	1300	Web Design Software	3

The **UNIX certificate** requires 16 credits in the courses listed below.

ICCB Code 4929 | Field of Study Code: CIS.CER.UNIX

Cis	1150	Introduction to Computer Information Systems	3
Cis	1400	Programming Logic and Technique	4
Cis	1450	Introduction to Linux/UNIX Operating Systems	3
Cis	2440	Shell Programming for UNIX/Linux	3
Cis	2450	UNIX System Administration	3

The **Desktop Database Proficiency certificate** requires proficiency in using Windows and 10 credits in the courses listed below.

ICCB Code 4932 | Field of Study Code: CIS.CER.DBPRO

Cis	1150	Introduction to Computer Information Systems	3
Cis	1230	Microcomputer Database Application	3
Cis	2710	Database Management	4

The **Spreadsheet Proficiency certificate** requires 17 credits in the courses listed below.

ICCB Code 4933 | Field of Study Code: CIS.CER.SPREAD

Cis	1130	Windows Basics	2
Cis	1150	Introduction to Computer Information Systems	3
Cis	1205	Office Suite Software and Integration	3
Cis	1221	Introduction to Spreadsheets	3
Cis	1222	Advanced Spreadsheets	2
Cis	1400	Programming Logic and Technique	4

The **Web Programmer certificate** requires 31 credits in the courses listed below.

ICCB Code 4934 | Field of Study Code: CIS.CER.WEBPRG

Cis	1120	The Internet	2
Cis	1130	Windows Basics	2
Cis	1150	Introduction to Computer Information Systems	3
Cis	1180	Introduction to Networking	3
Cis	1300	Web Design Software	3
Cis	1310	HTML and CSS	3
Cis	1400	Programming Logic and Technique	4
Cis	2320	JavaScript and Advanced HTML	3
Cis	2571	Introduction to Java	4
Cis	2572	Collections in Java	4

The **Visual BASIC Language Proficiency certificate** requires 15 credits in the courses listed below.

ICCB Code 4936 | Field of Study Code: CIS.CER.VB

Cis	1150	Introduction to Computer Information Systems	3
Cis	1400	Programming Logic and Technique	4
Cis	1510	Graphical User Interface Programming	4
Cis	2510	Advanced Graphical User Interface Programming	4

The **C++ Language Proficiency certificate** requires 15 credits in the courses listed below.

ICCB Code 4937 | Field of Study Code: CIS.CER.CPLUS

Cis	1150	Introduction to Computer Information Systems	3
Cis	1400	Programming Logic and Technique	4
Cis	2541	C++ Language Programming	4
Cis	2542	Advanced C++ Programming with Data Structure Applications	4

The **Web Technician certificate** requires 20 credits in the courses listed below.

ICCB Code 4939 | Field of Study Code: CIS.CER.WEBT

Cis	1120	The Internet	2
Cis	1130	Windows Basics	2
Cis	1150	Introduction to Computer Information Systems	3
Cis	1300	Web Design Software	3
Cis	1310	HTML and CSS	3
Cis	1400	Programming Logic and Technique	4
Cis	2320	JavaScript and Advanced HTML	3

The **Enterprise Database Proficiency certificate** requires 13 credits in the courses listed below.

ICCB Code 4945 | Field of Study Code: CIS.CER.ENTDB

Cis	1400	Programming Logic and Technique	4
Cis	2720	Structured Query Language (SQL) I	3

Cis	2725	Enterprise SQL Application.....	3
		OR	
Cis	2730	Enterprise Database Development .....	3
Cis	2770	Introduction to System Analysis and Design .....	3

The **JAVA Language Proficiency certificate** requires 15 credits in the courses listed below.

ICCB Code 4947 | Field of Study Code: CIS.CER.JAVA

Cis	1150	Introduction to Computer Information Systems .....	3
Cis	1400	Programming Logic and Technique .....	4
Cis	2571	Introduction to Java .....	4
Cis	2572	Collections in Java .....	4

The **LINUX certificate** requires 16 credits in the courses listed below.

ICCB Code 4949 | Field of Study Code: CIS.CER.LINUX

Cis	1150	Introduction to Computer Information Systems .....	3
Cis	1400	Programming Logic and Technique .....	4
Cis	1450	Introduction to Linux/UNIX Operating Systems .....	3
Cis	2440	Shell Programming for UNIX/Linux.....	3
Cis	2455	Linux System Administration .....	3

The **Game Design and Development certificate** will prepare the student for careers in computer game design and development. This certificate requires 18 credits in the courses listed below.

ICCB Code 4224 | Field of Study Code: CIS.CER.GAMED

Cis	1199	Introduction to Game Industry.....	3
Cis	1200	Game Design .....	3
Cis	1201	Advanced Game Design.....	3
Cis	1211	2D Game Development .....	3
Cis	2230	Simulation and Serious Game Design .....	3
Cis	2240	Cross-Platform Game Design.....	3

The **Game Programming and Development certificate** prepares the student to create and develop computer games using programming languages and development tools used in the game industry. This certificate requires 36 credits in the courses listed below.

ICCB Code 4226 | Field of Study Code: CIS.CER.GAMEP

Cis	1199	Introduction to Game Industry.....	3
Cis	1200	Game Design .....	3
Cis	1400	Programming Logic and Technique .....	4
Cis	2212	3D Game Development .....	3
Cis	2220	Game Programming Using C++ .....	4
Cis	2250	XNA Game Programming .....	4
Cis	2260	Game Programming Cross-Platform.....	3
Cis	2420	Microprocessor Assembly Language .....	4
Cis	2541	C++ Language Programming .....	4
Cis	2542	Advanced C++ with Data Structure Applications...4	

The **Windows Network Administration Certificate for Information Technology (IT)** professionals with the knowledge to design and implement a Microsoft network using Active Directory (AD). This certificate requires 21 credits in the courses listed below.

ICCB Code 4948 | Field of Study Code: CIS.CER.NETWK

Cis	1150	Introduction to Computer Information Systems ....	3
Cis	1180	Introduction to Networking .....	3
Cis	1610	Windows Client OS .....	3
Cis	1620	Windows Server OS.....	3
Cis	1630	Windows Server Active Directory (AD).....	3
Cis	1660	Managing a Microsoft Windows Server Network...3	
Cis	1670	Planning a Microsoft Windows Server Network.....3	

## COMPUTER AND INTERNETWORKING TECHNOLOGIES (CIT)

TWO AAS DEGREES, TEN CERTIFICATES

### AAS DEGREES

The **Computer and Internetworking Technician program** is designed to provide the student a broad exposure to computer systems as well as networking. Design of systems and networks is emphasized along with network security, convergence, and troubleshooting skills. This degree program requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3916 | Field of Study Code: CIT.AAS

#### Program Requirements

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless.....	3
Cit	1124	Accessing the WAN.....	3
Cit	1612	Configuring Windows PC Desktop Operating System .....	3
Cit	1613	Enterprise Desktop PC Support Technician.....	3
Cit	1635	Network Plus .....	3
Cit	1640	Security Plus.....	3
Cit	1645	Internet Telephony.....	3
		OR	
Cit	2410	CCNA Voice.....	3
Cit	2251	CCNA Security .....	3
			<u>38</u>

#### Program Electives

Select eight credits from any 1000- or 2000-level CIT course or any of the following:

Cis	1450	Introduction to LINUX/UNIX Operating Systems ...3	
Ofti	2600	Professional Development.....	3
			<u>8</u>

General Education.....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....64 to 68

The **Information Security training degree** satisfies the national training and education standards for the duties and responsibilities of Information Systems Security (INFOSEC) Professionals (NSTISSI 4011). The Information Systems Security (INFOSEC) 4011 Professionals degree requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3011 | Field of Study Code: CIT.AAS.INFO

#### Program Requirements

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless.....	3
Cit	1124	Accessing the WAN.....	3
Cit	1640	Security Plus.....	3
Cit	2251	CCNA Security .....	3
Crimj	1140	Principles of Security Administration.....	3
Crimj	1165	Computers and Criminal Justice .....	3

Program Electives.....14

Select 14 credits from any 1000- or 2000-level CIT course and the following can be included:

Cis	1450	Introduction to LINUX/UNIX Operating Systems.....	3
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General Education.....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....64 to 68

**CERTIFICATES**

The **CCNA Security certificate** meets the need of today’s IT professionals responsible for network security. It validates the knowledge required to install, troubleshoot, and monitor Cisco security network devices. In addition, CCNA Security confirms an individual’s skills for job roles such as network security specialist and security administrator. This certificate requires 15 credits in the courses listed below.

ICCB Code 4907 | Field of Study Code: CIT.CER.CCNA

Cit	1121	Networking Fundamentals .....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless .....	3
Cit	1124	Accessing the WAN .....	3
Cit	2251	CCNA Security .....	3

The **System Support Specialist certificate** prepares students to work as Computer and Network Support Specialists. Upon completion, students are prepared for the following industrial certifications: CompTIA A+, CompTIA Net+, and CompTIA Security+. This certificate requires 17 credits in the courses listed below.

ICCB Code 4910 | Field of Study Code: CIT.CER.SYS

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	1635	Network Plus .....	3
Cit	1640	Security Plus .....	3

The **Computer and Internetworking Technologies: CompTIA A+ and Network+ PC Technician certificate** requires 14 credits in the courses listed below.

ICCB Code 4914 | Field of Study Code: CIT.CER.TECH

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	1635	Network Plus .....	3

The **Network Professional certificate** requires 12 credits in the courses listed below.

ICCB Code 4915 | Field of Study Code: CIT.CER.NET

Cit	2241	Cisco Certified Network Professional-ROUTE .....	3
Cit	2242	Cisco Certified Network Professional II .....	3
Cit	2243	Cisco Certified Network Professional-SWITCH .....	3
Cit	2244	Cisco Certified Network Professional-TSHOOT .....	3

The **Computer and Internetworking Technologies certificate** requires 35 credits in the courses listed below.

ICCB Code 4916 | Field of Study Code: CIT.CER

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless.....	3
Cit	1124	Accessing the WAN.....	3
Cit	1635	Network Plus .....	3
Cit	1640	Security Plus.....	3
Cit	1645	Internet Telephony.....	3
Cit	2251	CCNA Security .....	3
Cit	2651	Computer Forensics I.....	3

The **Internetworking Technician certificate** requires 12 credits in the courses listed below.

ICCB Code 4918 | Field of Study Code: CIT.CER.INET

Cit	1121	Networking Fundamentals.....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless.....	3
Cit	1124	Accessing the WAN.....	3

The **Computer Forensics certificate** prepares students to use the latest methods in data preservation, identification and extraction from various file systems. Upon completion, students will perform forensic analysis of systems using powerful examination toolkits. Students learn universal practices in forensic investigations and evidence handling. The certificate requires 23 credits in the courses listed below.

ICCB Code 4961 | Field of Study Code: CIT.CER.FOREN

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	2651	Computer Forensics I.....	3
Cit	2652	Computer Forensics II.....	3
Cis	1450	Introduction to Linux/UNIX Operating Systems.....	3
Crimj	1153	Rules of Evidence .....	3

The **Intrusion Prevention Systems Specialist (IPS) certificate** requires 15 credits in the courses listed below.

ICCB Code 4962 | Field of Study Code: CIT.CER.INTPREV

Cit	1121	Networking Fundamentals.....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless.....	3
Cit	1124	Accessing the WAN.....	3
Cit	2251	CCNA Security .....	3

The **Voice over IP Telephony Specialist certificate** provides the foundations in design, installation, and troubleshooting, and use of Voice over IP related software and hardware. This certificate requires 18 hours in the courses listed below.

ICCB Code 4964 | Field of Study Code: CIT.CER.VOICE

Cit	1121	Networking Fundamentals .....	3
Cit	1122	Routing Protocols and Concept .....	3
Cit	1123	LAN Switching and Wireless .....	3
Cit	1124	Accessing the WAN .....	3
Cit	2411	Cisco Voice Over IP .....	3
Cit	2412	Quality of Service .....	3

Certificate program participants complete certificate courses that satisfy the national training and education standards for the duties and responsibilities of Information Systems Security (INFOSEC) Professionals (NSTISSI 4011). The Information Systems Security (INFOSEC) 4011 Professionals certificate requires 32 credits in the courses listed below.

ICCB Code 4011 | Field of Study Code: CIT.CER.INFO

Cit	1100	PC Maintenance and Upgrading.....	2
Cit	1111	Computer and Hardware Maintenance.....	3
Cit	1112	Advanced System Maintenance.....	3
Cit	1121	Networking Fundamentals.....	3
Cit	1122	Routing Protocols and Concepts .....	3
Cit	1123	LAN Switching and Wireless.....	3
Cit	1124	Accessing the WAN.....	3
Cit	1640	Security Plus.....	3
Cit	2251	CCNA Security .....	3
Crimj	1140	Principles of Security Administration.....	3
Crimj	1165	Computers and Criminal Justice .....	3



**COSMETOLOGY**

AAS DEGREE, CERTIFICATE

**AAS DEGREE**

Students will learn professional-level techniques in hair design, chemical processes, aesthetics and nail technology. It prepares students for state certification for the Illinois Cosmetology License from the Department of Professional and Financial Regulations. The

**Cosmetology degree** requires 64 credits in program requirements and general education courses as listed below.

ICCB Code 3528 | Field of Study Code: COSME.AAS

**Program Requirements**

Cosme 1101	Salon Safety and Sanitation I.....	2
Cosme 1103	Cosmetic Chemical Services I.....	3
Cosme 1105	Introduction to Basic Hairstyling I.....	3
Cosme 1107	Introduction to Basic Thermal Styling I.....	2
Cosme 1111	Introduction to Hair Styling II.....	2
Cosme 1113	Introduction to Chemical Services II.....	3
Cosme 1115	Salon Operations I.....	3
Cosme 1117	Introduction to Esthetics and Nail Technology I.....	2
Cosme 1120	License Review I.....	2
Cosme 2201	Hairstyling III.....	3
Cosme 2203	Chemical Services III.....	3
Cosme 2205	Advanced Esthetics and Nail Technology.....	2
Cosme 2207	Salon Safety and Sanitation II.....	2
Cosme 2221	Advanced Hair Styling.....	2
Cosme 2223	Advanced Chemical Services I.....	3
Cosme 2225	Salon Operations II.....	3
Cosme 2227	Advanced Thermal Styling.....	2
Cosme 2250	License Review II.....	2
Cosme 2253	Advanced Chemical Services II.....	2
		<u>46</u>

General Education.....18

Students must complete a total of 18 credits of general education requirements, including Chemistry 1105 and Speech 1120. (In addition to the courses above.)

Total Credits Required.....64

**CERTIFICATE**

The **Cosmetology certificate** requires 46 credits in the courses listed below.

ICCB Code 4528 | Field of Study Code: COSME.CER

Cosme 1101	Salon Safety and Sanitation I.....	2
Cosme 1103	Cosmetic Chemical Services I.....	3
Cosme 1105	Introduction to Basic Hairstyling I.....	3
Cosme 1107	Introduction to Basic Thermal Styling I.....	2
Cosme 1111	Introduction to Hair Styling II.....	2
Cosme 1113	Introduction to Chemical Services II.....	3
Cosme 1115	Salon Operations I.....	3
Cosme 1117	Introduction to Esthetics and Nail Technology I.....	2
Cosme 1120	License Review I.....	2
Cosme 2201	Hairstyling III.....	3
Cosme 2203	Chemical Services III.....	3
Cosme 2205	Advanced Esthetics and Nail Technology.....	2
Cosme 2207	Salon Safety and Sanitation II.....	2
Cosme 2221	Advanced Hair Styling.....	2
Cosme 2223	Advanced Chemical Services I.....	3
Cosme 2225	Salon Operations II.....	3
Cosme 2227	Advanced Thermal Styling.....	2
Cosme 2250	License Review II.....	2
Cosme 2253	Advanced Chemical Services II.....	2

**CRIMINAL JUSTICE**

TWO AAS DEGREES, FIVE CERTIFICATES

**AAS DEGREES**

The **Criminal Justice program** is designed to prepare students for career entry or career advancement in law enforcement and criminal justice agencies. This program is particularly useful for those pursuing careers with local and state law enforcement agencies and it can also prepare students for entry-level correctional and private security positions. Also, an Associate in Arts (AA) transfer option is available in Criminal Justice. This degree requires 64 credits in program requirements, program electives, electives and general education as listed below.

ICCB Code 3464 | Field of Study Code: CRIMJ.AAS

**Program Requirements**

Crimj 1100	Introduction to Criminal Justice.....	3
Crimj 1151	Constitutional Law.....	3
		<u>6</u>

Program Electives.....15

Select from any 1000- or 2000-level Criminal Justice courses (except Crimj 1100 and Crimj 1151).

Electives.....21  
(Select from any 1000- or 2000-level courses.)General Education.....22  
(In addition to the courses listed above)

Total Credits Required.....64

The **Homeland Security degree** is designed to increase the knowledge for personnel working in the areas of public administration, public safety, public health, security management, law enforcement, and personnel in corporations for overseeing in-house security programs. The degree provides an introduction to the threats posed by domestic and international terrorism, the concepts of emergency management and strategies for preventing, responding and countering terrorism, natural disasters, and other catastrophic events. Students will explore the best practices behind successful security planning and threat assessment, while learning the key principles of emergency management and disaster planning. This degree requires a minimum of 64 credits in program requirements, program electives, electives and general education as listed below.

ICCB Code 3465 | Field of Study Code: CRIMJ.AAS.HOME

**Program Requirements**

Crimj 1100	Introduction to Criminal Justice.....	3
Crimj 1145	Introduction to Homeland Security.....	3
Crimj 1151	Constitutional Law.....	3
Crimj 2150	Multiculturalism and Diversity in Criminal Justice.....	3
Pols 1100	Introduction to Political Science.....	3
Pols 2230	Introduction to Peace and Conflict Studies.....	3

Program Electives.....18

Select 18 credits from the following courses below.

Crimj 1146	Introduction to Border, Transportation and Physical Security.....	3
Crimj 1147	Introduction to Domestic and International Terrorism.....	3
Crimj 1148	Emergency Management.....	3
Crimj 2110	Continuity of Operations.....	3
Crimj 2120	Critical Incident Management.....	3
Crimj 2130	Disaster Management and Response.....	3
Crimj 2140	Introduction to Intelligence for Homeland Security.....	3
Crimj 2160	Introduction to Bio Security and Bio Terrorism.....	3

Electives.....10  
Select 10 credits from any 1000- or 2000-level courses.

General Education.....18 to 22

(In addition to courses listed above)

Total Credits Required .....64 to 68

CERTIFICATES

The **Emergency Management certificate** is designed to increase the knowledge for personnel working in the areas of public administration, public safety, security management, law enforcement, and executives in corporations responsible for overseeing in-house security programs. Students who complete the certificate will gain expertise in the proactive aspects of planning and strategy as well as the reactive aspects of crisis management and enterprise and organizational continuity. In addition to the technical and logistical issues facing emergency management professionals, the program focuses on understanding the importance of planning and response as they relate to emergency management. This certificate requires 15 credits in the courses listed below.

ICCB Code 4431 | Field of Study Code: CRIMJ.CER.EMER

Table with 3 columns: Course ID, Course Name, Credits. Includes Introduction to Homeland Security, Emergency Management, Continuity of Operations, Critical Incident Management, Disaster Management and Response.

The **Criminal Justice certificate** requires 30 credits in the courses listed below.

ICCB Code 4464 | Field of Study Code: CRIMJ.CER

Table with 3 columns: Course ID, Course Name, Credits. Includes Introduction to Criminal Justice, Constitutional Law, Criminal Law, Rules of Evidence, Criminal Investigation, Juvenile Delinquency, English Composition 1, American Politics, General Psychology, Introduction to Sociology.

The **Homeland Security certificate** program is designed to increase knowledge for personnel working in the areas of public administration, public safety, security management and law enforcement, and for executives in corporations responsible for overseeing in-house security programs. It provides an introduction to the threats posed by domestic and international terrorism, as well to strategies for countering those threats. Students will explore the best practices behind successful security planning and threat assessment, while learning the key principles of emergency management and disaster planning. The certificate requires 30 credits in the courses listed below.

ICCB Code 4465 | Field of Study Code: CRIMJ.CER.HOME

Table with 3 columns: Course ID, Course Name, Credits. Includes Introduction to Criminal Justice, Introduction to Homeland Security, Introduction to Border, Transportation and Physical Security, Introduction to Domestic and International Terrorism, Emergency Management, Constitutional Law, Introduction to Intelligence for Homeland Security, Multiculturalism and Diversity in Criminal Justice, Introduction to Bio Security and Bio Terrorism, Introduction to Globalization, Introduction to Political Science, Cultural Anthropology.

The **Forensic Criminal Investigation certificate** is designed to increase the knowledge and skills of students and professionals who either have an interest or are currently employed in the field of criminal justice or private investigations. Students will be introduced to the study and techniques of forensic science as it relates to crime scene investigations. This certificate requires 22 credits in the courses listed below.

ICCB Code 4463 | Field of Study Code: CRIMJ.CER.FCI

Table with 3 columns: Course ID, Course Name, Credits. Includes Introduction to Criminal Justice, Rules of Evidence, Criminal Investigation, Introduction to Forensic Science and Chemistry, Violent Crime, Introduction to Forensic Anthropology, Introduction to Forensic Science and Chemistry.

The theories, principles, and practices of private security and loss prevention. In addition to exposure to the technical and philosophical aspects of the profession, students will develop an understanding of the U.S. Criminal justice system and applicable constitutional concepts. The **Private Security certificate** requires 18 credits in the courses listed below.

ICCB Code 4462 | Field of Study Code: CRIMJ.CER.PRIV

Table with 3 columns: Course ID, Course Name, Credits. Includes Introduction to Criminal Justice, Police Operations and Procedures, Principles of Security Administration, Contemporary Issues in Private Security, Private Security and Law Enforcement, Constitutional Law.

CULINARY AND HOSPITALITY MANAGEMENT

Culinary Arts

TWO DEGREES, TWO CERTIFICATES

AAS DEGREES

The **Culinary Arts program** provides an opportunity for students to learn the necessary skills to begin or enhance a career in the hospitality industry, the nation's largest retail employer. The **Culinary Arts degree** program consists of a minimum of 64 credits in program requirements and general education as listed below.

ICCB Code 3231 | Field of Study: CULIN.AAS.CUART

Program Requirements

Table with 3 columns: Course ID, Course Name, Credits. Includes Culinary Arts: Quantity Food Prep I/II, Culinary Measurements and Conversions, Nutrition for the Foodservice Professional, Foodservice Sanitation, Food and Beverage Service and Sales, Pastry Arts - Baking and Patisserie I/II, Food, Beverage and Equipment Purchasing, Culinary Arts - Garde Manger, Culinary Arts - International Cuisine, Culinary Arts - Classical Cuisine, Cooperative Education/Internship (Occupational), Introduction to the Hospitality Industry, Supervision in the Hospitality Industry.

General Education .....18 to 22 (In addition to the above courses)

Total Credits Required .....64 to 68

The **Baking and Pastry Arts Degree** requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3232 | Field of Study Code: CULIN.AAS.BAKE

**Program Requirements**

Culin	1104	Cake Decorating and Confectionery	.....2
Culin	1107	Advanced Decorative Techniques	.....2
Culin	1108	Culinary Measurements & Conversions	.....2
Culin	1109	Nutrition for the Foodservice Professional	.....2
Culin	1120	Foodservice Sanitation	.....2
Culin	1171	Pastry Arts – Baking and Patisserie I	.....4
Culin	1172	Pastry Arts – Baking and Patisserie II	.....4
Culin	2111	Speciality and Alternative Baking	.....3
Culin	2152	Food, Beverage and Equipment Purchasing	.....3
Culin	2273	Pastry Arts – Baking and Patisserie III	.....4
Culin	2863	Cooperative Education/Internship (Occupational)	..3
Hosp	1100	Introduction to the Hospitality Industry	.....3
Hosp	1121	Supervision in the Hospitality Industry	.....3
Hosp	2275	Hospitality Concept Design	.....2
Hosp	2280	Hospitality Marketing Management	.....3
			42

Program Electives .....3

Students may choose any Hospitality or Culinary Arts class to satisfy this elective credit (In addition to courses listed above).  
 General Education .....19 to 22  
 Refer to General Education requirements for AAS degree.

Total Credits Required .....64 to 67

**CERTIFICATES**

The **Baking and Pastry Arts certificate** requires 45 credits in the courses below.

ICCB Code 4232 | Field of Study Code: CULIN.CER.BAKE

**PROGRAM REQUIREMENTS**

Culin	1104	Cake Decorating and Confectionery	.....2
Culin	1107	Advanced Decorative Techniques	.....2
Culin	1108	Culinary Measurements and Conversions	.....2
Culin	1109	Nutrition for the Foodservice Professional	.....2
Culin	1120	Foodservice Sanitation	.....2
Culin	1171	Pastry Arts – Baking and Patisserie I	.....4
Culin	1172	Pastry Arts – Baking and Patisserie II	.....4
Culin	2111	Specialty and Alternative Baking	.....3
Culin	2152	Food, Beverage and Equipment Purchasing	.....3
Culin	2273	Pastry Arts – Baking and Patisserie III	.....4
Culin	2863	Cooperative Education/Internship (Occupational)	..3
Hosp	1100	Introduction to the Hospitality Industry	.....3
Hosp	1121	Supervision in the Hospitality Industry	.....3
Hosp	2275	Hospitality Concept Design	.....2
Hosp	2280	Hospitality Marketing Management	.....3
			42

Program Electives .....3

Select three credits from any course in the Culinary Arts and Hospitality Management program. (In addition to the courses above)

The **Culinary Arts certificate** requires 46 credits in the courses listed below.

ICCB Code 4233 | Field of Study Code: CULIN.CER.CUART

Culin	1101	Culinary Arts: Quantity Food Prep I	.....4
Culin	1102	Culinary Arts: Quantity Food Prep II	.....4
Culin	1108	Culinary Measurements and Conversions	.....2
Culin	1109	Nutrition for the Foodservice Professional	.....2
Culin	1120	Foodservice Sanitation	.....2
Culin	1151	Food and Beverage Service and Sales	.....2
Culin	1171	Pastry Arts – Baking and Patisserie I	.....4
Culin	1172	Pastry Arts – Baking and Patisserie II	.....4
Culin	2152	Food, Beverage and Equipment Purchasing	.....3

Culin	2153	Culinary Arts – Garde Manger	.....3
Culin	2205	Culinary Arts – International Cuisine	.....3
Culin	2210	Culinary Arts – Classical Cuisine	.....4
Culin	2863	Cooperative Education/Internship (Occupational)	..3
Hosp	1100	Introduction to the Hospitality Industry	.....3
Hosp	1121	Supervision in the Hospitality Industry	.....3

**Hospitality Management**

TWO AAS DEGREES, FOUR CERTIFICATES

**AAS DEGREES**

The **Hospitality Management degree** requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3236 | Field of Study Code: HOSPAAS.MGMT

**Program Requirements**

Hosp	1100	Introduction to the Hospitality Industry	.....3
Hosp	1111	Front Office Operations	.....3
Hosp	1112	Hospitality Facilities Management	.....3
Hosp	1121	Supervision in the Hospitality Industry	.....3
Hosp	1140	Quality Management of Service in the Hospitality Industry	.....3
Hosp	2130	Hospitality Industry Accounting	.....3
Hosp	2230	Law for the Hospitality Industry	.....2
Hosp	2253	Professional Meeting and Event Management	.....3
Hosp	2280	Hospitality Marketing Management	.....3
Hosp	2285	Advanced Hospitality Operations	.....3
Hosp	2862	Cooperative Education/Internship (Occupational)	..2
Hosp	2863	Cooperative Education/Internship (Occupational)	..3
Culin	1120	Foodservice Sanitation	.....2
Culin	1151	Food and Beverage Services and Sales	.....2
			38

Program Electives .....8

You must choose eight credits from any non-required course within Culinary Arts, Hospitality Management or Travel, Tourism and Event Planning program areas. (In addition to the courses listed above)

General Education .....18 to 22  
 (In addition to the courses listed above)

Total Credits Required .....64 to 68

The **Hospitality Management program** provides an opportunity for students to learn the necessary skills to begin or enhance a career in the hospitality industry, the nation's largest retail employer.

The **Restaurant Management degree** requires a minimum of 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3235 | Field of Study Code: HOSPAAS.REST

**Program Requirements**

Hosp	1100	Introduction to the Hospitality Industry	.....3
Hosp	1112	Hospitality Facilities Management	.....3
Hosp	1121	Supervision in the Hospitality Industry	.....3
Hosp	2130	Hospitality Industry Accounting	.....3
Hosp	2230	Law for the Hospitality Industry	.....2
Hosp	2261	Beverage Management Operation	.....2
Hosp	2275	Hospitality Concept Design	.....2
Hosp	2280	Hospitality Marketing Management	.....3
Hosp	2285	Advanced Hospitality Operations	.....3
Hosp	2862	Cooperative Education/Internship (Occupational)	..2
Hosp	2863	Cooperative Education/Internship (Occupational)	..3
Culin	1101	Culinary Arts: Quantity Food Prep I	.....4
Culin	1102	Culinary Arts: Quantity Food Prep II	.....4
Culin	1109	Nutrition for the Foodservice Professional	.....2
Culin	1120	Foodservice Sanitation	.....2
Culin	1151	Food and Beverage Service and Sales	.....2

Culin	2152	Food, Beverage & Equipment Purchasing .....	3
			44
Program Electives .....			3
Select three credits from any course in the Culinary Arts and Hospitality Management Program. (In addition to the courses listed above)			
General Education .....			18 to 22
(In addition to the courses listed above)			
Total Credits Required .....			65 to 69

#### CERTIFICATES

The **Hospitality Foundations certificate** requires 12 credits in the courses listed below.

ICCB Code 4234 | Field of Study Code: HOSPCER.FOUN

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations .....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	1140	Quality Management of Service in the Hospitality Industry .....	3

The **Restaurant Management certificate** requires 47 credits in the courses listed below.

ICCB Code 4235 | Field of Study Code: HOSPCER.REST

#### PROGRAM REQUIREMENTS

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1112	Hospitality Facilities Management .....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	2130	Hospitality Industry Accounting .....	3
Hosp	2230	Law for the Hospitality Industry .....	2
Hosp	2261	Beverage Management Operation .....	2
Hosp	2275	Hospitality Concept Design .....	2
Hosp	2280	Hospitality Marketing Management .....	3
Hosp	2285	Advanced Hospitality Operations .....	3
Hosp	2862	Cooperative Education/Internship (Occupational) ..	2
Hosp	2863	Cooperative Education/Internship (Occupational) ..	3
Culin	1101	Culinary Arts: Quantity Food Prep I .....	4
Culin	1102	Culinary Arts: Quantity Food Prep II .....	4
Culin	1120	Foodservice Sanitation .....	2
Culin	1151	Food and Beverage Service and Sales .....	2
Culin	2152	Food, Beverage and Equipment Purchasing .....	3
			44

Program Electives .....

Choose 3 credits with the Culinary Arts or Hospitality Management program area. (In addition to the courses listed above)

The **Hospitality Management: Operations certificate** requires 31 credits in the courses listed below.

ICCB Code 4236 | Field of Study Code: HOSPCER.OPER

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations .....	3
Hosp	1112	Hospitality Facilities Management .....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	1140	Quality Management of Service in the Hospitality Industry .....	3
Hosp	2253	Professional Meeting and Event Management .....	3
Hosp	2280	Hospitality Marketing Management .....	3
Hosp	2285	Advanced Hospitality Operations .....	3
Hosp	2862	Cooperative Education/Internship (Occupational) ..	2
Hosp	2863	Cooperative Education/Internship (Occupational) ..	3
Culin	1151	Food and Beverage Service and Sales .....	2

The **Hospitality Sales and Marketing certificate** requires 20 credits in the courses listed below.

ICCB Code 4239 | Field of Study Code: HOSPCER.SALE

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations .....	3
Hosp	2203	Professional Catering and Banquet Management ..	3
Hosp	2253	Professional Meeting and Event Management .....	3
Hosp	2280	Hospitality Marketing Management .....	3
Hosp	2862	Cooperative Education/Internship(Occupational) ..	2
Hosp	2863	Cooperative Education/Internship(Occupational) ..	3

#### DENTAL HYGIENE

##### AAS DEGREE

The **Dental Hygiene program** prepares its graduates to provide comprehensive oral health care services in a variety of settings. Upon successful completion of the program and passing of the National Dental Hygiene Examination and Regional Board Examination, graduates will be eligible to apply for mandatory state licensure. This degree requires 82 credits in program requirements and general education as listed below

ICCB Code 3117 | Field of Study Code: DEHYG.AAS

##### Program Requirements

Dehyg	1101	Principles in Dental Hygiene I .....	3
Dehyg	1102	Principles in Dental Hygiene II .....	2
Dehyg	1105	Dental Materials/Expanded Functions .....	3
Dehyg	1112	Dental Radiology I .....	2
Dehyg	1115	Dental Tooth Anatomy and Morphology .....	2
Dehyg	1120	Preclinical Dental Hygiene I .....	1
Dehyg	1121	Clinical Dental Hygiene I .....	1
Dehyg	1125	Head and Neck Anatomy: Histology and Embryology .....	2
Dehyg	1135	Applied Nutrition and Biochemistry for the Dental Hygienist .....	2
Dehyg	1136	General and Oral Pathology .....	2
Dehyg	1145	Medical Emergencies in a Dental Office .....	1
Dehyg	2201	Dental Hygiene Theory I .....	2
Dehyg	2202	Dental Hygiene Theory II .....	2
Dehyg	2211	Periodontics I .....	2
Dehyg	2212	Periodontics II .....	2
Dehyg	2213	Dental Radiology II .....	2
Dehyg	2222	Clinical Dental Hygiene II .....	1
Dehyg	2223	Clinical Dental Hygiene III .....	2
Dehyg	2224	Clinical Dental Hygiene IV .....	2
Dehyg	2225	Review of Dental Literature .....	1
Dehyg	2232	Community Dental Health I .....	2
Dehyg	2233	Community Dental Health II .....	2
Dehyg	2235	Dental Pharmacology and Local Anesthetics .....	2
Dehyg	2245	Ethics and Jurisprudence: Practice Management for the Dental Hygienist .....	2
Anat	1551	Human Anatomy and Physiology I .....	4
		AND	
Anat	1552	Human Anatomy and Physiology II .....	4
		OR	
Anat	1571	Anatomy and Physiology with Cadaver I .....	4
		AND	
Anat	1572	Anatomy and Physiology with Cadaver II .....	4
Chemi	1211	General Chemistry .....	5
		OR	
Chemi	1551	Principles of Chemistry I .....	5
Engli	1101	English Composition I .....	3
Math	1102	Mathematics for Health Sciences .....	3
Micro	1420	Microbiology .....	4
Psych	1100	General Psychology .....	3
Socio	1100	Introduction to Sociology .....	3
Speec	1100	Fundamentals of Speech Communication .....	3



General Education .....	5
Two credits in either a Global/Multicultural Studies or a Contemporary Life Skills course, and 3 additional credits in Humanities and Fine Arts	
Total Credits Required .....	82

## DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE CERTIFICATE

The **Nuclear Medicine Technology certificate** is a 12- to 15-month program that involves evening classes and clinical education three days a week. Upon successful completion, graduates become eligible to sit for the American Registry of Radiologic Technologists (ARRT) and the Nuclear Medicine Technologist Certification Board (NMTCB). This certificate requires 40 credits in the courses listed below.

ICCB Code 4173 | Field of Study Code: DMIN.CER

Dmin 1100 Basics of Nuclear Medicine .....	3
Dmin 1101 Physics and Instrumentation in Nuclear Medicine .....	6
Dmin 1102 Nuclear Medicine Radiopharmacy .....	6
Dmin 1103 Radiation Biology and Radiation Safety .....	2
Dmin 1111 Clinical Nuclear Medicine I .....	3
Dmin 2200 Nuclear Medicine Procedures .....	4
Dmin 2202 Nuclear Medicine Procedures III .....	4
Dmin 2211 Clinical Nuclear Medicine II .....	3
Dmin 2212 Clinical Nuclear Medicine III .....	3
Dmin 2221 Positron Emission Tomography I .....	3
Dmin 2222 Nuclear Medicine Review Seminar .....	1
Dmir 2220 Sectional Anatomy for Diagnostic Imaging .....	2

## DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY AAS DEGREE, THREE CERTIFICATES

### AAS DEGREE

**Radiologic Technology** is a 24-month program in diagnostic medical radiography (X-ray technology), including extensive clinical experience. It is fully accredited by the Joint Review Committee on Education in Radiologic Technology. This degree program requires 74 credits in program requirements and general education, some of which may be used to meet general education requirements.

ICCB Code 3172 | Field of Study Code: DMIR.AAS

#### Program Requirements

Dmir 1111 Clinical Education I .....	2
Dmir 1112 Clinical Education II .....	2
Dmir 1113 Clinical Education III .....	2
Dmir 1121 Radiographic Equipment .....	4
Dmir 1122 Image Formation and Evaluation .....	4
Dmir 1131 Radiographic Procedures I .....	4
Dmir 1132 Radiographic Procedures II .....	3
Dmir 1133 Radiographic Procedures III .....	3
Dmir 1140 Ethics and Law in Diagnostic Medical Imaging .....	1
Dmir 1151 Basic Pharmacology .....	1
Dmir 2201 Physics, Biology and Protection .....	3
Dmir 2211 Clinical Education IV .....	3
Dmir 2212 Clinical Education V .....	3
Dmir 2213 Clinical Education VI .....	3
Dmir 2225 Basic Pathophysiology .....	3
Dmir 2235 Quality Management in Diagnostic Imaging .....	2
Dmir 2240 Radiographic Image Analysis .....	3
Anat 1500 Survey of Human Anatomy and Physiology .....	4
OR	
Anat 1551 Human Anatomy and Physiology I .....	4

OR	
Anat 1571 Anatomy and Physiology with Cadaver I .....	4
Cis 1110 Using Computers: An Introduction .....	2
Engli 1101 English Composition I .....	3
Engli 1102 English Composition II .....	3
Hlths 1110 Biomedical Terminology .....	4
Math 1102 Mathematics for Health Sciences .....	3
OR	
Math 1115 Technical Mathematics I .....	3
Speec 1100 Fundamentals of Speech Communication .....	3
OR	
Speec 1120 Small-Group Communication .....	3
OR	
Speec 1150 Introduction to Business Communication .....	3
	<u>68</u>

General Education .....

(In addition to the courses listed above)

Total Credits Required .....

### CERTIFICATES

The **Diagnostic Medical Imaging Radiologic Technology (DMIR)** program at College of DuPage is a three-semester certificate program that will allow graduates to become certified by the American Registry of Radiologic Technologists and practice as Radiation Therapy Technologists. This certificate requires 39 credits in the courses listed below.

ICCB Code 4174 | Field of Study Code: DMIR.CER.RADTH

Dmir 2301 Principles and Practice of Radiation Therapy I .....	4
Dmir 2302 Principles and Practice of Radiation Therapy II .....	4
Dmir 2303 Principles and Practice of Radiation Therapy III .....	4
Dmir 2310 Radiation Therapy Physics .....	3
Dmir 2311 Radiation Biology and Protection .....	4
Dmir 2312 Quality Management in Radiation Therapy .....	3
Dmir 2321 Cross-Sectional Anatomy .....	2
Dmir 2322 Pathophysiology for Radiation Therapy .....	3
Dmir 2323 Operational Issues in Radiation Therapy .....	3
Dmir 2331 Clinical Practice I .....	3
Dmir 2332 Clinical Practice II .....	3
Dmir 2333 Clinical Practice III .....	3

The **Computed Tomography (CT) certificate** is three semesters and provides the student with the required course work and clinical practice to perform as a CT technologist in medical imaging departments of hospitals, medical centers, and free standing medical imaging facilities. This certificate requires 18 credits in the courses listed below.

ICCB Code 4175 | Field of Study Code: DMIR.CER.CTOMO

Dmir 2500 Sectional Anatomy and Pathology for Computed Tomography .....	3
Dmir 2501 Principles of Computed Tomography and Patient Care .....	3
Dmir 2502 Physics and Instrumentation for Computed Tomography .....	3
Dmir 2503 Radiation Safety and Quality Management for Computed Tomography .....	3
Dmir 2511 Clinical Applications of Computed Tomography I .....	3
Dmir 2512 Clinical Applications of Computed Tomography II .....	3

The **Mammography certificate** at College of DuPage is a one-semester, advanced program that is designed to provide students with the necessary skills to become certified by the American Registry of Radiologic Technologists and meet the Mammography Quality Standards Act guidelines. This certificate requires seven credits in the courses listed below.

ICCB Code 4177 | Field of Study Code: DMIR.CER.MAMM

Dmir 2400 Clinical Applications of Mammography .....	2
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Dmir	2402	Breast Anatomy, Physiology and Pathology .....	1
Dmir	2403	Mammography Principles and Procedures .....	2
Dmir	2404	Mammography Quality Management and Instrumentation .....	2

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY

### AAS DEGREE, TWO CERTIFICATES

#### AAS DEGREE

Diagnostic Medical Imaging Sonography is a 24-month program that includes extensive didactic and clinical applications in the specialties of general and vascular sonography. Clinical applications include Abdominal/Superficial Structures, Obstetrics/Gynecology and vascular imaging techniques. All general education courses must be completed prior to admission to the Sonography program. This degree requires 88 credits in program requirements and general education as listed below.

ICCB Code 3142 | Field of Study Code: DMIS.AAS

#### Program Requirements

Dmis	1100	Introduction to Diagnostic Medical Sonography ...	3
Dmis	1101	Sonographic Physics and Instrumentation I .....	3
Dmis	1102	Sonographic Physics and Instrumentation II .....	3
Dmis	1105	Introduction to Pathophysiology for Sonographers .....	2
Dmis	1110	Basic Patient Care Skills for Sonographers .....	2
Dmis	1111	Clinical Education I .....	1
Dmis	1112	Clinical Education II .....	3
Dmis	1113	Clinical Education III .....	3
Dmis	1114	Clinical Education IV .....	3
Dmis	1120	Sonographic Cross-Sectional Anatomy .....	3
Dmis	1121	Fundamentals of OB/GYN I .....	3
Dmis	1122	Fundamentals of OB/GYN II .....	3
Dmis	1131	Abdomen/Superficial Structures I .....	3
Dmis	1132	Abdomen/Superficial Structures II .....	2
Dmis	1140	Fundamentals of Breast Sonography .....	2
Dmis	1141	Case Study Critique I .....	1
Dmis	1142	Case Study Critique II .....	1
Dmis	1151	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab I .....	1
Dmis	1152	Abdominal/Superficial Structures and Obstetrics/Gynecology Hands-on Scanning Lab II .....	1
Dmis	1153	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab III .....	1
Dmis	1154	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab IV .....	1
Dmis	1160	Legal Aspects of Health Care in Sonography .....	2
Dmis	2201	Abdominal and Peripheral Arterial .....	3
Dmis	2203	Cerebrovascular Ultrasound .....	2
Dmis	2204	Abdominal and Peripheral Venous .....	2
Dmis	2212	Clinical Education-Vascular Imaging I .....	3
Dmis	2213	Clinical Education-Vascular Imaging II .....	3
Dmis	2221	Abdominal and Peripheral Arterial Hands-on Scanning Lab .....	1
Dmis	2223	Cerebrovascular Ultrasound Hands-on Scanning Lab .....	1
Dmis	2224	Abdominal and Peripheral Venous Hands-on Scanning Lab .....	1
Dmis	2280	Sonographic Physics Registry and Review .....	1
Dmis	2285	Clinical Sonographic Registry and Review .....	1
Anat	1500	Survey of Human Anatomy and Physiology .....	4
Engl	1101	English Composition I .....	3
Hlth	1110	Biomedical Terminology .....	4
Math	1120	Mathematical Foundations for Diagnostic Medical Imaging Sonographers .....	3
Psych	1100	General Psychology .....	3
Spec	1100	Fundamentals of Speech Communication .....	3

	OR		
Spec	1120	Small-Group Communication .....	3
			85
General Education .....			3
(Three credits from the Humanities category)			
Total Credits Required .....			88

#### Diagnostic Medical Imaging Sonography (Ultrasound)

**certificate** is a 15-month advanced certificate program designed for graduates of accredited Medical Imaging programs in Radiology, Nuclear Medicine, Nursing, etc. Classes are conducted on Tuesday, Wednesday and Thursday evenings with occasional weekends. Clinical education is provided on weekdays at assigned clinical affiliates. Upon successful completion, graduates are eligible to take the American Registry of Diagnostic Medical Sonographers examination in OB/GYN, Abdomen, Superficial Structures and Physics. This certificate program requires 45 credits in the courses listed below.

ICCB Code 4142 | Field of Study Code: DMIS.CER

#### Program Requirements

Dmis	1100	Introduction to Diagnostic Medical Sonography ...	3
Dmis	1101	Sonographic Physics and Instrumentation I .....	3
Dmis	1102	Sonographic Physics and Instrumentation II .....	3
Dmis	1111	Clinical Education I .....	1
Dmis	1112	Clinical Education II .....	3
Dmis	1113	Clinical Education III .....	3
Dmis	1114	Clinical Education IV .....	3
Dmis	1120	Sonographic Cross-Sectional Anatomy .....	3
Dmis	1121	Fundamentals of OB/GYN I .....	3
Dmis	1122	Fundamentals of OB/GYN II .....	3
Dmis	1131	Abdomen/Superficial Structures I .....	3
Dmis	1132	Abdomen/Superficial Structures II .....	2
Dmis	1140	Fundamentals of Breast Sonography .....	2
Dmis	1141	Case Study Critique I .....	1
Dmis	1142	Case Study Critique II .....	1
Dmis	1151	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab I .....	1
Dmis	1152	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab II .....	1
Dmis	1153	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab III .....	1
Dmis	1154	Abdominal/Superficial Structures and Obstetrics/ Gynecology Hands-on Scanning Lab IV .....	1
Dmis	1160	Legal Aspects of Health Care in Sonography .....	2
Dmis	2280	Sonographic Physics Registry and Review .....	1
Dmis	2285	Clinical Sonographic Registry and Review .....	1

#### The Diagnostic Medical Vascular Sonography certificate

program is an extension of the current Diagnostic Medical Imaging program designed to provide trained sonographers in the specialty of vascular imaging for the clinical institutions and clinics in the Chicago area. This certificate program requires 18 credits in the courses listed below.

ICCB Code 4143 | Field of Study Code: DMIS.VASC

Dmis	2200	Vascular Hemodynamics and Physics .....	2
Dmis	2201	Abdominal and Peripheral Arterial .....	3
Dmis	2203	Cerebrovascular Ultrasound .....	2
Dmis	2204	Abdominal and Peripheral Venous .....	2
Dmis	2212	Clinical Education-Vascular Imaging I .....	3
Dmis	2213	Clinical Education-Vascular Imaging II .....	3
Dmis	2221	Abdominal and Peripheral Arterial Hands-on Scanning Lab .....	1
Dmis	2223	Cerebrovascular Ultrasound Hands-on Scanning Lab .....	1
Dmis	2224	Abdominal and Peripheral Venous Hands-on Scanning Lab .....	1

## EARLY CHILDHOOD EDUCATION AND CARE

AAS DEGREE, SIX CERTIFICATES

### AAS DEGREE

The **Early Childhood Education and Care program** prepares students to enter the early childhood education and early childhood field. Students acquire the skills, knowledge and attitudes to work with infants, toddlers, preschool-age and school-age children. Jobs for degree and certificate graduates are widely available in child care centers, preschools, park districts and public schools. This degree program requires a minimum of 64 credits in program requirements, program electives, electives and general education as listed below.

ICCB Code 3623 | Field of Study Code: ECEC.AAS

#### Program Requirements

Ecec	1100	Introduction to the Early Childhood Profession.....	3
Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	1130	Methods: Discovery and the Physical World.....	3
Ecec	1140	Methods: Self-Expression and the Social World.....	3
Ecec	1151	Language and Literacy Development of the Young Child.....	3
Ecec	2211	Child Health, Safety and Nutrition.....	3
Ecec	2220	Early Childhood Education Practicum.....	4
Ecec	2251	Curriculum Planning for the Young Child.....	3
Ecec	2252	Child/Family/Community Relations and Resources.....	3
Ecec	2260	Early Childhood Professional.....	3
			34

Program Electives.....4

Electives.....5 to 6  
(Select from any 1000- or 2000- level courses.)

General Education.....21  
(In addition to the courses listed above)

Total Credits Required.....64 to 65

### CERTIFICATES

The **Early Childhood Assistant Teacher certificate** will provide an assistant teacher in a licensed child care program with basic knowledge regarding child growth and development and health and safety practices in early education. This certificate requires 6 credits in the courses listed below.

ICCB Code 4622 | Field of Study Code: ECEC.CER.ASST

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	2211	Child Health, Safety and Nutrition.....	3

The **Early Childhood Education and Care certificate** requires 34 credits in the courses listed below.

ICCB Code 4623 | Field of Study Code: ECEC.CER

Ecec	1100	Introduction to the Early Childhood Profession.....	3
Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	1130	Methods: Discovery and the Physical World.....	3
Ecec	1140	Methods: Self-Expression and the Social World....	3
Ecec	1151	Language and Literacy Development of the Young Child.....	3
Ecec	2211	Child Health, Safety and Nutrition.....	3
Ecec	2220	Early Childhood Education Practicum.....	4
Ecec	2251	Curriculum Planning for the Young Child.....	3
Ecec	2252	Child/Family/Community Relations and Resources.....	3
Ecec	2260	Early Childhood Professional.....	3

### The Infant, Toddler and Two-Year-Old Child Care certificate.

Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students may have previously received an early childhood certificate or degree or may choose this certificate to begin their early childhood education. This certificate requires 12 credits in the courses listed below.

ICCB Code 4624 | Field of Study Code: ECEC.TODD

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1116	Care of the Infant, Toddler and Two-Year-Old Child I.....	3
Ecec	1117	Care of the Infant, Toddler and Two-Year-Old Child II.....	3
Ecec	2211	Child Health, Safety and Nutrition.....	3

### The Administration of an Early Childhood Center certificate.

Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students should have completed an early childhood certificate or degree or some other course of college study. This certificate requires 21 credits in the courses listed below.

ICCB Code 4625 | Field of Study Code: ECEC.CER.ECC

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	2211	Child Health, Safety and Nutrition.....	3
Ecec	2251	Curriculum Planning for the Young Child.....	3
Ecec	2254	Administration of an Early Childhood Center – Program Operations.....	3
Ecec	2255	Administration of an Early Childhood Center – Practices and Procedures.....	3
Ecec	2256	Administration of an Early Childhood Center – Staff, Families and Children.....	3

The **Family Child Care Provider certificate**. Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students may have previously received an early childhood certificate or degree or may choose this certificate to begin their early childhood education. This certificate requires 15 credits in the courses listed below.

ICCB Code 4627 | Field of Study Code: ECEC.CER.FAMCC

#### Program Requirements

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1120	Family Child Care Management.....	2
Ecec	1121	Family Child Care Curriculum and Guidance.....	2
Ecec	2211	Child Health, Safety and Nutrition.....	3
			10

Program Electives.....5  
Select 5 credits in Early Childhood Education and Care electives

The **School-Age Child Care certificate**. Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students may have previously received an early childhood certificate or degree or may choose this certificate to begin their early childhood education. This certificate requires 16 credits in the courses listed below.

ICCB Code 4628 | Field of Study Code: ECEC.CER.SCHCC

#### Program Requirements

Ecec	2211	Child Health, Safety and Nutrition.....	3
Ecec	2226	Development of the School-Age Child.....	2
Ecec	2227	Guidance of the School-Age Child.....	2
Ecec	2228	Activities for School-Age Children.....	2
Ecec	2252	Child/Family/Community Relations and Resources.....	3
			12

Program Electives.....4  
Select 4 credits in Early Childhood Education and Care electives



The **Multicultural Education and Care for the Young Child certificate**. Students choose this certificate to gain specific knowledge and skills working with diverse populations of children. Students will have previously received early childhood credits or may choose this certificate to begin their Early Childhood Education and Care studies. This certificate requires 14 credits in the courses listed below.

ICCB Code 4629 | Field of Study Code: ECEC.CER.MULTI

Ecec	1101	Growth and Development of the Young Child	.....3
Ecec	1102	Child Guidance Practices	.....3
Ecec	1161	Multicultural Curriculum for the Young Child	.....2
Ecec	1162	Multicultural Perspectives in Child Development and Education	.....2
Ecec	1163	Practicum: At-Risk Early Childhood Programs	.....1
Ecec	2252	Child/Family/Community Relations and Resources	.....3

## EDUCATION

### CERTIFICATE

The **Teaching Online Utilizing Technology (TOUT) certificate** provides a hands-on experience in designing and implementing online course materials within a learning management system. Students will focus on instructional design, visual literacy, online assessments, current collaborative and multimedia practices while designing accessibly compliant, engaging learning materials. This certificate requires 16 credits in the courses listed below.

ICCB Code 4370 | Field of Study Code: EDUCA.CER.TOUT

Educa	2700	Best Practices in Online Education	.....3
Educa	2720	Course Design for Online Teaching	.....4
Educa	2740	Multimedia for Online Teaching	.....3
Educa	2760	Teaching with Social Media and Collaboration Tools	.....3
Educa	2780	Video Applications in Education	.....3

## ELECTRO-MECHANICAL TECHNOLOGY

### TWO AAS DEGREES, FIVE CERTIFICATES

#### AAS DEGREES

The degree program prepares students to enter the industrial and manufacturing workplace with knowledge and skill levels in three areas: programmable controllers, process control instrumentation and mechanical maintenance. It consists of skills training in all three areas to provide the student with meaningful learning experiences to enter the workplace as a viable part of a plant engineering group, and/or maintenance or repair technician team. This program stresses both the electrical/electronic and mechanical aspect of industrial and manufacturing processes, and it is also designed for those individuals who are presently employed in industrial maintenance or plant engineering and are seeking skills upgrading and/or cross training. The **Electro-Mechanical Technology degree** program requires a minimum of 66 credits in program requirements, program electives and general education as listed below.

ICCB Code 3957 | Field of Study Code: ELMEC.AAS.ELMET

#### Program Requirements

Elmec	1101	Survey of Automation	.....3
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1141	Hydraulics and Pneumatics	.....3
Elmec	1171	Introduction to Robotic Technology	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	...3
Elmec	1400	Maintenance Management Systems	.....3
Elmec	1420	Drive Components	.....2
Elmec	2410	Programmable Controller II (PLC II)	.....3
Elmec	2510	Process and Automation Controls	.....3

Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1120	Electronic Documentation	.....2
Manuf	1104	Technical Mechanics	.....2
Manuf	1180	Quality Control	.....3
			39

Program Electives .....9

Choose at least 9 credits from the following courses.

Airc	1161	Introduction to Sheet Metal	.....2
Elect	1101	Circuits I	.....3
Elect	1102	Circuits II	.....4
Elect	1130	Electronics Materials and Fabrication	.....2
Elect	2220	Electronic Instruments, Measurements and Control	.....3
Elect	2255	Industrial Controls	.....3
Elmec	1120	Residential Wiring	.....3
Elmec	1150	National Electrical Code	.....3
Elmec	1410	Preventive and Predictive Maintenance	.....3
Elmec	2600	Motion Control: Servo and Stepper Motor Application and Control	.....2
Elmec	2610	Machine Vision and Artificial Intelligence	.....2
Elmec	2620	Critical Thinking in Technical Applications	.....2
Elmec	2630	Systems Troubleshooting	.....2
Elmec	2860	Cooperative Education/Internship (Occupational)	.....1 to 4
Manuf	1101	Industrial Design/CAD	.....3
Manuf	2251	Computer Numerical Control (CNC)	.....3
Weld	1100	Welding I	.....3

General Education .....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....66 to 70

The **Electrician Apprenticeship degree** program, in partnership with the Joint Apprenticeship and Training Committee (JATC) of the International Brotherhood of Electrical Workers (IBEW) Local Union, is open only to individuals admitted into the Electrician Apprenticeship Program of the IBEW. This degree will fulfill the classroom component of the IBEW/JATC apprenticeship experience. This program requires a minimum of 65 credits in program requirements and general education as listed below.

ICCB Code 3958 | Field of Study Code: ELMEC.AAS.ELECA

#### Program Requirements

Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....2
Elmec	1150	National Electrical Code	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	...3
Elmec	2630	Systems Troubleshooting	.....2
Elmec	2860	Cooperative Education/Internship (Occupational)	.....1 to 4
Elmec	2863	Cooperative Education/Internship — Advanced (Occupational)	.....3
Elmec	2864	Cooperative Education/Internship (Transfer)	.....4
Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1101	Circuits I	.....3
Elect	1120	Electronic Documentation	.....2
Elect	1130	Electronics Materials and Fabrication	.....3
Elect	1141	Digital Fundamentals	.....3
Elect	1151	Electronic Devices and Applications	.....4
Elect	2220	Electronic Instruments, Measurements and Control	.....3
Manuf	1101	Industrial Design/CAD	.....3
Manuf	2280	Industrial Safety	.....2
			47 to 50

General Education .....18 to 22  
Students must complete all general education requirements, including 2 credits in Global/Multicultural Studies or Contemporary Life Skills. (In addition to courses listed above.)

Total Credits Required .....65 to 72



**CERTIFICATES**

The **Electrician's Preparation certificate** provides knowledge, skills, and competencies to students for work in the area of residential, commercial, and industrial wiring. National Electric Code, residential, commercial and industrial wiring are studied.

This certificate does not provide license or certification to perform electrical work and requires 14 credits in the courses listed below.

ICCB Code 4957 | Field of Study Code: ELMEC.CER.EPREP

Elmec	1120	Residential Wiring	.....3
Elmec	1140	Commercial and Industrial Wiring	.....3
Elmec	1150	National Electrical Code	.....3
Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1120	Electronic Documentation	.....2

Students earning the **Mechanical Maintenance certificate** learn skills in power trains, drive components, mechanical alignment of couplings, pumps and motors, and troubleshooting and repair of industrial components. This certificate requires 34 credits in the courses listed below.

ICCB Code 4958 | Field of Study Code: ELMEC.CER.MECH

Elmec	1101	Survey of Automation	.....3
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1141	Hydraulics and Pneumatics	.....3
Elmec	1150	National Electrical Code	.....3
Elmec	1171	Introduction to Robotic Technology	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	..3
Elmec	1420	Drive Components	.....2
Elect	1100	Electricity and Electronics Fundamentals	.....3
Manuf	1104	Technical Mechanics	.....2
Manuf	1151	Machine Shop I	.....3
Weld	1100	Welding I	.....3

The **Process Control Instrumentation certificate** trains the student to inspect, calibrate, troubleshoot and repair various temperature, pressure, flow and level measurement instruments. This certificate requires 35 credits in the courses listed below.

ICCB Code 4959 | Field of Study Code: ELMEC.CER.PROC

**Program Requirements**

Elmec	1101	Survey of Automation	.....3
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1141	Hydraulics and Pneumatics	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	..3
Elmec	2410	Programmable Controller II (PLCII)	.....3
Elmec	2510	Process and Automation Controls	.....3
Elmec	2520	Advanced Process and Automation Controls	.....3
Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1120	Electronic Documentation	.....2
Elect	2255	Industrial Controls	.....3
Manuf	1180	Quality Control	.....3

The **Programmable Controllers certificate** involves programming and maintenance of various programmable controllers. This certificate requires 36 credits in the courses listed below.

ICCB Code 4960 | Field of Study Code: ELMEC.CER.PROG

Elmec	1101	Survey of Automation	.....3
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1150	National Electrical Code	.....3
Elmec	1171	Introduction to Robotic Technology	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	..3
Elmec	2410	Programmable Controller II (PLC II)	.....3
Elmec	2600	Motion Control: Servo and Stepper Motor Application and Control	.....2
Elect	1100	Electricity and Electronics Fundamentals	.....3

Elect	1120	Electronic Documentation	.....2
Elect	2255	Industrial Controls	.....3
Manuf	1104	Technical Mechanics	.....2
Manuf	1180	Quality Control	.....3

The **Advanced Multi-skilled Technician certificate** prepares students to enter the workforce in the high-end technology areas of mechanics, electricity, electronics, and manufacturing.

This certificate requires a minimum of 33 credits in the courses listed below.

ICCB Code 4963 | Field of Study Code: ELMEC.CER.MULTS

Elmec	1101	Survey of Automation	.....3
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	..3
Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1110	Introduction to Technology	.....2
Elect	1120	Electronic Documentation	.....2
Elect	1141	Digital Fundamentals	.....3
Elect	1151	Electronic Devices and Applications	.....4
Elect	2255	Industrial Controls	.....3
Manuf	1101	Industrial Design/CAD	.....3
OR			
Engin	1101	Engineering Graphics and Design	.....3
Manuf	1104	Technical Mechanics	.....2
OR			
Elmec	1420	Drive Components	.....2

**Electives**

Select minimum of one class of electives from the following list:

Elect	1130	Electronics Materials and Fabrication	.....2
Elect	1201	Renewable Energy Fundamentals	.....2
Elmec	1141	Hydraulics and Pneumatics	.....3
Elmec	1150	National Electrical Code	.....3
Elmec	1171	Introduction to Robotic Technology	.....3
Manuf	1151	Machine Shop I	.....3
Manuf	1180	Quality Control	.....3
Weld	1100	Welding I	.....3

**ELECTRONICS TECHNOLOGY**

TWO AAS DEGREES, SIX CERTIFICATES

**AAS DEGREES**

The **Electronics Technology program** offers two-year degrees and one-year specialty certificates in the electronics field. The degree program is designed to provide the student with fundamentals of electricity and electronics, including digital electronics and microcomputers, specialized manufacturing electronics, industrial automation and electronic communications. The program also includes an **Electronics Engineering Technology degree** for transferring students. To learn is to experience. This program emphasizes a hands-on approach to learning through projects to reinforce the theoretical material. This degree program requires 66 credits in program requirements, program electives and general education as listed below.

ICCB Code 3912 | Field of Study Code: ELECT.AAS

**Program Requirements**

Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1101	Circuits I	.....3
Elect	1102	Circuits II	.....4
Elect	1120	Electronic Documentation	.....2
Elect	1130	Electronics Materials and Fabrication	.....2
Elect	1141	Digital Fundamentals	.....3
Elect	1151	Electronic Devices and Applications	.....4
Elect	1161	Electronic Communication	.....4
Elect	1201	Renewable Energy Fundamentals	.....2
Elect	2273	Embedded Systems and Microcontroller Programming	.....3

Elmec	1190	Introduction to Programmable Logic Controllers ..3
Engli	1101	English Composition I.....3
Math	1431	Precalculus I.....5
Math	1432	Precalculus II: Trigonometry .....3
Physi	1201	General Physics I .....5
Physi	1202	General Physics II .....5
Speec	1100	Fundamentals of Speech Communication .....3
<u>57</u>		

Program Electives.....	3	
Choose 3 credits from the following courses.		
Elect	2001	Green Energy Systems.....3
Elect	2241	Wireless Telecommunications I.....3
Elect	2245	Programmable Logic Devices .....4
Elect	2255	Industrial Controls.....3
Elmec	1110	Motor and Generator Fundamentals.....3
Elmec	1130	Industrial Electricity.....3
Elmec	1171	Introduction to Robotic Technology.....3
Elmec	1420	Drive Components.....2
Elmec	2410	Programmable Controller II (PLC II).....3
Elmec	2600	Motion Control: Servo and Stepper Motor Application and Control.....2
General Education.....	6	
Complete 3 credits in Humanities and 3 credits in the Social and Behavioral Sciences (In addition to the courses listed above)		
Total Credits Required.....	66	

**Biomedical Engineering Technology** prepares students for careers as biomedical equipment technicians, (also known as biomedical engineering technicians) in hospitals, health agencies, businesses and industries that manufacture and maintain electronic and biomedical instrumentation equipment. This program prepares students to test, install, and maintain healthcare components such as rehabilitation and therapeutic products, medical imaging systems, and computer-based systems used in the biomedical technology field. The Biomedical Engineering Technology degree program requires 70 credits in program requirements as listed below.

ICCB Code 3812 | Field of Study Code: ELECT.AAS.BIOMED  
Program Requirements

Elect	1100	Electricity and Electronics Fundamentals.....3
Elect	1101	Circuits I.....3
Elect	1102	Circuits II.....4
Elect	1110	Introduction to Technology.....2
Elect	1130	Electronics Materials and Fabrication.....2
Elect	1141	Digital Fundamentals.....3
Elect	1151	Electronic Devices and Applications.....4
Elect	1221	Introduction to Biomedical Instrumentation Technology.....3
Elect	2220	Electronic Instruments, Measurements, and Control.....3
Elect	2221	Biomedical Instrumentation Technology and Applications.....3
Elect	2245	Programmable Logic Devices.....4
Elect	2273	Embedded Systems and Microcontroller Programming.....3
Anat	1500	Survey of Human Anatomy and Physiology.....4
Cit	1121	Networking Fundamentals.....3
Elmec	1101	Survey of Automation.....3
Engli	1101	English Composition I.....3
Hlths	1110	Biomedical Terminology.....4
Humnt	1110	The Arts and Cultural Diversity.....3
Math	1115	Technical Mathematics I.....3
Physi	1100	Physics.....4
Socio	1100	Introduction to Sociology.....3
Speec	1100	Fundamentals of Speech Communication.....3

Total Credits Required.....	70
CERTIFICATES	

The **Electricity and Electronics Technology certificate** prepares students for an entry-level electronics and electricity technology position with basic skills and competencies in the field of analog and digital electrical and electronic devices. It provides students with fundamentals of electricity and electronics, including analog and digital circuits, microcomputers, and industrial automation. This certificate requires 13 credits in the courses listed below.

ICCB Code 4905 | Field of Study Code: ELECT.CER.EETEC

Elect	1100	Electricity and Electronics Fundamentals.....3
Elect	1120	Electronic Documentation.....2
Elect	1130	Electronics Materials and Fabrication.....2
Elect	1141	Digital Fundamentals.....3
Elmec	1101	Survey of Automation.....3

The **Digital Logic Devices Programming certificate** provides basic education in embedded systems programming. Floating-point Programmable Gate Arrays (FPGA), Complex Programmable Logical Devices (CPLD), and microprocessors used to develop sample applications. State-of-the-art devices are programmed using the Verilog, Very High Speed Integrated Circuits Hardware Description Language (VHDL), Basic and Assembly, languages. This certificate requires a minimum of 13 credits in the courses listed below.

ICCB Code 4906 | Field of Study Code: ELECT.CER.DIGIT

Elect	1141	Digital Fundamentals.....3
Elect	2245	Programmable Logic Devices.....4
Elect	2273	Embedded Systems and Microcontroller Programming.....3
Cit	1121	Networking Fundamentals.....3
OR		
Cis	1400	Programming Logic and Technique.....4

The **Renewable Energy Technology certificate** is intended to train technicians in the field of electronics, electricity, mechanics, and computers related to the applications in the field of renewable and green energies. This certificate requires 30 credits in the courses listed below.

ICCB Code 4908 | Field of Study Code: ELECT.CER.RENEW

Elect	1100	Electricity and Electronics Fundamentals.....3
Elect	1101	Circuits I.....3
Elect	1141	Digital Fundamentals.....3
Elect	1151	Electronic Devices and Applications.....4
Elect	1201	Renewable Energy Fundamentals.....2
Elect	2001	Green Energy Systems.....3
Elect	2255	Industrial Controls.....3
Elmec	1110	Motor and Generator Fundamentals.....3
Elmec	1120	Residential Wiring.....3
Elmec	1150	National Electrical Code.....3

The **Industrial Controls and Automation certificate** requires 35 credits in the courses listed below.

ICCB Code 4913 | Field of Study Code: ELECT.CER.INCA

Elect	1100	Electricity and Electronics Fundamentals.....3
Elect	1101	Circuits I.....3
Elect	1120	Electronic Documentation.....2
Elect	1130	Electronics Materials and Fabrication.....2
Elect	1141	Digital Fundamentals.....3
Elect	1151	Electronic Devices and Applications.....4
Elect	1161	Electronic Communication.....4
Elect	2255	Industrial Controls.....3
Elmec	1101	Survey of Automation.....3
Elmec	1171	Introduction to Robotic Technology.....3
Elmec	1190	Introduction to Programmable Logic Controllers ..3
Elmec	2600	Motion Control: Servo and Stepper Motor

Application and Control.....2  
 The **Electronics Technology certificate** requires 39 credits in the courses listed below.

ICCB Code 4925 | Field of Study Code: ELECT.CER

Elect	1100	Electricity and Electronics Fundamentals	.....3
Elect	1101	Circuits I	.....3
Elect	1102	Circuits II	.....4
Elect	1120	Electronic Documentation	.....2
Elect	1130	Electronics Materials and Fabrication	.....2
Elect	1141	Digital Fundamentals	.....3
Elect	1151	Electronic Devices and Applications	.....4
Elect	1161	Electronic Communication	.....4
Elect	1201	Renewable Energy Fundamentals	.....2
Elect	2255	Industrial Controls	.....3
Elect	2273	Real-Time Systems and Programming	.....3
Math	1428	College Algebra with Applications	.....3
Program Electives			.....3
Choose 3 credits from the following courses.			
Elect	2001	Green Energy Systems	.....3
Elect	2241	Wireless Telecommunications I	.....3
Elect	2245	Programmable Logic Devices	.....4
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1171	Introduction to Robotic Technology	.....3

**ENGLISH**  
 CERTIFICATE

The **English Technical Communication certificate** addresses the need to communicate technical information to a variety of audiences. It offers students the opportunity to use their technical skills to work in a variety of fields, including business, industry, government, health care and technology. This certificate requires 24 credits in the courses listed below.

ICCB Code 4630 | Field of Study Code: ENGLI.CER.TECH

Program Requirements				
Engli	1105	Introduction to Technical Writing	.....3	
Engli	1110	Technical Writing	.....3	
Engli	1115	Writing for the Web	.....3	
Graph	1102	Introduction to Graphic Publishing Applications	...3	
Speec	1150	Introduction to Business Communication	.....3	
Engli	2863	Cooperative Education/Internship (Occupational)	.....3	
			18	
Electives				.....6
Choose 6 credits from the list below. Additional courses with coordinator approval.				
Art	2266	Computer Art I	.....3	
Cis	1150	Introduction to Computer Information Systems	.....3	
Cis	1300	Web Design Software	.....3	
Cis	1310	HTML and CSS	.....3	
Cis	2320	JavaScript and Advanced HTML	.....3	
Engli	2126	Modern English Grammar	.....3	
Engli	2253	Creative Nonfiction Writing	.....3	
Engli	2261	Writing for Publication	.....3	
Graph	1101	Printing Methods and Processes	.....3	
Grdsn	1821	Selected Topics in Graphic Design	.....3	
Grdsn	2203	Advertising Design	.....3	
Journ	1105	News Reporting and Writing	.....3	
Mptv	1011	Introduction to Motion Pictures and Television	.....3	
Ofti	1130	Business Correspondence	.....3	
Speec	1120	Small-Group Communication	.....3	
Speec	1140	Public Relations	.....3	

**FACILITY MANAGEMENT**  
 AAS DEGREE, TWO CERTIFICATES

AAS DEGREE

The **Facility Management program** is designed to provide the student a broad exposure to the business area with specialty training in the functions of facility management. Upon completion, the student will possess the skills and educational background necessary for managing facilities. The program provides the student the entry-level job skills used by facilities managers. It provides for updating knowledge or learning new skills for those currently employed in the field. This degree program requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3228 | Field of Study Code: FACM.AAS

Program Requirements				
Accou	1140	Financial Accounting	.....4	
Arch	1111	Building Materials	.....4	
Arch	1130	Blueprint Reading	.....2	
Busin	1100	Introduction to Business	.....3	
Cis	1150	Introduction to Computer Information Systems	.....3	
Facm	1100	Introduction to Facility Management	.....3	
Facm	2202	Facility Systems — Electrical	.....3	
Facm	2203	Facility Systems — Mechanical	.....3	
Facm	2215	Facility and Property Management	.....3	
Manag	2210	Principles of Management	.....3	
			31	
Program Electives				.....15
Select 15 credits from the following list:				
Accou	1150	Managerial Accounting	.....4	
Airc	1100	Refrigeration Principles	.....3	
Airc	1105	Introduction to Safety, Materials and Equipment	.....3	
Airc	1108	Refrigerant Certification	.....1	
Airc	1110	Introduction to Controls	.....3	
Airc	1112	Residential Refrigeration	.....3	
Airc	1161	Introduction to Sheet Metal	.....2	
Airc	1180	Introduction to Heating	.....5	
Airc	1186	Introduction to Hydronics	.....2	
Airc	1187	Central Heating Plants	.....3	
Airc	2201	Residential Air Conditioning	.....3	
Airc	2202	Commercial Air Conditioning	.....3	
Airc	2205	Heat Pumps	.....2	
Airc	2210	Commercial Refrigeration	.....5	
Airc	2220	Installation	.....3	
Airc	2225	Troubleshooting Systems	.....3	
Airc	2230	Advanced Controls	.....3	
Airc	2231	Direct Digital Control of HVAC Systems	.....3	
Airc	2232	Energy Audits/Economics	.....2	
Airc	2236	Central Cooling Plants	.....3	
Airc	2240	Load Calculations and Duct Design	.....5	
Airc	2241	Industrial Air Conditioning Design	.....3	
Airc	2250	System Balancing	.....2	
Airc	2260	Heating and Air Conditioning Contracting	.....3	
Arch	1141	Construction Methods I	.....2	
Arch	1211	Basic Computer-Aided Drafting — AutoCAD	.....3	
Arch	1301	Introduction to Construction Management	.....3	
Arch	2142	Construction Methods II	.....2	
Arch	2150	Basic Surveying	.....2	
Arch	2210	Mechanical, Electrical, and Plumbing Systems	.....3	
Arch	2240	Codes, Specifications and Contracts	.....3	
Arch	2260	Construction Estimating	.....3	
Arch	2270	Construction Scheduling	.....3	
Busin	1111	Customer Service	.....3	
Busin	2200	Business Budgeting	.....3	
Busin	2210	Principles of Finance	.....3	
Buslw	2211	Business Law I	.....3	
Cis	1221	Introduction to Spreadsheets	.....3	
Elect	1100	Electricity and Electronics Fundamentals	.....3	
Elect	1101	Circuits I	.....3	

Elect	1102	Circuits II	4
Elect	1141	Digital Fundamentals	3
Elect	1142	Digital Components and Architecture	3
Elect	2112	Motor Control	3
Elect	2245	Programmable Logic Devices	4
Elect	2255	Industrial Controls	3
Elect	2262	Introduction to Microprocessors	4
Elmec	1101	Survey of Automation	3
Elmec	1110	Motor and Generator Fundamentals	3
Elmec	1120	Residential Wiring	3
Elmec	1130	Industrial Electricity	3
Elmec	1140	Commercial and Industrial Wiring	3
Elmec	1141	Hydraulics and Pneumatics	3
Elmec	1400	Maintenance Management Systems	3
Elmec	1410	Preventive and Predictive Maintenance	3
Engli	1105	Introduction to Technical Writing	3
Hort	1100	Introduction to Horticulture	3
Hort	1112	Landscape Maintenance and Construction	3
Hort	1125	Water Conservation in the Landscape	1
Hort	1135	Introduction to Green Roofs	1
Hort	1141	Sustainable Landscape Design	1
Hort	2231	Turf Science and Management	3
Manag	1100	Supervision	3
Manag	2230	Purchasing	3
Manag	2240	Human Resource Management	3
Manuf	1104	Technical Mechanics	2
Manuf	1121	Physical Metallurgy	3
Manuf	1126	Introduction to Plastics	3
Manuf	1127	Engineering Materials of Industry	3
Manuf	1180	Quality Control	3
Marke	2210	Principles of Marketing	3
Psych	2210	Industrial and Organizational Psychology	3
Reale	1130	Real Estate Broker Pre-License Topics	5
Reale	1131	Real Estate Broker Pre-License Applied Real Estate Principles 1	3
Speec	1150	Introduction to Business Communication	3
Weld	1100	Welding I	3
Weld	1112	Oxy-Fuel, Welding, Plasma Cutting and Brazing	3
General Education			18-22
(In addition to the courses listed above)			
Total Credits Required			64-68

#### CERTIFICATES

The **Facility Management General certificate** allows professionals from related fields to increase knowledge related to a career in facility management. This certificate would also be useful for the technician moving up to a supervisory or entry-level management position. The Facility Management General certificate requires 15 credits in the courses listed below.

ICCB Code 4228 | Field of Study Code: FACM.CER

Facm	1100	Introduction to Facility Management	3
Facm	2202	Facility Systems – Electrical	3
Facm	2203	Facility Systems – Mechanical	3
Facm	2215	Facility and Property Management	3
Busin	1111	Customer Service	3

The **Facility Management Technician certificate** provides entry-level facility management technicians an opportunity to upgrade workplace skills. This certificate could also be useful for entry-level managers in the field to increase their understanding of maintaining and operating a variety of systems. The Facility Management Technician certificate requires 18 credits in the courses listed below.

ICCB Code 4229 | Field of Study Code: FACM.CER.TECH

#### Program Requirements

Facm	1100	Introduction to Facility Management	3
Facm	2215	Facility and Property Management	3
			6

Program Electives	12
Select 12 credits of electives from the Facility Management program, or consult with the program coordinator.	

## FASHION MERCHANDISING AND DESIGN

THREE AAS DEGREES, FOUR CERTIFICATES

#### AAS DEGREES

The **Fashion Merchandising and Design program** studies the entire fashion world. In the Fashion Design degree option, students study for positions in the creation or construction of fashions, such as designer, pattern maker, sample maker, seamstress, alterations specialist, theater costumer and product development. In the Fashion Merchandising option, students study for positions in sales and management, such as showroom personnel, manufacturer's representative or visual merchandiser. The **Fashion Merchandising degree** program requires a minimum of 64 credits in program requirements, program electives and general education in the courses listed below.

ICCB Code 3252 | Field of Study Code: FASHI.AAS.MERCH

#### Program Requirements

Fashi	1120	Fashion Promotion	3
OR			
Fashi	2220	Visual Merchandising	3
Fashi	1130	History of Costume I	3
Fashi	1131	History of Costume II	3
Fashi	1151	Principles of Textiles	3
Fashi	2231	Fashion Marketing and Merchandising	3
Fashi	2235	Apparel Quality Analysis	3
Fashi	2251	Fashion Motivation	3
Busin	1100	Introduction to Business	3
Manag	1100	Supervision	3
Marke	2210	Principles of Marketing	3
Marke	2220	Principles of Selling	3
OR			
Marke	2240	Advertising	3
Marke	2230	Principles of Retail	3
			36

Program Electives	10
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Select 10 credits from below and/or other Fashion, Business, Marketing or Management courses.

Fashi	1120	Fashion Promotion	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
Fashi	1800	Experiential Special Topics in Fashion	1 to 4
Fashi	1820	Selected Topics in Fashion Merchandising	3
Fashi	1840	Independent Study in Fashion	1 to 4
Fashi	2220	Visual Merchandising	3
Fashi	2860	Cooperative Education/Internship (Occupational)	1 to 4

General Education	18 to 22
(In addition to the courses listed above)	

Total Credits Required	64 to 68
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The **Fashion Design degree program** requires a minimum of 64 credits in program requirements, program electives and general education in the courses listed below.

ICCB Code 3527 | Field of Study Code: FASHI.AAS.DESGN

#### Program Requirements

Fashi	1101	Flat Pattern Drafting I	3
Fashi	1102	Flat Pattern Drafting II	3
Fashi	1105	Design Principles in Apparel	3
Fashi	1130	History of Costume I	3
Fashi	1131	History of Costume II	3
Fashi	1151	Principles of Textiles	3
Fashi	1155	Clothing Construction I	3



Fashi	1156	Clothing Construction II	3
Fashi	1160	Tailoring	3
Fashi	2201	Draping	3
Fashi	2202	Design Studio: Apparel	3
Fashi	2211	Fashion Illustration	3
Fashi	2231	Fashion Marketing and Merchandising	3
			<u>39</u>

Program Electives .....5

Select at least 5 credits from the courses listed below.

Fashi	1110	Machine Knitting I	1.5
Fashi	1112	Machine Knitting II	1.5
Fashi	1114	Weaving I	1.5
Fashi	1116	Weaving II	1.5
Fashi	1120	Fashion Promotion	3
Fashi	1165	Clothing Construction for the Apparel Industry	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
Fashi	1800	Experiential Special Topics in Fashion	1 to 4
Fashi	1820	Selected Topics in Fashion Merchandising	3
Fashi	1821	Selected Topics in Fashion Design	3
Fashi	1840	Independent Study in Fashion	1 to 4
Fashi	2212	Advanced Fashion Illustration	3
Fashi	2222	Computer-Aided Apparel Design I	3
Fashi	2223	Computer-Aided Apparel Design II	3
Fashi	2224	Production Pattern Grading	3
Fashi	2235	Apparel Quality Analysis	3
Fashi	2251	Fashion Motivation	3
Fashi	2261	Textile Design I	3
Fashi	2262	Textile Design II	3
Fashi	2860	Cooperative Education/Internship (Occupational)	1

General Education .....20 to 24  
 (In addition to the courses listed above, complete 18 to 22 semester credits in general education, plus 2 credits in the Global/Multicultural Studies or Contemporary Life Skills categories.)

Total Credits Required .....**64 to 68**

**The Fashion Apparel Production degree** program requires a minimum of 64 credits in program requirements, program electives and general education in the courses listed below. This degree is for fashion and creative designers with focus on producing design collections for profit using apparel industry standards. Features hands on studio courses focusing on creating a marketable collection and taking it through the steps of production and marketing.

ICCB Code 3253 | Field of Study Code: FASHI.AAS.APPRL

Program Requirements

Fashi	1101	Flat Pattern Drafting I	3
Fashi	1102	Flat Pattern Drafting II	3
Fashi	1155	Clothing Construction I	3
Fashi	1156	Clothing Construction II	3
		OR	
Fashi	1165	Clothing Construction for the Apparel Industry	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
Fashi	2201	Draping	3
Fashi	2211	Fashion Illustration	3
Fashi	2222	Computer-Aided Apparel Design I	3
Fashi	2245	Design Collection Development	3
Fashi	2255	Design Studio: Marketing the Collection	3
Fashi	2430	Apparel Production Management	3
Fashi	2460	Fashion Law and Ethics	3
Accou	1110	Accounting Procedures	3
			<u>39</u>

Program Electives .....6

Select 6 credits from any Fashion course other than those listed above. Suggested program electives are listed below.

Fashi	1105	Design Principles in Apparel	3
Fashi	1151	Principles of Textiles	3
Fashi	2212	Advanced Fashion Illustration	3
Fashi	2231	Fashion Marketing and Merchandising	3

General Education .....19 to 22  
 (In addition to the courses listed above, complete 19 to 22 semester credits in general education, plus 2 credits in the Global/Multicultural Studies or Contemporary Life Skills categories.)  
 Total Credits Required .....64 to 67

**CERTIFICATES**

In the **Fashion Merchandising certificate**, students study for positions in sales and management, such as showroom personnel, manufacturer's representative or visual merchandiser. The certificate program requires 30 credits in the course listed below.

ICCB Code 4252 | Field of Study Code: FASHI.CER.MERCH

Program Requirements

Fashi	1120	Fashion Promotion	3
		OR	
Fashi	2220	Visual Merchandising	3
Fashi	1151	Principles of Textiles	3
Fashi	2231	Fashion Marketing and Merchandising	3
Fashi	2235	Apparel Quality Analysis	3
Fashi	2251	Fashion Motivation	3
Busin	1100	Introduction to Business	3
Marke	2210	Principles of Marketing	3
			<u>21</u>

Program Electives .....9

Select 9 additional credits from below and/or Business, Marketing or Management courses.

Fashi	1120	Fashion Promotion	3
Fashi	1130	History of Costume I	3
Fashi	1131	History of Costume II	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
Fashi	2220	Visual Merchandising	3
Fashi	2860	Cooperative Education/Internship (Occupational)	1 to 4
Manag	1100	Supervision	3
Marke	2220	Principles of Selling	3
Marke	2230	Principles of Retail	3

The **Fashion Entrepreneurship certificate** requires 21 credits in the courses listed below.

ICCB Code 4526 | Field of Study Code: FASHI.CER.ENTRE

Program Requirements

Fashi	1101	Flat Pattern Drafting I	3
Fashi	1102	Flat Pattern Drafting II	3
Fashi	1155	Clothing Construction I	3
Fashi	1156	Clothing Construction II	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
			<u>15</u>

Program Electives .....6

Select 6 credits from below.

Busin	1100	Introduction to Business	3
Busin	1161	Entrepreneurship	3
Fashi	1120	Fashion Promotion	3
Fashi	1160	Tailoring	3
Fashi	1165	Clothing Construction for the Apparel Industry	3
Fashi	1821	Selected Topics in Fashion Design	3
Fashi	2201	Draping	3
Fashi	2202	Design Studio: Apparel	3
Fashi	2204	Bridal Couture I: Bridal and Special Occasion	1.5
Fashi	2206	Bridal Couture II: Bridal and Special Occasion	1.5
Fashi	2208	Millinery Design I	1.5
Fashi	2210	Millinery Design II	1.5
Fashi	2211	Fashion Illustration	3
Fashi	2212	Advanced Fashion Illustration	3

For the **Fashion Design certificate**, students study for positions in the creation or construction of fashions, such as designer, pattern maker, sample maker, seamstress, alterations specialist, theater

costumer and product development. This certificate requires 30 credits in the courses listed below.

ICCB Code 4527 | Field of Study Code: FASHI.CER.DESGN

Program Requirements

Fashi	1101	Flat Pattern Drafting I.....	3
Fashi	1102	Flat Pattern Drafting II.....	3
Fashi	1151	Principles of Textiles.....	3
Fashi	1155	Clothing Construction I.....	3
Fashi	1156	Clothing Construction II.....	3
Fashi	2201	Draping.....	3
Fashi	2202	Design Studio: Apparel.....	3
Fashi	2211	Fashion Illustration.....	3
			24

Program Electives.....6

Select a minimum of 6 credits from below.

Fashi	1105	Design Principles in Apparel.....	3
Fashi	1120	Fashion Promotion.....	3
Fashi	1130	History of Costume I.....	3
Fashi	1131	History of Costume II.....	3
Fashi	1160	Tailoring.....	3
Fashi	1800	Experiential Special Topics in Fashion.....	1 to 4
Fashi	1821	Selected Topics in Fashion Design.....	3
Fashi	1840	Independent Study in Fashion.....	1 to 4
Fashi	2231	Fashion Marketing and Merchandising.....	3
Fashi	2251	Fashion Motivation.....	3

The **Fashion Apparel Production certificate** is for fashion and creative designers with focus on producing design collections for profit using apparel industry standards. Features hands on studio courses focusing on creating a marketable collection and taking it through the steps of production and marketing.

ICCB Code 4253 | Field of Study Code: FASHI.CER.APPRL

Program Requirements

Fashi	1101	Flat Pattern Drafting I.....	3
Fashi	1102	Flat Pattern Drafting II.....	3
Fashi	1155	Clothing Construction I.....	3
Fashi	1156	Clothing Construction II.....	3
		OR	
Fashi	1165	Clothing Construction for the Apparel Industry.....	3
Fashi	1180	Business Practices for the Fashion Entrepreneur.....	3
Fashi	2201	Draping.....	3
Fashi	2211	Fashion Illustration.....	3
Fashi	2222	Computer-Aided Apparel Design I.....	3
Fashi	2245	Design Collection Development.....	3
Fashi	2255	Design Studio: Marketing the Collection.....	3
Fashi	2430	Apparel Production Management.....	3
Fashi	2460	Fashion Law and Ethics.....	3
Accou	1110	Accounting Procedures.....	3
			39

Program Electives.....3

Select 3 credits from any Fashion course other than those listed above. Suggested program electives are listed below.

Fashi	1105	Design Principles in Apparel.....	3
Fashi	1151	Principles of Textiles.....	3
Fashi	2212	Advanced Fashion Illustration.....	3
Fashi	2223	Computer-Aided Apparel Design II.....	3
Fashi	2231	Fashion Marketing and Merchandising.....	3

**FIRE SCIENCE TECHNOLOGY**

TWO AAS DEGREES, FIVE CERTIFICATES

AAS DEGREES

The **Fire Science Technology program** encompasses both firefighting and emergency medical services. The Fire Science degree focuses on the theory and techniques of firefighting, inclusive of the Emergency Medical Technician curriculum,

required by most fire departments. The new Emergency Medical Services degree focuses on emergency medical services and the administration of those services in any setting. The certificate programs target specific aspects of firefighting and emergency care. The **Fire Science degree** program requires 64 credits in the program requirements, program electives, electives and general education in the courses below.

ICCB Code 3427 | Field of Study Code: FIRE.AAS

Program Requirements

Fire	1100	Introduction to Fire Science.....	3
Fire	1111	Fire Prevention I.....	3
Fire	2201	Extinguishing and Alarm Systems.....	3
Fire	2210	Fire Apparatus.....	3
Fire	2215	Building Construction.....	3
			15

Program Electives.....14

Select from the following courses:

Fire	1101	Fire Fighter II-A.....	4
Fire	1102	Fire Fighter II-B.....	4
Fire	1103	Fire Fighter II-C.....	4
Fire	1104	Advanced Technician Firefighter.....	4
Fire	1120	Codes and Laws.....	3
Fire	2210	Fire Apparatus.....	3
Fire	2211	Fire Apparatus Engineer.....	3
Fire	2221	Tactics I.....	3
Fire	2222	Tactics II.....	3
Fire	2230	Hazardous Materials.....	3
Fire	2231	Hazardous Materials Operations.....	3
Fire	2232	Hazardous Materials Technician A.....	3
Fire	2233	Hazardous Materials Technician B.....	3
Fire	2240	Industrial Safety.....	3
Fire	2251	Fire Leadership I.....	3
Fire	2252	Fire Leadership II.....	3
Fire	2253	Fire Leadership III.....	3
Fire	2254	Fire Leadership IV.....	3
Fire	2255	Fire Service Instructor I.....	3
Fire	2256	Fire Service Instructor II.....	3
Fire	2260	Fire Investigation.....	3
Fire	2261	Fire/Arson Investigation I.....	3
Fire	2262	Fire/Arson Investigation II.....	3
Fire	2263	Fire/Arson Investigation III.....	3
Fire	2271	Emergency Med Technician.....	10
Fire	2272	Paramedic Transition.....	3
Fire	2273	Vehicle and Machinery Operations.....	3
Fire	2282	EMT Instructor Training.....	3
Fire	2283	Emergency Medical Responder.....	3
Fire	2285	Trauma Patient Assessment.....	2

Electives.....17

Select from any 1000- or 2000-level courses.

General Education.....18

(In addition to the courses listed above)

Total Credits Required.....64

**Emergency Medical Services Degree**

This degree program requires 65 credits in courses listed below.

ICCB Code 3428 | Field of Study Code: FIRE.AAS.EMS

Program Requirements

Fire	2274	Paramedic I.....	8
Fire	2275	Paramedic II.....	8
Fire	2276	Paramedic III.....	8
Fire	2277	Paramedic IV.....	8
Anat	1500	Survey of Human Anatomy and Physiology.....	4
		OR	
		Any Science Lab course	
Engli	1101	English Composition I.....	3
Manag	1100	Supervision.....	3

Manag	2210	Principles of Management .....	3
Manag	2220	Organizational Behavior.....	3
Manag	2240	Human Resource Management .....	3
Math	1102	Mathematics for Health Sciences .....	3
		OR	
		Any Math course higher than Math 1102	
Psych	1100	General Psychology.....	3
Speec	1100	Fundamentals of Speech Communication .....	3
			60

General Education .....	5
Three credits in any Humanities course, and 2 credits in any Contemporary Life Skills course. (In addition to courses listed above.)	
Total Credits Required .....	65

#### CERTIFICATES

The **Paramedic certificate** requires 32 credits in the courses listed below.

ICCB Code 4426 | Field of Study Code: FIRE.CER.MEDIC

Fire	2274	Paramedic I.....	8
Fire	2275	Paramedic II.....	8
Fire	2276	Paramedic III.....	8
Fire	2277	Paramedic IV .....	8

The **Fire Fighter certificate** requires 18 credits in the courses listed below.

ICCB Code 4427 | Field of Study Code: FIRE.CER

Fire	1101	Fire Fighter II-A.....	4
Fire	1102	Fire Fighter II-B.....	4
Fire	1103	Fire Fighter II-C.....	4
Fire	2211	Fire Apparatus Engineer .....	3
Fire	2230	Hazardous Materials .....	3

The **Fire Prevention certificate** requires 24 credits in the courses listed below.

ICCB Code 4428 | Field of Study Code: FIRE.CER.PREV

Fire	1111	Fire Prevention I .....	3
Fire	2201	Extinguishing and Alarm Systems.....	3
Fire	2215	Building Construction .....	3
Fire	2230	Hazardous Materials .....	3
Fire	2251	Fire Leadership I.....	3
Fire	2260	Fire Investigation .....	3
Engli	1101	English Composition I.....	3
Speec	1100	Fundamentals of Speech Communication .....	3

The **Fire Officer certificate** requires 33 credits in the courses listed below.

ICCB Code 4429 | Field of Study Code: FIRE.CER.OFCR

Fire	1111	Fire Prevention I .....	3
Fire	2221	Tactics I.....	3
Fire	2222	Tactics II.....	3
Fire	2251	Fire Leadership I.....	3
Fire	2252	Fire Leadership II.....	3
Fire	2253	Fire Leadership III.....	3
Fire	2254	Fire Leadership IV .....	3
Fire	2255	Fire Service Instructor I .....	3
Fire	2256	Fire Service Instructor II .....	3
Engli	1101	English Composition I.....	3
Speec	1100	Fundamentals of Speech Communication .....	3

The **Emergency Medical Technician certificate** is designed for students and professionals who have an interest or are currently employed in the field of fire science or the emergency medical field. Introduction to the study of pre-hospital care as it relates to patient assessment, treatments and transportation to the hospital. This certificate requires 10 credits in the course listed below.

ICCB Code 4430 | Field of Study Code: FIRE.CER.EMT

Fire	2271	Emergency Medical Technician.....	10
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#### GEOGRAPHY

##### CERTIFICATE

The **Geographic Information Systems (GIS) certificate** is intended to provide formal GIS training to students interested in this field. The six classes will cover a broad range of GIS topics, including terminology, data management, map design, geodatabases, spatial queries, spatial analysis, project development and design and problem solving. The program emphasizes a real-world approach to the GIS sciences with the purpose of attaining employment and careers in the field of GIS. This certificate requires 18 credits in the courses listed below.

ICCB Code 4837 | Field of Study Code: GEOGR.CER.GIS

Geogr	1140	Urban Geography .....	3
Geogr	1151	Geographic Information System I.....	3
Geogr	1152	GIS II .....	3
Geogr	1153	Applied GIS .....	3
Geogr	1154	Geodatabase Development.....	3
Geogr	1155	GIS Capstone Project .....	3

#### GRAPHIC ARTS TECHNOLOGY

##### TWO AAS DEGREES, TWO CERTIFICATES

**The GRAPHIC ARTS TECHNOLOGY program will be discontinued at the end of Spring term 2013 (May, 2013). Beginning Summer 2012, new students will no longer be accepted into the Graphic Arts Technology program. For more information, please contact the Liberal Arts Division Office at (630) 942-2047. Students interested in GRAPHIC DESIGN should contact the Fine and Applied Arts Office at (630) 942-2048.**

##### AAS DEGREES

The **Graphic Arts Technology program** prepares students for jobs in printing, publishing and related industries. The **Print Production degree** requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3531 | Field of Study Code: GRAPH.AAS

##### Program Requirements

Graph	1101	Printing Methods and Processes .....	3
Graph	1102	Introduction to Graphic Publishing Applications ...	3
Graph	1103	Print Production I.....	3
Graph	1104	Binding and Finishing .....	2
Graph	1160	Color Reproduction Techniques.....	3
Graph	1183	Digital Page Layout: QuarkXPress .....	3
Graph	1185	Digital Layout: Adobe InDesign .....	3
Graph	1186	Digital Illustrator for Production .....	3
Graph	1187	Digital Imaging: Adobe Photoshop .....	3
Graph	2201	Print II.....	3
Graph	2230	Graphic Arts Business Practices .....	3
Graph	2265	Web Publishing: Adobe Dreamweaver .....	3
Graph	2275	Capstone: Print Production .....	4
			39

Program Electives.....7  
Select seven credits in any 1000- or 2000-level Graphic Arts Technology course in addition to the Program Requirements listed above. Select 3 credits co-op or internship.

General Education.....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....

The **Digital Prepress Production degree** program requires a minimum of 65 credits in program requirements and general education as listed below.

ICCB Code 3535 | Field of Study Code: GRAPH.AAS.DIGIT

**Program Requirements**

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1104	Binding and Finishing	2
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Layout: QuarkXPress	3
Graph	1185	Digital Layout: Adobe InDesign	3
Graph	1186	Digital Illustrator for Production	3
Graph	1187	Digital Imaging: Adobe Photoshop	3
Graph	2230	Graphic Arts Business Practices	3
Graph	2240	Advanced Digital Page Layout: QuarkXPress	3
Graph	2250	Advanced Digital Layout: Adobe InDesign	3
Graph	2254	Advanced Digital Imaging: Adobe Photoshop	3
Graph	2265	Web Publishing: Adobe Dreamweaver	3
Graph	2270	Advanced Adobe Illustrator for Production	3
Graph	2280	Capstone: Digital Graphics	3
Grdsn	1102	Graphic Design I	3

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General Education .....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....65 to 69

**CERTIFICATES**

The **Graphic Arts Technology—Print Production certificate** requires 36 credits in the courses listed below.

ICCB Code 4531 | Field of Study Code: GRAPH.CER.GTEC

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1103	Print Production I	3
Graph	1104	Binding and Finishing	2
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Page Layout: QuarkXPress	3
Graph	1185	Digital Layout: Adobe InDesign	3
Graph	1186	Digital Illustrator for Production	3
Graph	1187	Digital Imaging: Adobe Photoshop	3
Graph	2201	Print II	3
Graph	2230	Graphic Arts Business Practices	3
Graph	2275	Capstone: Print Production	4

The **Digital Prepress Production certificate** requires a total of 42 credits in the courses listed below.

ICCB Code 4532 | Field of Study Code: GRAPH.CER.DIGIT

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Page Layout: QuarkXPress	3
Graph	1185	Digital Layout: Adobe InDesign	3
Graph	1186	Adobe Illustrator for Production	3
Graph	1187	Digital Imaging: Adobe Photoshop	3
Graph	2230	Graphic Arts Business Practices	3
Graph	2240	Advanced Digital Page Layout: QuarkXPress	3
Graph	2250	Advanced Digital Layout: Adobe InDesign	3
Graph	2254	Advanced Digital Imaging Adobe Photoshop	3
Graph	2270	Advanced Adobe Illustrator for Production	3
Graph	2280	Capstone: Digital Graphics	3
Graph	2285	Advanced Digital Page Layout: Adobe InDesign	3
Grdsn	1102	Graphic Design I	3

**GRAPHIC DESIGN**

AAS DEGREE, THREE CERTIFICATES

**AAS DEGREE**

The **Graphic Design program** emphasizes portfolio development through the study of principles and elements of design, typography, illustration, identity design, advertising design, web design and simulated studio work. Students gain experience in the use of traditional and digital design tools and software. Articulation agreements exist to continue education beyond the AAS degree.

The **Graphic Design degree** program requires a minimum of 66 credits in program requirements and general education as listed below.

ICCB Code 3613 | Field of Study Code: GRDSN.AAS

**Program Requirements**

Grdsn	1100	Drawing for Design	3
Grdsn	1102	Graphic Design I	3
Grdsn	1103	Project Planning for Graphic Design	3
Grdsn	1104	Typography	3
Grdsn	1105	Graphic Design II	3
Grdsn	1106	Three-Dimensional Design	3
Grdsn	1107	Digital Illustration I	3
Grdsn	1108	Digital Illustration II	3
Grdsn	2201	Graphic Design III	3
Grdsn	2202	Web/Interactive Design I	3
Grdsn	2203	Advertising Design	3
Grdsn	2204	Digital Illustration III	3
Grdsn	2205	Graphic Design IV	3
Grdsn	2206	Web/Interactive Design II	3
Grdsn	2207	New Media Design	3
Grdsn	2208	Portfolio Seminar	3

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General Education .....18 to 22  
(In addition to courses listed above)

*NOTE:* NASAD accreditation requires a 3 credit Art History course to fulfill the Humanities and Fine Arts general education requirement. Choose one of the following:

Art	2211	Art History I: To 1300	3
Art	2212	Art History II: 1300 to 1750	3
Art	2213	Art History III: 1750 to Present	3
Art	2214	Introduction to Non-Western Art	3

Total Credits Required .....66 to 70

**CERTIFICATES**

The **Graphic Design Level 1 certificate** provides a foundation in the principles and elements of design, typography, drawing and illustration, using traditional and digital design tools and software. This certificate requires 24 credits in the courses listed below.

ICCB Code 4616 | Field of Study Code: GRDSN.CER.LVL1

Grdsn	1100	Drawing for Design	3
Grdsn	1102	Graphic Design I	3
Grdsn	1103	Project Planning for Graphic Design	3
Grdsn	1104	Typography	3
Grdsn	1105	Graphic Design II	3
Grdsn	1106	Three-Dimensional Design	3
Grdsn	1107	Digital Illustration I	3
Grdsn	1108	Digital Illustration II	3

The **Graphic Design Level 2 certificate** provides advanced studies in graphic design, including identity, advertising and web design, as well as simulated studio work. This certificate requires 24 credits in the courses listed below.

ICCB Code 4617 | Field of Study Code: GRDSN.CER.LVL2

Grdsn	2201	Graphic Design III	3
Grdsn	2202	Web/Interactive Design I	3



Grdsn	2203	Advertising Design .....	3
Grdsn	2204	Digital Illustration III .....	3
Grdsn	2205	Graphic Design IV .....	3
Grdsn	2206	Web/Interactive Design II .....	3
Grdsn	2207	New Media Design .....	3
Grdsn	2208	Portfolio Seminar.....	3

The **Web Design certificate** provides a foundation in design, principles of interactivity and the use of web-authoring software. This certificate requires 21 credits in the courses listed below.

ICCB Code 4620 | Field of Study Code: GRDSN.CER.WEBDE

Grdsn	1102	Graphic Design I .....	3
Grdsn	1105	Graphic Design III.....	3
Grdsn	1107	Digital Illustration I .....	3
Grdsn	2201	Graphic Design III.....	3
Grdsn	2202	Web/Interactive Design I .....	3
Grdsn	2206	Web/Interactive Design II .....	3
Grdsn	2207	New Media Design.....	3

## HEALTH INFORMATION TECHNOLOGY

AAS DEGREE, FOUR CERTIFICATES

### AAS DEGREE

A health information professional collects, analyzes and manages the information that steers the health care industry. At the heart of the profession's information responsibilities are records, both computer-based and paper, of an individual's health care. The health information professional orchestrates the collection of many kinds of documentation from a variety of sources, monitors the integrity of the information, and ensures appropriate access to the individual record. The professional also manages aggregate data based on the care of patients. The professional collects health care data by abstracting and encoding information, by using computer programs to interpret data, and by putting in place quality controls to ensure the data's validity. This program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The **Health Information Technology degree** requires 68 credits in program requirements and general education, some of which may be used to meet general education requirements.

ICCB Code 3152 | Field of Study Code: HIT.AAS

#### Program Requirements

Hit	1101	Fundamentals of Health Information Technology ..4	
Hit	1102	Clinical Classification Systems .....	5
Hit	1103	Computerized Health Data and Statistics .....	4
Hit	1107	CPT Coding.....	3
Hit	1125	Clinical Reimbursement Methodologies .....	3
Hit	2201	Legal and Qualitative Aspects of Health Information .....	5
Hit	2202	Management of Health Information.....	3
Hit	2203	Pharmacology for HIT Professionals.....	3
Hit	2211	Pathophysiology for Health Information.....	4
Hit	2221	Clinical I .....	3
Hit	2231	Clinical II .....	5
Anat	1500	Survey of Human Anatomy and Physiology .....	4
Cis	1150	Introduction to Computer Information Systems.....	3
Engli	1101	English Composition I.....	3
Hlths	1110	Biomedical Terminology .....	4
Math	1102	Mathematics for Health Sciences .....	3
Psych	1100	General Psychology.....	3
Speec	1100	Fundamentals of Speech Communication .....	3
		OR	
Speec	1120	Small-Group Communication .....	3
		OR	
Speec	1150	Introduction to Business Communication.....	3
			65

General Education .....

Take 3 credits in the Humanities in addition to those courses listed above. The following course is recommended:

Philo	1112	Biomedical Ethics.....	3
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Total Credits Required .....

### CERTIFICATES

The **Medical Transcription certificate** prepares students to transcribe medical reports, e.g. surgical reports, consultation reports and discharge summaries. Medical transcriptionists are medical word specialists and are employed in hospitals, clinics, doctors' offices, other health care facilities, and even out of the home. Transcription students take courses in English, medical terminology, anatomy and physiology, pathophysiology, word processing and medical transcription. A medical transcriptionist must have above average typing skills and the ability to work with mechanical transcribing equipment. This certificate requires 33 credits in the courses listed below.

ICCB Code 4152 | Field of Study Code: HIT.CER.MEDTR

#### Program Requirements

Hlths	1110	Biomedical Terminology .....	4
Anat	1500	Survey of Human Anatomy and Physiology .....	4
Hit	2203	Pharmacology for HIT Professionals.....	3
Hit	2211	Pathophysiology for Health Information.....	4
Hit	2223	Medical Transcription I .....	3
Hit	2224	Medical Transcription II .....	3
Ofti	1210	Word Processing I .....	3
Ofti	2305	Word Processing Transcription .....	3
Engli	1101	English Composition I.....	3
			30

Program Electives .....

Select one of the following:

Hit	1107	CPT Coding.....	3
Hit	1120	ICD Coding for Physicians.....	3

The **Physician Office Coding and Billing certificate** requires 13 credits in the courses listed below.

ICCB Code 4154 | Field of Study Code: HIT.CER.POBILL

Hit	1107	CPT Coding.....	3
Hit	1120	ICD Coding for Physicians.....	3
Hit	1121	Billing in Physician's Offices .....	3
Hlths	1110	Biomedical Terminology .....	4

The **Acute Healthcare Coding certificate** requires 24 credits in the courses listed below.

ICCB Code 4155 | Field of Study Code: HIT.CER.ACUTE

Hit	1101	Fundamentals of Health Information Technology ..4	
Hit	1102	Clinical Classification Systems .....	5
Hit	1125	Clinical Reimbursement Methodologies .....	3
Hit	2211	Pathophysiology for Health Information.....	4
Anat	1500	Survey of Human Anatomy and Physiology .....	4
Hlths	1110	Biomedical Terminology .....	4

The **Ambulatory Coding certificate** requires 24 credits in the courses listed below.

ICCB Code 4156 | Field of Study Code: HIT.CER.AMBUL

Hit	1101	Fundamentals of Health Information Technology ..4	
Hit	1102	Clinical Classification Systems .....	5
Hit	1107	CPT Coding.....	3
Hit	2211	Pathophysiology for Health Information.....	4
Anat	1500	Survey of Human Anatomy and Physiology .....	4
Hlths	1110	Biomedical Terminology .....	4

# HEALTH SCIENCES

## AAS DEGREE, FIVE CERTIFICATES

### AAS DEGREE

Medical assistants are allied health professionals specifically trained to work in ambulatory settings, such as physicians' offices, clinics and group practices. These multi-skilled personnel perform administrative and clinical procedures. Duties may include but are not limited to: billing and coding, maintaining medical records, completing basic clinical assessments, recording vital signs, preparing patients for examination, collecting blood specimens, performing basic laboratory tests, performing EKGs, preparing and administering medications and assisting physicians with treatment and/or minor procedures. The **Medical Assistant degree** requires 64 credits in program requirements and electives from the courses listed below.

The College of DuPage Medical Assistant Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Medical Assistant Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs  
1361 Park Street  
Clearwater, FL 33756  
727-210-2350  
[www.caahep.org](http://www.caahep.org)

ICCB Code 3163 | Field of Study Code: HLTHS.AAS.MASS

#### Program Requirements

Hlths	1110	Biomedical Terminology .....	4
Hlths	1120	Introduction to Clinical Lab Science.....	3
Hlths	1122	Basic Phlebotomy Techniques .....	4
Hlths	1126	Basic Non-Invasive Electrocardiology (EKG).....	2
Hlths	1130	Medical Assistant Administrative Procedures .....	3
Hlths	1133	Health Insurance for Medical Assistants .....	3
Hlths	2211	Legal and Ethical Aspects of Health Care.....	3
Hlths	2233	Pathophysiology for Medical Assisting .....	3
Hlths	2237	Assisting with Medical Specialties .....	3
Hlths	2239	Medical Assistant Clinical Procedures .....	3
Hlths	2245	Workplace Development for Medical Assistants....	2
Hlths	2250	Medical Assistant Practicum.....	3
Hlths	2253	Certified Medical Assistant Exam Prep .....	1
Anat	1500	Survey of Human Anatomy and Physiology .....	4
Cis	1110	Using Computers: An Introduction.....	2
Engli	1101	English Composition I.....	3
		OR	
Engli	1105	Introduction to Technical Writing .....	3
Math	1102	Mathematics for Health Sciences .....	3
Philo	1112	Biomedical Ethics.....	3
		OR	
Philo	1114	Business Ethics .....	3
Psych	1100	General Psychology.....	3
Speec	1100	Fundamentals of Speech Communication .....	3
		OR	
Speec	1120	Small-Group Communication.....	3
		OR	
Speec	1150	Introduction to Business Communication.....	3
			<u>58</u>

Program Electives.....6

Students must complete 6 credits from the following courses

Hlths	1124	Phlebotomy Clinical .....	2
Hlths	1128	Advanced Non-Invasive Electrocardiography (EKG).....	3
Hlths	1150	CPR-Basic Life Support for Healthcare Providers .	1
Phys	2251	Living with Health .....	3
Socio	2251	Health and Illness in Contemporary Society.....	3
Socio	2252	Social Gerontology: Aging and Society.....	3

Total Credits Required .....64

### CERTIFICATES

Certified Nursing Assistants are entry-level providers of direct patient care in today's health care environment, including long-term care, hospitals, home health agencies, rehabilitation and hospice. Routine care and treatment are administered by the nursing assistant under the direct supervision of a nurse. Nurse aide training is completed in one term of instruction that is comprised of lecture, lab and clinical. Both day and evening classes are offered.

The **Certified Nursing Assistant program** meets the guidelines set by federal and state government. Successful completion of this approved program qualifies the individual to sit for the state competency evaluation and to be entered on the Illinois Department of Public Health Nurse Aide Registry.

The **Certified Nursing Assistant certificate** requires 6 credits in the course listed below.

ICCB Code 4158 | Field of Study Code: HLTHS.CER.CNA

Hlths	1105	Nurse Assistant .....	6
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#### Phlebotomy/EKG certificate

Phlebotomists are health care professionals who collect blood specimens for laboratory testing. The study of the electrical activity of the heart is included as phlebotomists are performing electrocardiograms (EKGs). Phlebotomists are presently employed in a variety of patient-care settings, including hospitals, clinics, laboratories and physician offices. Courses are offered day or evening, with the clinical component during the day. Individuals who have health care backgrounds, such as CNA, EMT and LPN, can also consider taking these courses. CPR certification for health care workers is required prior to beginning clinical training. Open enrollment is available.

The **Phlebotomy/EKG program** meets the guidelines set by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and entitles students to apply to sit for the national exam to become a Certified Phlebotomist upon completion.

The **Phlebotomy/EKG certificate** requires 12 credits in the courses listed below.

ICCB Code 4162 | Field of Study Code: HLTHS.CER.PHLEB

Hlths	1110	Biomedical Terminology .....	4
Hlths	1122	Basic Phlebotomy Techniques .....	4
Hlths	1124	Phlebotomy Clinical .....	2
Hlths	1126	Basic Non-Invasive Electrocardiology (EKG).....	2

The **Non-Invasive Electrocardiography Technician certificate** program prepares students to work in cardiology performing non-invasive cardiographic tests, including EKGs, Holter monitors and treadmill stress testing. This certificate requires 10 credits in the courses listed below.

ICCB Code 4163 | Field of Study Code: HLTHS.CER.NEKG

Hlths	1110	Biomedical Terminology .....	4
Hlths	1126	Basic Non-Invasive Electrocardiography (EKG) ....	2
Hlths	1128	Advanced Non-Invasive Electrocardiography (EKG) .....	3
Hlths	1129	Non-Invasive Electrocardiography Clinical .....	1

The **Pharmacy Technician certificate** program includes pharmacy abbreviation, calculations, drug classes, basic physiology, disease states and prescription processing. Students also receive hands-on compounding experience and instruction for preparation of the Pharmacy Technician Certification Board (PTCB) national exam. This certificate requires 5 credits in the course listed below.

ICCB Code 4164 | Field of Study Code: HLTHS.CER.PHARM

Hlths	1115	Pharmacy Technician .....	5
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**Medical Assistant certificate**

Medical assistants are allied health professionals specifically trained to work in ambulatory settings, such as physicians' offices, clinics and group practices. These multi-skilled personnel perform administrative and clinical procedures. Duties may include but are not limited to: billing and coding, maintaining medical records, completing basic clinical assessments, recording vital signs, preparing patients for examination, collecting blood specimens, performing basic laboratory tests, performing EKGs, preparing and administering medications and assisting physicians with treatment and/or minor procedures. This certificate requires a total of 46 credits in the courses listed below.

The College of DuPage Medical Assistant Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Medical Assistant Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs  
 1361 Park Street  
 Clearwater, FL 33756  
 727-210-2350  
[www.caahep.org](http://www.caahep.org)  
 ICCB Code 4165 | Field of Study Code: HLTHS.CER.MASS

Hlths	1110	Biomedical Terminology	.....4
Hlths	1120	Introduction to Clinical Lab Science	.....3
Hlths	1122	Basic Phlebotomy Techniques	.....4
Hlths	1126	Basic Non-Invasive Electrocardiology (EKG)	.....2
Hlths	1130	Medical Assistant Administrative Procedures	.....3
Hlths	1133	Health Insurance for Medical Assistants	.....3
Hlths	2211	Legal and Ethical Aspects of Health Care	.....3
Hlths	2233	Pathophysiology for Medical Assisting	.....3
Hlths	2237	Assisting with Medical Specialties	.....3
Hlths	2239	Medical Assistant Clinical Procedures	.....3
Hlths	2245	Workplace Development for Medical Assistants	.....2
Hlths	2250	Medical Assistant Practicum	.....3
Hlths	2253	Certified Medical Assistant Exam Prep	.....1
Anat	1500	Survey of Human Anatomy and Physiology	.....4
Cis	1110	Using Computers: An Introduction	.....2
Psych	1100	General Psychology	.....3

**HORTICULTURE**

AAS DEGREE, SEVEN CERTIFICATES

**AAS DEGREE**

The **Horticulture program** meets the needs of students entering the horticulture industry as well as those presently employed who wish to continue their professional growth. Besides providing horticultural knowledge and skills, the program emphasizes the business and management proficiency necessary to compete successfully in the horticulture industry.

The **Horticulture degree** program requires a minimum of 64 credits in program requirements, program electives, electives and general education as listed below.

ICCB Code 3338 | Field of Study Code: HORT.AAS

**Program Requirements**

Hort	1100	Introduction to Horticulture	.....3
Hort	1101	Soils and Fertilizers	.....3
Hort	1110	Applied Plant Taxonomy	.....3
Hort	1130	Horticulture Business	.....3
		OR	
Busin	1100	Introduction to Business	.....3
Hort	2221	Plant Propagation	.....3
Hort	2863	Cooperative Education/Internship (Occupational)	.....3
Biolo	1110	Environmental Biology	.....4
		OR	

Biolo	1151	Principles of Biological Science	.....5
		OR	
Chemi	1211	General Chemistry	.....5
Math	1104	Mathematics for Horticulture	.....3
			25 to 26

**Program Electives**.....27

Select a minimum of 27 credits from the courses listed below.

Hort	1105	Floral Design I	.....3
Hort	1111	Landscape Design I	.....3
Hort	1112	Landscape Maintenance and Construction	.....3
Hort	1115	Floral Design II	.....3
Hort	1125	Water Conservation in the Landscape	.....1
Hort	1131	Landscaping for Wildlife	.....1
Hort	1135	Introduction to Green Roofs	.....1
Hort	1140	Landscape Graphics	.....2
Hort	1141	Sustainable Landscape Design	.....1
Hort	1145	Perennial Plant Communities I	.....2
Hort	1185	Arbiculture	.....3
Hort	1820	Selected Topics	.....3
Hort	1821	Selected Topics	.....3
Hort	1824	Selected Topics	.....2
Hort	1826	Selected Topics	.....1
Hort	1827	Selected Topics	.....1
Hort	2211	Computer-Aided Drafting for Landscape	.....3
Hort	2212	Advanced Computer-Aided Drafting for Landscape	.....3
Hort	2225	Specialty Floral Design	.....3
Hort	2231	Turf Science and Management	.....3
Hort	2241	Landscape Plants I	.....3
Hort	2242	Landscape Plants II	.....3
Hort	2243	Ornamental Grasses	.....2
Hort	2244	Herbaceous Perennials	.....3
Hort	2245	Perennial Plant Communities II	.....1
Hort	2251	Diseases of Ornamental Plants	.....3
Hort	2253	Greenhouse Operations and Procedures	.....3
Hort	2255	Greenhouse Crop Production	.....3
Hort	2257	Bedding Plant Production	.....3
Hort	2261	Insects of Ornamental Plants	.....3
Hort	2271	Landscape Design II	.....3
Hort	2840	Experimental/Pilot Class	.....1 to 6

When selecting program electives, students may include up to eight credits in any combination from the additional courses listed below. No more than three hours of co-op can be applied as program elective credit toward this degree.

Arch	1211	Basic Computer-Aided Drafting — AutoCAD	.....3
Hort	1800	Experiential Special Topics	.....1 to 3
Hort	2860	Cooperative Education/Internship (Occupational)	.....1 to 4
Hort	2865	Cooperative Education/Internship Advanced (Occupational)	.....1 to 4

General Education.....12 to 14  
 (In addition to the courses listed above)

Total Credits Required .....64 to 67

**CERTIFICATES**

The **Horticulture certificate** requires 15 credits in the courses listed below.

ICCB Code 4346 | Field of Study Code: HORT.CER

Hort	1100	Introduction to Horticulture	.....3
Hort	1101	Soils and Fertilizers	.....3
Hort	1110	Applied Plant Taxonomy	.....3
Hort	1130	Horticulture Business	.....3
Hort	2221	Plant Propagation	.....3

The **Floral Shop Management certificate** requires 24 credits in the courses listed below.

ICCB Code 4347 | Field of Study Code: HORT.CER.FLOR

**Program Requirements**

Hort	1100	Introduction to Horticulture	3
Hort	1105	Floral Design I	3
Hort	1115	Floral Design II	3
Hort	1130	Horticulture Business	3
OR			
Busin	1100	Introduction to Business	3
Hort	2225	Specialty Floral Design	3
Hort	2244	Herbaceous Perennials	3
Hort	2863	Cooperative Education/Internship (Occupational)	3
			21

Electives .....3

Select three credits from any 1000- or 2000-level courses.

Suggested electives:

Fashi	2220	Visual Merchandising	3
Hort	2257	Bedding Plant Production	3

The **Landscape Design and Construction certificate** requires 35 credits in the courses listed below.

ICCB Code 4348 | Field of Study Code: HORT.CER.LAND

Hort	1100	Introduction to Horticulture	3
Hort	1101	Soils and Fertilizers	3
Hort	1111	Landscape Design I	3
Hort	1112	Landscape Maintenance and Construction	3
Hort	1140	Landscape Graphics	2
Hort	2241	Landscape Plants I	3
Hort	2242	Landscape Plants II	3
Hort	2244	Herbaceous Perennials	3
Hort	2271	Landscape Design II	3
Hort	2863	Cooperative Education/Internship (Occupational)	.3
Arch	1211	Basic Computer-Aided Drafting — AutoCAD	3
OR			
Hort	2211	Computer-Aided Drafting for Landscape	3
Math	1104	Mathematics for Horticulture	3

The **Greenhouse Management certificate** requires 24 credits in the courses listed below.

ICCB Code 4349 | Field of Study Code: HORT.CER.GRNH

Hort	1100	Introduction to Horticulture	3
Hort	1101	Soils and Fertilizers	3
Hort	1130	Horticulture Business	3
OR			
Busin	1100	Introduction to Business	3
Hort	2221	Plant Propagation	3
Hort	2253	Greenhouse Operations and Procedures	3
Hort	2255	Greenhouse Crop Production	3
Hort	2257	Bedding Plant Production	3
Hort	2863	Cooperative Education/Internship (Occupational)	3

The **Sustainable Landscapes certificate** requires 7 credits in the courses listed below.

ICCB Code 4350 | Field of Study Code: HORT.CER.SUSTAIN

Hort	1125	Water Conservation in the Landscape	1
Hort	1131	Landscaping for Wildlife	1
Hort	1135	Introduction to Green Roofs	1
Hort	1141	Sustainable Landscape Design	1
Hort	1145	Perennial Plant Communities I	2
Hort	2245	Perennial Plant Communities II	1

The **Landscape and Turf Maintenance certificate** requires 33 credits in the courses listed below.

ICCB Code 4351 | Field of Study Code: HORT.CER.TURF

**Program Requirements**

Hort	1100	Introduction to Horticulture	3
Hort	1101	Soils and Fertilizers	3
Hort	1110	Applied Plant Taxonomy	3
Hort	1112	Landscape Maintenance and Construction	3
Hort	2231	Turf Science and Management	3
Hort	2251	Diseases of Ornamental Plants	3
Hort	2261	Insects of Ornamental Plants	3
Hort	2863	Cooperative Education/Internship (Occupational)	.3
Math	1104	Mathematics for Horticulture	3
			27

Program Electives .....6

Select any two of the following courses.

Hort	1185	Arboriculture	3
Hort	2241	Landscape Plants I	3
Hort	2242	Landscape Plants II	3
Hort	2244	Herbaceous Perennials	3

The **Nursery and Garden Center Management certificate** requires 35 credits in the courses listed below.

ICCB Code 4352 | Field of Study Code: HORT.CER.GRDN

Hort	1100	Introduction to Horticulture	3
Hort	1101	Soils and Fertilizers	3
Hort	1130	Horticulture Business	3
OR			
Busin	1100	Introduction to Business	3
Hort	2221	Plant Propagation	3
Hort	2241	Landscape Plants I	3
Hort	2242	Landscape Plants II	3
Hort	2243	Ornamental Grasses	2
Hort	2244	Herbaceous Perennials	3
Hort	2251	Diseases of Ornamental Plants	3
Hort	2261	Insects of Ornamental Plants	3
Hort	2863	Cooperative Education/Internship (Occupational)	.3
Math	1104	Mathematics for Horticulture	3

**HOSPITALITY MANAGEMENT**

TWO AAS DEGREES, SIX CERTIFICATES

**AAS DEGREES**

The **Hospitality Management degree** requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3236 | Field of Study Code: HOSPAAS.MGMT

**Program Requirements**

Hosp	1100	Introduction to the Hospitality Industry	3
Hosp	1111	Front Office Operations	3
Hosp	1112	Hospitality Facilities Management	3
Hosp	1121	Supervision in the Hospitality Industry	3
Hosp	1140	Quality Management of Service in the Hospitality Industry	3
Hosp	2130	Hospitality Industry Accounting	3
Hosp	2230	Law for the Hospitality Industry	2
Hosp	2253	Professional Meeting and Event Management	3
Hosp	2280	Hospitality Marketing Management	3
Hosp	2285	Advanced Hospitality Operations	3
Hosp	2862	Cooperative Education/Internship (Occupational)	.2
Hosp	2863	Cooperative Education/Internship (Occupational)	.3
Culin	1120	Foodservice Sanitation	2
Culin	1151	Food and Beverage Services and Sales	2
			38

Program Electives .....8

You must choose eight credits from any non-required course within Culinary Arts, Hospitality Management or Travel, Tourism and Event Planning program areas. (In addition to the courses listed above)



General Education.....	18 to 22
(In addition to the courses listed above)	
Total Credits Required .....	64 to 68

The **Hospitality Management program** provides an opportunity for students to learn the necessary skills to begin or enhance a career in the hospitality industry, the nation's largest retail employer. The **Restaurant Management degree** requires a minimum of 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3235 | Field of Study Code: HOSPAAS.REST

#### Program Requirements

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1112	Hospitality Facilities Management.....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	2130	Hospitality Industry Accounting.....	3
Hosp	2230	Law for the Hospitality Industry .....	2
Hosp	2261	Beverage Management Operation .....	2
Hosp	2275	Hospitality Concept Design .....	2
Hosp	2280	Hospitality Marketing Management.....	3
Hosp	2285	Advanced Hospitality Operations .....	3
Hosp	2862	Cooperative Education/Internship (Occupational) ..	2
Hosp	2863	Cooperative Education/Internship (Occupational) ..	3
Culin	1101	Culinary Arts: Quantity Food Prep I .....	4
Culin	1102	Culinary Arts: Quantity Food Prep II .....	4
Culin	1109	Nutrition for the Foodservice Professional .....	2
Culin	1120	Foodservice Sanitation .....	2
Culin	1151	Food and Beverage Service and Sales .....	2
Culin	2152	Food, Beverage & Equipment Purchasing .....	3
			44

Program Electives.....3  
Select three credits from any course in the Culinary Arts and Hospitality Management Program. (In addition to the courses listed above)

General Education.....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....

#### CERTIFICATES

The **Hospitality Foundations certificate** requires 12 credits in the courses listed below.

ICCB Code 4234 | Field of Study Code: HOSPCER.FOUN

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations.....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	1140	Quality Management of Service in the Hospitality Industry.....	3

The **Restaurant Management certificate** requires 47 credits in the courses listed below.

ICCB Code 4235 | Field of Study Code: HOSPCER.REST

#### PROGRAM REQUIREMENTS

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1112	Hospitality Facilities Management.....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	2130	Hospitality Industry Accounting.....	3
Hosp	2230	Law for the Hospitality Industry .....	2
Hosp	2261	Beverage Management Operation .....	2
Hosp	2275	Hospitality Concept Design .....	2
Hosp	2280	Hospitality Marketing Management.....	3
Hosp	2285	Advanced Hospitality Operations .....	3
Hosp	2862	Cooperative Education/Internship (Occupational) ..	2
Hosp	2863	Cooperative Education/Internship (Occupational) ..	3
Culin	1101	Culinary Arts: Quantity Food Prep I.....	4
Culin	1102	Culinary Arts: Quantity Food Prep II.....	4

Culin	1120	Foodservice Sanitation .....	2
Culin	1151	Food and Beverage Service and Sales.....	2
Culin	2152	Food, Beverage and Equipment Purchasing.....	3
			44

Program Electives.....8  
Choose 3 credits with the Culinary Arts or Hospitality Management program area. (In addition to the courses listed above)

The **Hospitality Management: Operations certificate** requires 31 credits in the courses listed below.

ICCB Code 4236 | Field of Study Code: HOSPCER.OPER

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations.....	3
Hosp	1112	Hospitality Facilities Management.....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	1140	Quality Management of Service in the Hospitality Industry.....	3
Hosp	2253	Professional Meeting and Event Management .....	3
Hosp	2280	Hospitality Marketing Management.....	3
Hosp	2285	Advanced Hospitality Operations .....	3
Hosp	2862	Cooperative Education/Internship (Occupational) ..	2
Hosp	2863	Cooperative Education/Internship (Occupational) ..	3
Culin	1151	Food and Beverage Service and Sales.....	2

The **Hospitality Sales and Marketing certificate** requires 20 credits in the courses listed below.

ICCB Code 4239 | Field of Study Code: HOSPCER.SALE

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations.....	3
Hosp	2203	Professional Catering and Banquet Management ..	3
Hosp	2253	Professional Meeting and Event Management .....	3
Hosp	2280	Hospitality Marketing Management.....	3
Hosp	2862	Cooperative Education/Internship(Occupational) ..	2
Hosp	2863	Cooperative Education/Internship(Occupational) ..	3

Study the viticultural influences and techniques that impact the aroma, flavor, body, and style of wines and learn how certain practices affect wine flavor through lectures and tastings. You will learn what constitutes perfect ripeness for each region of the world. The **Wine Appreciation and Knowledge Certificate** requires 8 credits in the courses listed below.

ICCB Code 4240 | Field of Study Code: HOSPCER.WINE

Hosp	1201	Wine Regions of the World I .....	2
Hosp	1202	Wine Regions of the World II .....	2
Hosp	1203	Wine Regions of the World III .....	2
Hosp	1204	Wine and Food Pairings.....	2

The modern resort must meet the needs of the vacationing guest by offering retail shops, guest activity programming, and a complete spa experience. The Resort Management certificate provides students the opportunity to learn the nuance of this specialized area within hospitality management. The certificate requires 26 credits in the courses below.

ICCB Code 4231 | Field of Study Code: HOSPCER.RESORT

Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1105	Introduction to Resort Management.....	3
Hosp	1111	Front Office Operations.....	3
Hosp	1112	Hospitality Facilities Management.....	3
Hosp	1121	Supervision in the Hospitality Industry .....	3
Hosp	2105	Spa and Recreation Management.....	3
Hosp	2280	Hospitality Marketing Management.....	3
Hosp	2862	Cooperative Education/Internship (Occupational).....	2
Hosp	2863	Cooperative Education/Internship (Occupational).....	3

# HUMAN SERVICES

SEVEN AAS DEGREES, EIGHT CERTIFICATES

## AAS DEGREES

The Human Services program provides beginning professional training for human service agency jobs. In addition to degree options in Addictions Counseling, Corrections, Mental Health, Developmental Disabilities, Domestic/Family Violence, Eating Disorders, Residential Child Care and Human Services, students may complete certificates in Human Services, Addictions Counseling, Applied Gerontology and Domestic/Family Violence.

This program is approved by the Council on Standards in Human Service Education. The **Human Services Generalist degree** program requires a minimum of 69 credits in program requirements and general education as listed below.

ICCB Code 3467 | Field of Study Code: HUMAN.AAS

### Program Requirements

Human 1100	Introduction to Human Services	4
Human 1113	Interpersonal Dynamics	4
Human 1114	Contemporary Practice Models	3
Human 1115	Behavior Modification	3
Human 1121	Cross-Cultural Communications	4
Human 1125	Introduction to Addictions	4
Human 1141	Psychiatric Rehabilitation	4
Human 1170	Role of Advocacy in Human Services	2
Human 1175	Crisis Intervention	2
Human 1180	Domestic/Family Violence	4
Human 2212	Group Dynamics	5
Human 2223	Generalist Practice I	2
Human 2251	Fieldwork I	4
Human 2279	Ethics in Counseling	2
		<u>45</u>

Program Electives ..... 4

Student must select at least four credits from the following electives:

Human 1105	Esteem Building	2
Human 1130	Psychedelic Mindview	2
Human 1141	Psychiatric Rehabilitation	4
Human 1142	Psychiatric Rehabilitation Skills	4
Human 1160	Residential Child Care	2
Human 1165	Dynamics of Child Abuse	3
Human 1170	Role of Advocacy in Human Services	2
Human 1190	Introduction to Developmental Disabilities	5
Human 1820	Selected Topics I	1-3
Human 2200	Human Services Corrections Counseling	4
Human 2213	Grief Counseling	3
Human 2214	Older Adult Care Management	4
Human 2240	Family Education and Treatment Models	3
Human 2245	Introduction to Eating Disorders	3
Human 2274	Legal Issues in Counseling	1
Human 2284	CADC Exam Preparation	1
Human 2285	Divorce and Family Mediation	4
Human 2286	Assessment of Trauma for Veteran Population and Families	3
Human 2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders	3
Human 2288	Treatment Approaches for Veteran Population and Families	3
Human 2289	Individual and Group Counseling Focused on Veteran Population	3
Human 2290	Assessment for Appropriate Referral Focusing on Veterans' Needs	1

General Education ..... 20  
(In addition to the courses listed above)

Total Credits Required ..... 69

The **Applied Gerontology degree** program requires 68 credits in program requirements and general education. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

ICCB Code 3468 | Field of Study Code: HUMAN.AAS.GERON

### Program Requirements

Human 1100	Introduction to Human Services	4
Human 1113	Interpersonal Dynamics	4
Human 1114	Contemporary Practice Models	3
Human 1115	Behavior Modification	3
Human 1121	Cross-Cultural Communications	4
Human 1125	Introduction to Addictions	4
Human 1170	Role of Advocacy in Human Services	2
Human 2212	Group Dynamics	3
Human 2213	Grief Counseling	3
Human 2214	Older Adult Care Management	4
Human 2223	Generalist Practice I	2
Human 2240	Family Education and Treatment Models	3
Human 2251	Fieldwork I	4
Human 2279	Ethics in Counseling	2
Psych 2237	Developmental Psychology: The Life Span	3
		<u>48</u>

General Education ..... 20  
(In addition to the courses listed above)

Total Credits Required ..... 68

The **Addiction Counseling degree** program requires 68 credits in program requirements, program electives and general education as listed below.

ICCB Code 3469 | Field of Study Code: HUMAN.AAS.ADDIC

### Program Requirements

Human 1100	Introduction to Human Services	4
Human 1113	Interpersonal Dynamics	4
Human 1114	Contemporary Practice Models	3
Human 1115	Behavior Modification	3
Human 1121	Cross-Cultural Communications	4
Human 1125	Introduction to Addictions	4
Human 1126	Psychopharmacology for Addictions Counselors	3
Human 1180	Domestic/Family Violence	4
Human 2212	Group Dynamics	3
Human 2225	Addictions Counseling I	4
Human 2226	Addictions Counseling II	3
Human 2251	Fieldwork I	4
Human 2279	Ethics in Counseling	2
		<u>45</u>

Program Electives ..... 3

Student must select at least three credits from the following electives:

Human 1105	Esteem Building	2
Human 1130	Psychedelic Mindview	2
Human 1142	Psychiatric Rehabilitation Skills	4
Human 1143	Health Skills for Psychiatric Rehabilitation	4
Human 1144	Vocational and Community Living Skills	4
Human 1160	Residential Child Care	2
Human 1165	Dynamics of Child Abuse	3
Human 1170	Role of Advocacy in Human Services	2
Human 1175	Crisis Intervention	2
Human 1190	Introduction to Developmental Disabilities	5
Human 1820	Selected Topics I	1-3
Human 2200	Human Services Corrections Counseling	4
Human 2213	Grief Counseling	3
Human 2214	Older Adult Care Management	4
Human 2240	Family Education and Treatment Models	3
Human 2274	Legal Issues in Counseling	1
Human 2284	CADC Exam Preparation	1
Human 2285	Divorce and Family Mediation	4

Human	2286	Assessment of Trauma for Veteran Population and Families.....	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders.....	3
Human	2288	Treatment Approaches for Veteran Population and Families.....	3
Human	2289	Individual and Group Counseling Focused on Veteran Population .....	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs .....	1

Program Electives

Advanced degree requirements could include:

Human	2252	Fieldwork II .....	4
Human	2280	Addictions Counseling III.....	3

General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....69

The **Corrections Counseling degree** program requires 68 credits in program requirements and general education. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

ICCB Code 3470 | Field of Study Code: HUMAN.AAS.CORR

Program Requirements

Human	1100	Introduction to Human Services .....	4
Human	1113	Interpersonal Dynamics .....	4
Human	1114	Contemporary Practice Models.....	3
Human	1115	Behavior Modification .....	3
Human	1121	Cross-Cultural Communications .....	4
Human	1125	Introduction to Addictions.....	4
Human	1170	Role of Advocacy in Human Services .....	2
Human	2200	Human Services Corrections Counseling .....	4
Human	2212	Group Dynamics .....	3
Human	2200	Introduction to the Juvenile Justice System .....	4
Human	2223	Generalist Practice I.....	2
Human	2240	Family Education and Treatment Models.....	3
Human	2251	Fieldwork I .....	4
Human	2279	Ethics in Counseling .....	2
Crimj	1100	Introduction to Criminal Justice.....	3
Psych	2237	Developmental Psychology: The Life Span .....	3

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General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....68

The **Developmental Disability degree** requires 68 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

ICCB Code 3471 | Field of Study Code: HUMAN.AAS.DEVDS

Program Requirements

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics .....	4
Human	1114	Contemporary Practice Models.....	3
Human	1115	Behavior Modification .....	3
Human	1121	Cross-Cultural Communications .....	4
Human	1125	Introduction to Addictions.....	4
Human	1170	Role of Advocacy in Human Services .....	2
Human	1175	Crisis Intervention.....	2
Human	1190	Introduction to Developmental Disabilities.....	5
Human	2212	Group Dynamics .....	3
Human	2223	Generalist Practice I.....	2

Human	2240	Family Education and Treatment Models.....	3
Human	2251	Fieldwork I .....	4
Human	2279	Ethics in Counseling .....	2
Psych	2237	Developmental Psychology: The Life Span .....	3

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General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....69

The **Residential Child Care degree** requires 65 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

ICCB Code 3473 | Field of Study Code: HUMAN.AAS.RESCC

Program Requirements

Human	1100	Introduction to Human Services .....	4
Human	1113	Interpersonal Dynamics .....	4
Human	1114	Contemporary Practice Models.....	3
Human	1115	Behavior Modification .....	3
Human	1121	Cross-Cultural Communications .....	4
Human	1125	Introduction to Addictions.....	4
Human	1160	Residential Child Care.....	2
Human	1165	Dynamics of Child Abuse .....	3
Human	1170	Role of Advocacy in Human Services .....	2
Human	1175	Crisis Intervention.....	2
Human	2212	Group Dynamics .....	3
Human	2223	Generalist Practice I.....	2
Human	2240	Family Education and Treatment Models.....	3
Human	2251	Fieldwork I .....	4
Human	2279	Ethics in Counseling .....	2

45

General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....65

The **Domestic Family/Violence degree** requires 70 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

ICCB Code 3474 | Field of Study Code: HUMAN.AAS.DOM

Program Requirements

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics .....	4
Human	1114	Contemporary Practice Models.....	3
Human	1115	Behavior Modification .....	3
Human	1121	Cross-Cultural Communications .....	4
Human	1125	Introduction to Addictions.....	4
Human	1165	Dynamics of Child Abuse .....	3
Human	1170	Role of Advocacy in Human Services .....	2
Human	1175	Crisis Intervention.....	2
Human	1180	Domestic/Family Violence .....	4
Human	2212	Group Dynamics .....	3
Human	2223	Generalist Practice I.....	2
Human	2240	Family Education and Treatment Models.....	3
Human	2251	Fieldwork I .....	4
Human	2279	Ethics in Counseling .....	2
Psych	2237	Developmental Psychology: The Life Span .....	3

50

General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....70

CERTIFICATES

The **Human Services Generalist certificate** prepares students for entry-level human services work with a broad range of populations. This certificate requires program requirements and program electives listed below.

ICCB Code 4467 | Field of Study Code: HUMAN.CER

Human 1100	Introduction to Human Services	4
Human 1113	Interpersonal Dynamics	4
Human 1114	Contemporary Practice Models	3
Human 1115	Behavior Modification	3
Human 1121	Cross-Cultural Communications	4
Human 1125	Introduction to Addictions	4
Human 1141	Psychiatric Rehabilitation	4
Human 1170	Role of Advocacy in Human Services	2
Human 1175	Crisis Intervention	2
Human 1180	Domestic/Family Violence	4
Human 2212	Group Dynamics	3
Human 2223	Generalist Practice I	2
Human 2251	Fieldwork I	4
Human 2279	Ethics in Counseling	2
		<u>45</u>

Program Electives .....4  
Student must select at least four credits from the following electives:

Human 1105	Esteem Building	2
Human 1130	Psychedelic Mindview	2
Human 1142	Psychiatric Rehabilitation Skills	4
Human 1143	Health Skills for Psychiatric Rehabilitation	4
Human 1144	Vocational and Community Living Skills	4
Human 1160	Residential Child Care	2
Human 1165	Dynamics of Child Abuse	3
Human 1190	Introduction to Developmental Disabilities	5
Human 1820	Selected Topics I	1-3
Human 2200	Human Services Corrections Counseling	4
Human 2213	Grief Counseling	3
Human 2214	Older Adult Care Management	4
Human 2240	Family Education and Treatment Models	3
Human 2245	Introduction to Eating Disorders	3
Human 2274	Legal Issues in Counseling	1
Human 2285	Divorce and Family Mediation	4
Human 2286	Assessment of Trauma for Veteran Population and Families	3
Human 2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders	3
Human 2288	Treatment Approaches for Veteran Population and Families	3
Human 2289	Individual and Group Counseling Focused on Veteran Population	3
Human 2290	Assessment for Appropriate Referral Focusing on Veterans' Needs	1

The **Applied Gerontology certificate** prepares students to work with an older adult population to meet their unique needs. This certificate requires 50 credits in program requirements and program electives listed below.

ICCB Code 4468 | Field of Study Code: HUMAN.CER.GERON

Human 1100	Introduction to Human Services	4
Human 1113	Interpersonal Dynamics	4
Human 1114	Contemporary Practice Models	3
Human 1115	Behavior Modification	3
Human 1121	Cross-Cultural Communications	4
Human 1125	Introduction to Addictions	4
Human 1170	Role of Advocacy in Human Services	2
Human 1180	Domestic/Family Violence	4
Human 2212	Group Dynamics	3
Human 2213	Grief Counseling	3
Human 2214	Older Adult Care Management	4

Human 2223	Generalist Practice I	2
Human 2251	Fieldwork I	4
Human 2279	Ethics in Counseling	2
		<u>46</u>

Program Electives .....4  
Student must select at least four credits from the following electives:

Human 1105	Esteem Building	2
Human 1130	Psychedelic Mindview	2
Human 1141	Psychiatric Rehabilitation	4
Human 1142	Psychiatric Rehabilitation Skills	4
Human 1160	Residential Child Care	2
Human 1165	Dynamics of Child Abuse	3
Human 1175	Crisis Intervention	2
Human 1190	Introduction to Developmental Disabilities	5
Human 1820	Selected Topics I	1-3
Human 2200	Human Services Corrections Counseling	4
Human 2213	Grief Counseling	3
Human 2240	Family Education and Treatment Models	3
Human 2245	Introduction to Eating Disorders	3
Human 2274	Legal Issues in Counseling	1
Human 2285	Divorce and Family Mediation	4
Human 2286	Assessment of Trauma for Veteran Population and Families	3
Human 2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders	3
Human 2288	Treatment Approaches for Veteran Population and Families	3
Human 2289	Individual and Group Counseling Focused on Veteran Population	3
Human 2290	Assessment for Appropriate Referral Focusing on Veterans' Needs	1

The **Addictions Counseling certificate** prepares students to work with an addictions population. Advanced training meets Illinois Alcohol and Other Drugs of Abuse Professional Certification Association (IAODAPCA) standards for the addictions counseling certification. This certificate requires 48 credits program requirements and program electives listed below.

ICCB Code 4469 | Field of Study Code: HUMAN.CER.ADDIC

Human 1100	Introduction to Human Services	4
Human 1113	Interpersonal Dynamics	4
Human 1114	Contemporary Practice Models	3
Human 1115	Behavior Modification	3
Human 1121	Cross-Cultural Communications	4
Human 1125	Introduction to Addictions	4
Human 1126	Psychopharmacology for Addictions Counselors	3
Human 1180	Domestic/Family Violence	4
Human 2212	Group Dynamics	3
Human 2225	Addictions Counseling I	4
Human 2226	Addictions Counseling II	3
Human 2251	Fieldwork I	4
Human 2279	Ethics in Counseling	2
		<u>45</u>

Program Electives .....3  
Student must select at least three credits from the following courses:

Human 1105	Esteem Building	2
Human 1130	Psychedelic Mindview	2
Human 1141	Psychiatric Rehabilitation	4
Human 1142	Psychiatric Rehabilitation Skills	4
Human 1160	Residential Child Care	2
Human 1165	Dynamics of Child Abuse	3
Human 1170	Role of Advocacy in Human Services	2
Human 1175	Crisis Intervention	2
Human 1190	Introduction to Developmental Disabilities	5



Human	1820	Selected Topics I	1-3
Human	2200	Human Services Corrections Counseling	4
Human	2213	Grief Counseling	3
Human	2214	Older Adult Care Management	4
Human	2240	Family Education and Treatment Models	3
Human	2245	Introduction to Eating Disorders	3
Human	2274	Legal Issues in Counseling	1
Human	2284	CADC Exam Preparation	1
Human	2285	Divorce and Family Mediation	4
Human	2286	Assessment of Trauma for Veteran Population and Families	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders	3
Human	2288	Treatment Approaches for Veteran Population and Families	3
Human	2289	Individual and Group Counseling Focused on Veteran Population	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs	1

**Program Electives**

Advanced Certificate Standing (optional)

Complete the following additional 7 credit hours.

Human	2252	Fieldwork II	4
Human	2280	Addictions Counseling III	3

The **Veteran Counseling certificate** will offer the student specialized education for working with veterans. This certificate requires 26 credits in the courses listed below.

ICCB Code 4473 | Field of Study Code: HUMAN.CER.VET

Human	1125	Introduction to Addictions	4
Human	1175	Crisis Intervention	2
Human	2213	Grief Counseling	3
Human	2251	Fieldwork I	4
Human	2286	Assessment of Trauma for Veteran Population and Families	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders	3
Human	2288	Treatment Approaches for Veteran Population and Families	3
Human	2289	Individual and Group Counseling Focused on Veteran Population	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs	1

The **Human Services Domestic/Family Violence certificate** prepares students for entry-level human services work in a domestic violence agency. This certificate requires a minimum of 48 credits in the program requirements and program elective courses listed below.

ICCB Code 4474 | Field of Study Code: HUMAN.CER.DOM

Human	1100	Introduction to Human Services	4
Human	1113	Interpersonal Dynamics	4
Human	1114	Contemporary Practice Models	3
Human	1115	Behavior Modification	3
Human	1121	Cross-Cultural Communications	4
Human	1125	Introduction to Addictions	4
Human	1141	Psychiatric Rehabilitation	4
Human	1170	Role of Advocacy in Human Services	2
Human	1175	Crisis Intervention	2
Human	1180	Domestic/Family Violence	4
Human	2212	Group Dynamics	3
Human	2223	Generalist Practice I	2
Human	2251	Fieldwork I	4
Human	2279	Ethics in Counseling	2
			45

Program Electives	4
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Student must select at least four credits from the following courses:

Human	1105	Esteem Building	2
Human	1130	Psychedelic Mindview	2
Human	1142	Psychiatric Rehabilitation Skills	4
Human	1143	Health Skills for Psychiatric Rehabilitation	4
Human	1144	Vocational and Community Living Skills	4
Human	1160	Residential Child Care	2
Human	1165	Dynamics of Child Abuse	3
Human	1190	Introduction to Developmental Disabilities	5
Human	1820	Selected Topics I	1-3
Human	2200	Human Services Corrections Counseling	4
Human	2213	Grief Counseling	3
Human	2214	Older Adult Care Management	4
Human	2240	Family Education and Treatment Models	3
Human	2245	Introduction to Eating Disorders	3
Human	2274	Legal Issues in Counseling	1
Human	2285	Divorce and Family Mediation	4
Human	2286	Assessment of Trauma for Veteran Population and Families	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders	3
Human	2288	Treatment Approaches for Veteran Population and Families	3
Human	2289	Individual and Group Counseling Focused on Veteran Population	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs	1

The **Psychiatric Rehabilitation certificate** requires 20 credits in the courses listed below.

ICCB Code 4476 | Field of Study Code: HUMAN.CER.REHAB

Human	1141	Psychiatric Rehabilitation	4
Human	1142	Psychiatric Rehabilitation Skills	4
Human	1143	Health Skills for Psychiatric Rehabilitation	4
Human	1144	Vocational and Community Living Skills	4
Human	2251	Fieldwork I	4

The **Corrections Counseling certificate** will provide specialized education for those working in the corrections counseling setting. This certificate requires 49 credits in program requirements and program electives as listed below.

ICCB Code 4470 | Field of Study Code: HUMAN.CER.CORR

Human	1100	Introduction to Human Services	4
Human	1113	Interpersonal Dynamics	4
Human	1114	Contemporary Practice Models	3
Human	1115	Behavior Modification	3
Human	1121	Cross-Cultural Communications	4
Human	1125	Introduction to Addictions	4
Human	1170	Role of Advocacy in Human Services	2
Human	1175	Crisis Intervention	2
Human	1180	Domestic/Family Violence	4
Human	2200	Human Services Corrections Counseling	4
Human	2212	Group Dynamics	3
Human	2223	Generalist Practice I	2
Human	2251	Fieldwork I	4
Human	2279	Ethics in Counseling	2
			45

Program Electives

Students must select four credits of electives from the following courses.

Human	1105	Esteem Building	2
Human	1130	Psychedelic Mindview	2
Human	1141	Psychiatric Rehabilitation	4
Human	1142	Psychiatric Rehabilitation Skills	4
Human	1160	Residential Child Care	2
Human	1165	Dynamics of Child Abuse	3
Human	1190	Introduction to Developmental Disabilities	5
Human	1820	Selected Topics I	1-3

Human	2213	Grief Counseling .....	3
Human	2214	Older Adult Care Management.....	4
Human	2240	Family Education and Treatment Models.....	3
Human	2245	Introduction to Eating Disorders.....	3
Human	2274	Legal Issues in Counseling.....	1
Human	2285	Divorce and Family Mediation .....	4
Human	2286	Assessment of Trauma for Veteran Population .....	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders .....	3
Human	2288	Treatment Approaches for Veteran Population and Families.....	3
Human	2289	Individual and Group Counseling Focused on Veteran Population .....	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs .....	1

The **Residential Child Care certificate** will provide specialized education for those working in the residential child care setting. This certificate requires 48 credits in program requirements and program electives as listed below.

ICCB Code 4472 | Field of Study Code: HUMAN.CER.RESCC

Human	1100	Introduction to Human Services .....	4
Human	1113	Interpersonal Dynamics .....	4
Human	1114	Contemporary Practice Models.....	3
Human	1115	Behavior Modification .....	3
Human	1121	Cross-Cultural Communications .....	4
Human	1125	Introduction to Addictions.....	4
Human	1160	Residential Child Care.....	2
Human	1165	Dynamics of Child Abuse .....	3
Human	1175	Crisis Intervention.....	2
Human	1180	Domestic/Family Violence .....	4
Human	2212	Group Dynamics .....	3
Human	2223	Generalist Practice I .....	2
Human	2251	Fieldwork I .....	4
Human	2279	Ethics in Counseling .....	2

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Program Electives .....

Students must select four credits of electives from the following courses.

Human	1105	Esteem Building .....	2
Human	1130	Psychedelic Mindview.....	2
Human	1141	Psychiatric Rehabilitation .....	4
Human	1142	Psychiatric Rehabilitation Skills .....	4
Human	1170	Role of Advocacy in Human Services .....	2
Human	1190	Introduction to Developmental Disabilities.....	5
Human	1820	Selected Topics I.....	1-3
Human	2200	Human Services Corrections Counseling .....	4
Human	2213	Grief Counseling .....	3
Human	2214	Older Adult Care Management.....	4
Human	2240	Family Education and Treatment Models.....	3
Human	2245	Introduction to Eating Disorders.....	3
Human	2274	Legal Issues in Counseling.....	1
Human	2285	Divorce and Family Mediation .....	4
Human	2286	Assessment of Trauma for Veteran Population .....	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders .....	3
Human	2288	Treatment Approaches for Veteran Population and Families.....	3
Human	2289	Individual and Group Counseling Focused on Veteran Population .....	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs .....	1

The **Developmental Disabilities certificate** provides specialized education to prepare an entry level human services professional to work with clients with developmental disabilities. The certificate requires 49 credits in program requirements and program electives in the courses listed below.

ICCB Code 4471 | Field of Study Code: HUMAN.CER.DEVDS

Human	1100	Introduction to Human Services .....	4
Human	1113	Interpersonal Dynamics .....	4
Human	1114	Contemporary Practice Models.....	3
Human	1115	Behavior Modification .....	3
Human	1121	Cross-Cultural Communications .....	4
Human	1125	Introduction to Addictions.....	4
Human	1170	Role of Advocacy in Human Services .....	2
Human	1175	Crisis Intervention.....	2
Human	1190	Introduction to Developmental Disabilities.....	5
Human	2212	Group Dynamics .....	3
Human	2223	Generalist Practice I .....	2
Human	2240	Family Education and Treatment Models.....	3
Human	2251	Fieldwork I .....	4
Human	2279	Ethics in Counseling .....	2

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Program Electives

Students must select four credits of electives from the following courses.

Human	1105	Esteem Building .....	2
Human	1130	Psychedelic Mindview.....	2
Human	1141	Psychiatric Rehabilitation .....	4
Human	1160	Residential Child Care.....	2
Human	1165	Dynamics of Child Abuse .....	3
Human	1180	Domestic/Family Violence .....	4
Human	1820	Selected Topics I.....	1-3
Human	2200	Human Services Corrections Counseling .....	4
Human	2213	Grief Counseling .....	3
Human	2214	Older Adult Care Management.....	4
Human	2245	Introduction to Eating Disorders.....	3
Human	2274	Legal Issues in Counseling.....	1
Human	2285	Divorce and Family Mediation .....	4
Human	2286	Assessment of Trauma for Veteran Population .....	3
Human	2287	Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders .....	3
Human	2288	Treatment Approaches for Veteran Population and Families.....	3
Human	2289	Individual and Group Counseling Focused on Veteran Population .....	3
Human	2290	Assessment for Appropriate Referral Focusing on Veterans' Needs .....	1

## INTEGRATED ENGINEERING TECHNOLOGY (InET)

AAS DEGREE

AAS DEGREE

The **Integrated Engineering Technology, (InET)** is a two-year program leading to an AAS degree, is designed to meet industry needs for multifunctional technicians competent in mechanics, computers, and electronics technology. This innovative program is an activity-based approach to learning where students work in teams. As InET engineering technicians, students may work individually or as members of a professional team, applying aspects of scientific and engineering concepts to the implementation of existing technologies and the creation of new technologies in the areas of administration, installations and maintenance of robotics and automated systems development, operation and maintenance. This degree requires 64 hours in program requirements, program electives and general education.

ICCB Code 3914 | Field of Study Code: INETA.AAS

Program Requirements

Elect	1100	Electricity and Electronics Fundamentals .....	3
Elect	1101	Circuits I .....	3
Elect	1110	Introduction to Technology .....	2
Elect	1120	Electronic Documentation .....	2
Elect	1141	Digital Fundamentals .....	3
Elect	1151	Electronic Devices and Applications .....	4

Elect	1201	Renewable Energy Fundamentals	.....2
Elect	2255	Industrial Controls	.....3
Elmec	1110	Motor and Generator Fundamentals	.....3
Elmec	1171	Introduction to Robotic Technology	.....3
Elmec	1190	Introduction to Programmable Logic Controllers	..3
Elmec	1420	Drive Components	.....2
Elmec	2410	Programmable Controller II (PLC II)	.....3
Elmec	2600	Motion Control: Servo and Stepper Motor Application and Control	.....2
Engli	1101	English Composition I	.....3
Math	1115	Technical Mathematics I	.....3
Physi	1100	Physics	.....4
Speec	1100	Fundamentals of Speech Communication	.....3
			51

General Education .....6  
 Six additional credits Humanities: 3 credits; Social and Behavioral Sciences: 3 credits (In addition to courses listed above)

Program Electives .....7  
 Choose 7 credits from the courses listed below.

Elect	1102	Circuits II	.....4
Elect	1161	Electronic Communications	.....4
Elect	2001	Green Energy Systems	.....3
Elect	2245	Programmable Logic Devices	.....4
Elect	2273	Real-Time Systems and Programming	.....3
Elect	2860	Cooperative Education/Internship (Occupational)	.....1 to 4
Elmec	1120	Residential Wiring	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1141	Hydraulics and Pneumatics	.....3
Elmec	1150	National Electrical Code	.....3
Manuf	1104	Technical Mechanics	.....2
Weld	1100	Welding I	.....3
			64

## INTERIOR DESIGN

### AAS DEGREE, FOUR CERTIFICATES

#### AAS DEGREE

Interior designers are responsible for the health, safety and welfare of the public by improving the quality of life related to interior spaces and the design of functional environments. The professional interior designer is qualified by education, experience and examination (NCIDQ) to perform a variety of tasks, including analyzing the client's needs, goals and life/safety requirements; formulating preliminary design concepts that are appropriate, functional and aesthetic; developing and presenting working drawings (for non-load bearing walls) floor plans, lighting plans and furniture plans; specifying furniture surface materials and finishes; and preparing and administering bids, contracts and professional services necessary to successful implementation of final design solution. The **Interior Design degree** requires a minimum of 69 credits in program requirements, program electives and general education as listed below.

ICCB Code 3539 | Field of Study Code: INTER.AAS

Program Requirements

Inter	1110	Drafting Interiors	.....3
Inter	1120	Interior Systems	.....2
Inter	1130	Perspective Techniques	.....2
Inter	1140	Color Rendering	.....2
Inter	1151	Architecture and Design History I	.....3
Inter	1152	Architecture and Design History II	.....3
Inter	1160	Environmental Textiles	.....2
Inter	1170	Environmental Materials and Applications	.....3
Inter	1180	Professional Practice and Ethics	.....2
Inter	1190	Barrier-Free and Life-Safety Codes	.....3

Inter	2211	Computer Applications I	.....3
Inter	2220	Interior Architectural Details	.....2
Inter	2311	Lighting I	.....3
Inter	2410	Residential Design Studio	.....3
Inter	2420	Universal Design Studio	.....3
Inter	2430	Contract Design Studio	.....3
Inter	2440	Office Design Studio	.....3
Inter	2610	Portfolio Review	.....3
Art	1151	Two-Dimensional Foundations Studio	.....3
Math	1100	Business Mathematics	.....3
Psych	1100	General Psychology	.....3
			57

Program Electives .....3  
 Select 3 credits from the courses listed below.

Inter	1153	Architecture and Design History: Non-Western Cultures	.....3
Inter	1821	Selected Topics I	.....3
Inter	1840	Independent Study — Individualized	.....1 to 4
Inter	2212	Computer Applications II	.....3
Inter	2213	Computer Applications III	.....3
Inter	2312	Lighting II	.....3
Inter	2450	Senior Design Studio	.....3
Inter	2511	Kitchen and Bath Design I	.....3
Inter	2512	Kitchen and Bath Design II	.....3
Inter	2515	Kitchen and Bath Computer Applications	.....3
Inter	2520	Furniture Design	.....3
Inter	2821	Advanced Selected Topics I	.....3
Inter	2870	Cooperative Education/Internship (Transfer)	..1 to 4
Inter	2871	Cooperative Education/Internship Advanced (Transfer)	.....1 to 4

General Education .....9 to 11  
 (In addition to the courses listed above)

Total Credits Required .....69 to 71

### CERTIFICATES

The **Kitchen and Bath Design certificate** requires a minimum of 44 credits in the courses listed below. Any required courses or prerequisite courses may be transferred from Interior Design AAS degree credits or may be met through review of Interior Design professional portfolio skills and consent of coordinator.

ICCB Code 4535 | Field of Study Code: INTER.CER.KBD

Inter	1110	Drafting Interiors	.....3
Inter	1120	Interior Systems	.....2
Inter	1130	Perspective Techniques	.....2
Inter	1151	Architecture and Design History I	.....3
Inter	1152	Architecture and Design History II	.....3
Inter	1160	Environmental Textiles	.....2
Inter	1170	Environmental Materials and Applications	.....3
Inter	1180	Professional Practice and Ethics	.....2
Inter	1190	Barrier-Free and Life-Safety Codes	.....3
Inter	2211	Computer Applications I	.....3
Inter	2220	Interior Architectural Details	.....2
Inter	2311	Lighting I	.....3
Inter	2410	Residential Design Studio	.....3
Inter	2511	Kitchen and Bath Design I	.....3
Inter	2512	Kitchen and Bath Design II	.....3
Inter	2515	Kitchen and Bath Computer Applications	.....3
Inter	2870	Cooperative Education/Internship (Transfer)	..1 to 4

The **Interior Design Computer Applications certificate** requires 21 credits in the course listed below. Any required courses or prerequisite courses may be transferred from Interior Design AAS degree credits or may be met through review of Interior Design professional portfolio skills and consent of coordinator.

ICCB Code 4536 | Field of Study Code: INTER.CER.COMP

Inter	1110	Drafting Interiors	3
Inter	1120	Interior Systems	2
Inter	1130	Perspective Techniques	2
Inter	1190	Barrier-Free and Life-Safety Codes	3
Inter	2211	Computer Applications I	3
Inter	2212	Computer Applications II	3
Inter	2213	Computer Applications III	3
Inter	2220	Interior Architectural Details	2

The **Interior Design Lighting certificate** requires 27 credits in the courses listed below. Any required courses or prerequisite courses may be transferred from Interior Design AAS degree credits or may be met through review of Interior Design professional portfolio skills and consent of coordinator.

ICCB Code 4540 | Field of Study Code: INTER.CER.LITE

Inter	1110	Drafting Interiors	3
Inter	1120	Interior Systems	2
Inter	1130	Perspective Techniques	2
Inter	1190	Barrier-Free and Life-Safety Codes	3
Inter	2211	Computer Applications I	3
Inter	2212	Computer Applications II	3
Inter	2213	Computer Applications III	3
Inter	2220	Interior Architectural Details	2
Inter	2311	Lighting I	3
Inter	2312	Lighting II	3

The **Sustainable Interior Design certificate** was developed for interior design majors and returning professionals seeking advanced skills. This certificate requires 9 credits in the courses listed below. Any certificate required courses may be met through review of Interior Design professional portfolio skills and consent of coordinator.

ICCB Code 4541 | Field of Study Code: INTER.CER.SUST

Inter	2531	Green Interiors I	3
Inter	2532	Green Interiors II	3
Inter	2450	Senior Design Studio	3

## LIBRARY AND INFORMATION TECHNOLOGY

AAS DEGREE, CERTIFICATE

### AAS DEGREE

The **Library and Information Technology program** prepares students for paraprofessional levels of library service. Courses are designed for beginning students with no previous experience, for those returning to the work force, or those upgrading skills. A keyboarding test is required. This degree requires a minimum of 64 credits in program requirements, electives and general education as listed below.

ICCB Code 3651 | Field of Study Code: LIBRA.AAS

#### Program Requirements

Libra	1101	Introduction to Libraries and the Information Age	3
Libra	1102	Introduction to Reference and Information Services	4
Libra	1103	Acquisition of Library Materials	3
Libra	1104	Essential Library Workplace Skills	3
Libra	1105	Readers Advisory	3
		OR	
Libra	1820	Selected Topics in Librarianship	3
Libra	2100	Introduction to Cataloging and Classification	4
Libra	2200	Serving the Public in Today's Libraries	4
Libra	2300	Multimedia Services and Equipment in Today's Library	3
Libra	2600	Library Practicum	4
Cis	1150	Introduction to Computer Information Systems	3
Manag	2220	Organizational Behavior	3

37

Electives	9
Select 9 credits from any 1000- or 2000-level courses.	

General Education ..... 18 to 22  
(In addition to the courses listed above)

Total Credits Required ..... 64 to 68

### CERTIFICATE

The **Library and Information Technology certificate** requires 31 credits in the courses listed below and a keyboarding proficiency exam.

ICCB Code 4651 | Field of Study Code: LIBRA.CER

Libra	1101	Introduction to Libraries and the Information Age	3
Libra	1102	Introduction to Reference and Information Services	4
Libra	1103	Acquisition of Library Materials	3
Libra	1104	Essential Library Workplace Skills	3
Libra	1105	Readers Advisory	3
		OR	
Libra	1820	Selected Topics in Librarianship	3
Libra	2100	Introduction to Cataloging and Classification	4
Libra	2200	Serving the Public in Today's Libraries	4
Libra	2300	Multimedia Services and Equipment in Today's Library	3
Libra	2600	Library Practicum	4

## LONG-TERM CARE ADMINISTRATION

### CERTIFICATE

The **Long-Term Care Administration certificate** requires 16 credits in the courses listed below.

ICCB Code 4197 | Field of Study Code: LTC.CER

Ltc	1130	Introduction to Long-term Care Services	3
Ltc	1140	Introduction to Nursing Home Administration	3
Ltc	1151	Nursing Home Administrative Practices I	3
Ltc	1152	Nursing Home Administrative Practices II	3
Ltc	1161	Aging and Long-term Care I	2
Ltc	1162	Aging and Long-term Care II	2

## MANAGEMENT

AAS DEGREE, SIX CERTIFICATES

### AAS DEGREE

The **Management program** prepares students for management and supervisory careers in business and industry. Graduates may enter lower- to middle-management positions directly from college or may elect to establish their own businesses. Employment opportunities include positions as production managers or supervisors.

The **Management degree** requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3202 | Field of Study Code: MANAG.AAS

#### Program Requirements

Manag	2210	Principles of Management	3
Manag	2220	Organizational Behavior	3
Manag	2240	Human Resource Management	3
Accou	1140	Financial Accounting	4
Busin	1100	Introduction to Business	3
Buslw	2211	Business Law I	3
Cis	1150	Introduction to Computer Information Systems	3
Cis	1221	Introduction to Spreadsheets	3
Econo	2200	Principles of Economics	3
		OR	



Econo	2201	Macroeconomics and the Global Economy .....	3
	OR		
Psych	1100	General Psychology .....	3
Marke	2210	Principles of Marketing .....	3
Philo	1114	Business Ethics .....	3
			34

Program Electives.....18  
 Select 18 credits from the courses listed below.

Busin	1111	Customer Service.....	3
Busin	1120	Fundamentals of Personal Investing .....	3
Busin	1161	Entrepreneurship.....	3
Busin	2200	Business Budgeting.....	3
Busin	2210	Principles of Finance.....	3
Busin	2255	International Business.....	3
Manag	1100	Supervision.....	3
Manag	1820	Selected Topics in Management .....	3
Manag	2170	Project Management.....	3
Manag	2215	Leadership.....	3
Manag	2230	Purchasing .....	3

General Education.....12 to 16  
 (In addition to the courses listed above)

Total Credits Required .....64 to 68

**CERTIFICATES**

The **E-Commerce certificate** requires 15 credits in the courses listed below.

ICCB Code 4201 | Field of Study Code: MANAG.CER.ECOM

Program Requirements

Busin	1100	Introduction to Business .....	3
	OR		
Manag	1100	Supervision.....	3
	OR		
Marke	1100	Consumer Marketing .....	3
Busin	1170	Electronic Business/Commerce .....	3
Marke	1170	Internet & Social Media Marketing .....	3
Marke	1175	Customer Relationship Management.....	3
			12

Program Electives.....3

Choose one of the classes below:

Cis	1300	Web Design Software .....	3
Cis	1310	HTML and CSS .....	3
Manag	2170	Project Management.....	3
Marke	1171	Database Marketing.....	3

The **Management certificate** requires 31 credits in the courses listed below.

ICCB Code 4202 | Field of Study Code: MANAG.CER

Program Requirements

Manag	2210	Principles of Management .....	3
Manag	2220	Organizational Behavior.....	3
Manag	2240	Human Resource Management .....	3
Accou	1140	Financial Accounting.....	4
Busin	1100	Introduction to Business .....	3
Buslw	2211	Business Law I .....	3
Cis	1150	Introduction to Computer Information Systems .....	3
Marke	2210	Principles of Marketing .....	3
			25

Program Electives.....6

Select 6 credits from the courses listed below:

Busin	2200	Business Budgeting.....	3
Busin	2255	International Business.....	3
Cis	1221	Introduction to Spreadsheets .....	3
Manag	1100	Supervision.....	3
Manag	2170	Project Management.....	3
Manag	2215	Leadership.....	3

Manag	2230	Purchasing .....	3
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The **Supervision certificate** requires 12 credits in the courses listed below.

ICCB Code 4208 | Field of Study Code: MANAG.CER.SPRV

Manag	1100	Supervision.....	3
Manag	2220	Organizational Behavior.....	3
Busin	1100	Introduction to Business .....	3
Cis	1150	Introduction to Computer Information Systems.....	3

The **Entrepreneurship certificate** requires a minimum of 12 credits in the courses listed below.

ICCB Code 4210 | Field of Study Code: MANAG.CER.ENTR

Program Requirements

Busin	1161	Entrepreneurship.....	3
Busin	2200	Business Budgeting.....	3
Accou	1110	Accounting Procedures .....	3
	OR		
Accou	1140	Financial Accounting.....	4
			9-10

Program Electives.....3

Select one of the courses listed below:

Busin	1111	Customer Service.....	3
Buslw	2211	Business Law I .....	3
Manag	1100	Supervision.....	3
Manag	2210	Principles of Marketing .....	3
Manag	2230	Purchasing .....	3
Manag	2240	Human Resource Management .....	3
Marke	1100	Consumer Marketing .....	3
Marke	1170	Internet & Social Media Marketing .....	3
Marke	2210	Principles of Marketing .....	3
Marke	2220	Principles of Selling.....	3
Marke	2230	Principles of Retail.....	3

The **Business Environment and Concepts certificate** is designed for CPA Examination candidates who have a non-business baccalaureate degree. It requires 18 credits in the courses listed below.

ICCB Code 4213 | Field of Study Code: MANAG.CER.BEC

Program Requirements

Busin	1100	Introduction to Business .....	3
Busin	2210	Principles of Finance.....	3
Econo	2201	Macroeconomics and the Global Economy .....	3
Econo	2202	Microeconomics and the Global Economy.....	3
			12

Program Electives.....6

Select two of the following courses:

Busin	2200	Business Budgeting.....	3
Busin	2255	International Business.....	3
Manag	2210	Principles of Management .....	3
Manag	2220	Organizational Behavior.....	3
Marke	2210	Principles of Marketing .....	3
Philo	1114	Business Ethics .....	3
			6

The **Organizational Leadership certificate** requires 12 credits in the courses listed below.

ICCB Code 4218– FIELD OF STUDY CODE: MANAG.CER.ORG

Manag	2210	Principles of Management .....	3
Manag	2215	Leadership.....	3
Manag	2220	Organizational Behavior.....	3
Manag	2240	Human Resource Management .....	3

# MANUFACTURING TECHNOLOGY

FOUR AAS DEGREES, SEVEN CERTIFICATES

## AAS DEGREES

The **Manufacturing Technology program** provides training in a wide variety of skill areas of product manufacturing and services. The four degree options in the program are Automated Manufacturing Systems, Drafting/Design, Manufacturing Technology and Manufacturing Engineering Technology. Automated Manufacturing is designed to prepare the student for careers in computer-aided manufacturing, robotics and numerical control. Drafting/Design prepares the student for careers in the drafting and computer-aided design areas. Manufacturing Technology provides the student with a broad background in the areas of machining, drafting and fluid systems so as to prepare them for entry-level positions as machine operators, machine maintenance personnel and quality control personnel. The Manufacturing Engineering Technology degree prepares students for entry-level engineering technician positions in manufacturing. The **Manufacturing Technology degree** requires 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3940 | Field of Study Code: MANUF.AAS

### Program Requirements

Manuf	1101	Industrial Design/CAD	3
Manuf	1104	Technical Mechanics	2
Manuf	1110	Metrology	3
Manuf	1151	Machine Shop I	3
Manuf	1153	Advanced Machine Processes	3
Manuf	1180	Quality Control	3
Manuf	2251	Computer Numerical Control (CNC)	3
Elect	1100	Electricity and Electronics Fundamentals	3
Elmec	1141	Hydraulics and Pneumatics	3
Weld	1100	Welding I	3
			<u>29</u>

### Program Electives

Select from the courses below.

Elmec	1171	Introduction to Robotic Technology	3
Manuf	1121	Physical Metallurgy	3
Manuf	2201	Geometric Dimensioning and Tolerancing	3
Manuf	2202	Solid Modeling and Design	3
Weld	1112	Oxy-Fuel, Welding, Plasma Cutting and Brazing	3
Weld	1122	Shielded Metal Arc (SMAW)	3
Weld	1132	Gas Metal Arc (MIG)	3
Weld	1142	Gas Tungsten Arc (TIG)	3

General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....65

The **Automated Manufacturing Systems degree** requires 66 credits in program requirements, program electives and general education as listed below.

ICCB Code 3941 | Field of Study Code: MANUF.AAS.AUTO

### Program Requirements

Manuf	1101	Industrial Design/CAD	3
Manuf	1104	Technical Mechanics	2
Manuf	1110	Metrology	3
Manuf	1121	Physical Metallurgy	3
Manuf	1151	Machine Shop I	3
Manuf	1180	Quality Control	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-Aided Manufacturing (CAM)	3
Manuf	2280	Industrial Safety	2
Elect	1100	Electricity and Electronics Fundamentals	3
Elmec	1141	Hydraulics and Pneumatics	3
Elmec	1171	Introduction to Robotic Technology	3

Elmec 1190 Introduction to Programmable Logic Controllers ..3  
40

### Program Electives

Select 6 credits from the courses below.

Manuf	1153	Advanced Machine Processes	3
Manuf	1160	Technical Static and Strength of Material	4
Manuf	2201	Geometric Dimensioning and Tolerancing	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design	3
Manuf	2271	Robotic Application	3
Manuf	2280	Industrial Safety	2

General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....66

The **Drafting/Design degree** requires 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3942 | Field of Study Code: MANUF.AAS.DRAFT

### Program Requirements

Manuf	1101	Industrial Design/CAD	3
Manuf	1104	Technical Mechanics	2
Manuf	1121	Physical Metallurgy	3
Manuf	1151	Machine Shop I	3
Manuf	1180	Quality Control	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design	3
Manuf	2208	Mechanical Design Portfolio	3
Elect	1100	Electricity and Electronics Fundamentals	3
			<u>32</u>

### Program Electives

Select from the courses below.

Elmec	1141	Hydraulics and Pneumatics	3
Elmec	1171	Introduction to Robotic Technology	3
Elmec	1190	Introduction to Programmable Logic Controllers ..3	
Manuf	1110	Metrology	3
Manuf	2201	Geometric Dimensioning and Tolerancing	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2280	Industrial Safety	2
Manuf	2281	Cost Analysis	2
Weld	1100	Welding I	3

General Education .....20  
(In addition to the courses listed above)

Total Credits Required .....65

The **Manufacturing Engineering Technology degree** requires 65 credits in program requirements and general education as listed below.

ICCB Code 3943 | Field of Study Code: MANUF.AAS.MET

### Program Requirements

Manuf	1101	Industrial Design/CAD	3
Manuf	1121	Physical Metallurgy	3
Manuf	1151	Machine Shop I	3
Manuf	1160	Technical Static and Strength of Material	4
Manuf	1180	Quality Control	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-Aided Manufacturing (CAM)	3
Manuf	2281	Cost Analysis	3
Elect	1100	Electricity and Electronics Fundamentals	3
Elmec	1141	Hydraulics and Pneumatics	3

Math	1431	Precalculus I	5
Math	1432	Precalculus II: Trigonometry	3
Math	1635	Statistics	4
Physi	1201	General Physics I	5
			53
General Education			12
(In addition to the courses listed above)			
Total Credits Required			65

**CERTIFICATES**

The **Manufacturing Skills Standards certificate (MSSC)** requires 7 credits in the courses listed below.

ICCB Code 4938 | Field of Study Code: MANUF.CER.MSSC

Manuf	1104	Technical Mechanics	2
Manuf	1180	Quality Control	3
Manuf	2280	Industrial Safety	2

The **Manufacturing Technology certificate** requires 35 credits in program requirements and program electives from the courses listed below.

ICCB Code 4940 | Field of Study Code: MANUF.CER

**Program Requirements**

Manuf	1101	Industrial Design/CAD	3
Manuf	1104	Technical Mechanics	2
Manuf	1110	Metrology	3
Manuf	1121	Physical Metallurgy	3
Manuf	1151	Machine Shop I	3
Manuf	1153	Advanced Machine Processes	3
Manuf	1180	Quality Control	3
Elect	1100	Electricity and Electronics Fundamentals	3
Elmec	1141	Hydraulics and Pneumatics	3
Weld	1100	Welding I	3
OR			
Math	1115	Technical Mathematics I	3
			29

**Program Electives** .....6

Select from the courses below.

Elmec	1171	Introduction to Robotic Technology	3
Manuf	2201	Geometric Dimensioning and Tolerancing	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-Aided Manufacturing (CAM)	3
Weld	1122	Shielded Metal Arc (SMAW)	3
Weld	1132	Gas Metal Arc (MIG)	3
Weld	1142	Gas Tungsten Arc (TIG)	3

The **Automated Manufacturing Systems certificate** requires 35 credits in the courses listed below.

ICCB Code 4941 | Field of Study Code: MANUF.CER.AUTO

Manuf	1101	Industrial Design/CAD	3
Manuf	1104	Technical Mechanics	2
Manuf	1151	Machine Shop I	3
Manuf	1180	Quality Control	3
Manuf	2200	Production Technology	4
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-aided Manufacturing (CAM)	3
Manuf	2280	Industrial Safety	2
Elmec	1141	Hydraulics and Pneumatics	3
Elmec	1171	Introduction to Robotic Technology	3
Elmec	1190	Introduction to Programmable Logic Controllers	3
Math	1115	Technical Mathematics I	3

The **Drafting/Design certificate** requires 38 credits in the courses listed below.

ICCB Code 4942 | Field of Study Code: MANUF.CER.DRAFT

Manuf	1101	Industrial Design/CAD	3
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Manuf	1104	Technical Mechanics	2
Manuf	1151	Machine Shop I	3
Manuf	1180	Quality Control	3
Manuf	2201	Geometric Dimensioning and Tolerancing	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design	3
Manuf	2208	Mechanical Design Portfolio	3
Elect	1100	Electricity and Electronics Fundamentals	3
Elmec	1141	Hydraulics and Pneumatics	3
Math	1115	Technical Mathematics I	3

The **Computer-Aided Design certificate** requires 24 credits in the courses listed below.

ICCB Code 4944 | Field of Study Code: MANUF.CER.CAD

**Program Requirements**

Manuf	1101	Industrial Design/CAD	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design	3
Manuf	2208	Mechanical Design Portfolio	3
			18

**Program Electives** .....6

Select 6 credits from the courses below.

Elect	1100	Electricity and Electronics Fundamentals	3
Elmec	1141	Hydraulics and Pneumatics	3
Manuf	1110	Metrology	3
Manuf	1121	Physical Metallurgy	3
Manuf	2201	Geometric Dimensioning and Tolerancing	3
Manuf	2280	Industrial Safety	2
Manuf	2281	Cost Analysis	2

The **Tool and Die Making certificate** requires 31 credits from the courses listed below.

ICCB Code 4984 | Field of Study Code: MANUF.CER.TOOL

Manuf	1127	Engineering Materials of Industry	3
Manuf	2200	Machine Tool Technology	4
Manuf	2261	Basic Die Making I	4
Manuf	2262	Basic Die Making II	4
Manuf	2272	Advanced Die Making and Engineering I	4
Manuf	2274	Advanced Die Making and Engineering II	4
Math	1115	Technical Mathematics I	3
Math	1116	Technical Mathematics II	5

The **Mold Making certificate** requires 31 credits from the courses listed below.

ICCB Code 4986 | Field of Study Code: MANUF.CER.MOLD

Manuf	1127	Engineering Materials of Industry	3
Manuf	2200	Machine Tool Technology	4
Manuf	2265	Mold Making I	4
Manuf	2267	Mold Making II	4
Manuf	2276	Advanced Mold Making and Engineering I	4
Manuf	2277	Advanced Mold Making and Engineering II	4
Math	1115	Technical Mathematics I	3
Math	1116	Technical Mathematics II	5

**MARKETING**

**AAS DEGREE, TWO CERTIFICATES**

**AAS DEGREE**

The **Marketing program** provides the academic and practical background for a successful career in this dynamic field. Graduates have many employment opportunities, including inside and outside sales, customer services, consumer marketing, business-to-business

marketing, e-commerce and promotions. The **Marketing degree** program requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3204 | Field of Study Code: MARKE.AAS

**Program Requirements**

Marke	1170	Internet & Social Media Marketing	3
Marke	2210	Principles of Marketing	3
Marke	2220	Principles of Selling	3
Marke	2230	Principles of Retail	3
Marke	2240	Advertising	3
Accou	1140	Financial Accounting	4
Busin	1100	Introduction to Business	3
Buslw	2211	Business Law I	3
Cis	1221	Introduction to Spreadsheets	3
Cis	1150	Introduction to Computer Information Systems	3
Econo	2201	Macroeconomics and the Global Economy	3
		OR	
Psych	1100	General Psychology	3
Manag	2210	Principles of Management	3
Philo	1114	Business Ethics	3
			<hr/>
			40

**Program Electives** .....12

Select 12 credits from the courses below.

Busin	1170	Electronic Business/Commerce	3
Busin	2255	International Business	3
Marke	1100	Consumer Marketing	3
Marke	1171	Database Marketing	3
Marke	1175	Customer Relationship Management	3
Marke	2250	Business to Business	3

General Education .....12 to 16  
(In addition to the courses listed above)

Total Credits Required .....64 to 68

**CERTIFICATES**

The **Marketing certificate** requires a minimum of 31 credits in the courses listed below.

ICCB Code 4204 | Field of Study Code: MARKE.CER

**Program Requirements**

Marke	1170	Internet & Social Media Marketing	3
Marke	2210	Principles of Marketing	3
Accou	1140	Financial Accounting	4
Busin	1100	Introduction to Business	3
Cis	1150	Introduction to Computer Information Systems	3
Manag	2210	Principles of Management	3
			<hr/>
			19

**Program Electives** .....12

Select 12 credits from the courses below.

Busin	1170	Electronic Business/Commerce	3
Marke	1100	Consumer Marketing	3
Marke	1171	Database Marketing	3
Marke	1175	Customer Relationship Management	3
Marke	2220	Principles of Sales	3
Marke	2230	Principles of Retail	3
Marke	2240	Advertising	3
Marke	2250	Business to Business	3

The **Consumer Marketing certificate** requires 12 credits in the courses listed below.

ICCB Code 4216 | Field of Study Code: MARKE.CER.CON

**Program Requirements**

Marke	1100	Consumer Marketing	3
Marke	2210	Principles of Marketing	3
Busin	1100	Introduction to Business	3
			<hr/>
			9

**Program Electives** .....3

Select one of the following courses.

Cis	1150	Introduction to Computer Information Systems	3
Marke	2220	Principles of Sales	3
Marke	2240	Advertising	3

**MOTION PICTURE/TELEVISION**

THREE AAS DEGREES, TWO CERTIFICATES

**AAS DEGREES**

The **Motion Picture/Television program** specializes in preparing students for employment and/or transfer in the fields of film, video, television, animation and audio production. Graduates find jobs in industry, education and government; although a knowledge of motion picture or television production is also helpful for those seeking careers in advertising, public relations and other related fields. A hands-on approach to learning is emphasized. Several courses are transfer oriented.

The **Television Production degree program** requires a minimum of 64 credits, in program requirements, program electives and general education as listed below.

ICCB Code 3695 | Field of Study Code: MPTV.AAS.PROD

**Program Requirements**

Mptv	1011	Introduction to Motion Pictures and Television	3
Mptv	1020	Editing for Motion Pictures and Television	3
Mptv	1213	History of Television	3
Mptv	1220	Introduction to Television Studio Production	3
Mptv	1222	Writing for Television	3
Mptv	1324	Motion Graphics and Special Effects I	3
Mptv	2031	Pre-Production for Motion Pictures and Television	3
Mptv	2134	On-Location TV Production	3
Mptv	2231	Photojournalism for Television	3
Mptv	2233	Documentary Production	3
Mptv	2240	Advanced Television Production	3
			<hr/>
			30

**Program Electives** .....12

Select at least 12 credits from any MPTV courses that are not listed as a program requirement. Suggested program electives are Mptv 1111, Mptv 1022, Mptv 1120, Mptv 1822, Mptv 2022, Mptv 2333, and Mptv 2822.

General Education .....19  
(In addition to the courses listed above)

Total Credits Required .....64

The **Film/Video Production degree program** requires a minimum of 66 credits in program requirements, program electives and general education as listed below.

ICCB Code 3696 | Field of Study Code: MPTV.AAS.FILM

**Program Requirements**

Mptv	1011	Introduction to Motion Pictures and Television	3
Mptv	1020	Editing for Motion Pictures and Television	3
Mptv	1022	Audio for Motion Pictures and Television	3
Mptv	1111	Film/Video Aesthetics	3
Mptv	1113	Film/Video History	3
Mptv	1120	Cinematography	3
Mptv	2022	Screenwriting for Short Forms	3
Mptv	2031	Pre-Production for Motion Pictures and Television	3
Mptv	2131	Film/Video Production	3
Mptv	2133	Directing for Film/Video	3
Mptv	2140	Advanced Film/Video Production	3
			<hr/>
			33

**Program Electives** .....14

Select at least 14 credits from the courses below.

Mptv	1220	Introduction to Television Production	3
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Mptv	1311	Introduction to Animation .....	3
Mptv	1320	Intermediate Animation .....	3
Mptv	1822	Selected Topics .....	3
Mptv	2231	Photojournalism for Television .....	3
Mptv	2233	Documentary Production .....	3
Mptv	2240	Advanced Television Production .....	3
Mptv	2331	Three-Dimensional Animation I .....	3
Mptv	2340	Three-Dimensional Animation II .....	3
Mptv	2822	Advanced Selected Topics .....	3
General Education .....			19 to 22
(In addition to the courses listed above)			
Total Credits Required .....			66 to 69

The **Animation degree** program specializes in preparing students for employment and/or transfer in the field of animation. Students will explore and become proficient in the basics of animation with projects that include character animation and computer-generated imagery. This program will teach students' techniques in story development, character design, animation, motion control, lighting, and sound for animation. The Animation degree program requires 64 credits in program requirements, program electives, electives and general education as listed below.

ICCB Code 3698 | Field of Study Code: MPTV.AAS.ANIMAT

**Program Requirements**

Mptv	1020	Editing for Motion Pictures and Television .....	3
Mptv	1311	Introduction to Animation .....	3
Mptv	1313	History of Animation .....	3
Mptv	1324	Motion Graphics and Special Effects I .....	3
Mptv	2331	Three-Dimensional Animation I .....	3
Mptv	2342	Animation Portfolio .....	3
Art	1101	Drawing I .....	3
Art	1102	Drawing II .....	3
Art	1151	Two-Dimensional Foundations Studio .....	3
Art	2201	Life Drawing I .....	3
Art	2266	Computer Art I .....	3
Grdsn	2210	Cartooning .....	3
Grdsn	2211	Storyboarding/Sequential Art .....	3
			39

Program Electives .....			6
Select from any 1000- or 2000-level Mptv faculty adviser-approved Mptv courses, or the courses listed below.			
Mptv	2333	Motion Graphics and Special Effects II .....	3
Electives .....			3
Select from any 1000- or 2000-level Mptv or general education course.			
General Education .....			16
(In addition to the courses listed above)			
Total Credits Required .....			64

**CERTIFICATES**

The **Motion Picture/Television certificate** requires 45 credits in the courses listed below

ICCB Code 4695 | Field of Study Code: MPTV.CER

**Program Requirements**

Mptv	1011	Introduction to Motion Pictures and Television .....	3
Mptv	1020	Editing for Motion Pictures and Television .....	3
Mptv	1022	Audio for Motion Pictures and Television .....	3
Mptv	1111	Film/Video Aesthetics .....	3
Mptv	1120	Cinematography .....	3
Mptv	1220	Introduction to Television Production .....	3
Mptv	2022	Screenwriting for Short Forms .....	3
Mptv	2031	Pre-Production for Motion Pictures and Television .....	3
Mptv	2133	Directing for Film/Video .....	3
AND			
Mptv	2140	Advanced Film/Video Production .....	3

OR			
Mptv	2231	Photojournalism for Television .....	3
AND			
Mptv	2240	Advanced Television Production .....	3
			30

Program Electives .....			15
Select at least 15 credits from the courses below.			

Mptv	1113	Film History .....	3
Mptv	1311	Introduction to Animation .....	3
Mptv	1320	Intermediate Animation .....	3
Mptv	1822	Selected Topics .....	3
Mptv	2233	Documentary Production .....	3
Mptv	2331	Three-Dimensional Animation I .....	3
Mptv	2340	Three-Dimensional Animation II .....	3
Mptv	2822	Advanced Selected Topics .....	3

The **Motion Picture/Television program** specializes in preparing students for employment and/or transfer in the fields of film, video, television, animation and audio production. Graduates find jobs in industry, education and government; although a knowledge of motion picture or television production is also helpful for those seeking careers in advertising, public relations and other related fields. A hands-on approach to learning is emphasized. Several courses are transfer oriented. The **Animation certificate** requires 45 credits in the courses listed below.

ICCB Code 4698 | Field of Study Code: MPTV.CER.ANIMA

**Program Requirements**

Mptv	1020	Editing for Motion Pictures and Television .....	3
Mptv	1311	Introduction to Animation .....	3
Mptv	1313	History of Animation .....	3
Mptv	1324	Motion Graphics and Special Effects I .....	3
Mptv	2331	Three-Dimensional Animation I .....	3
Mptv	2342	Animation Portfolio .....	3
Art	1101	Drawing I .....	3
Art	1102	Drawing II .....	3
Art	1151	Two-Dimensional Foundations Studio .....	3
Art	2201	Life Drawing I .....	3
Art	2266	Computer Art I .....	3
Grdsn	2210	Cartooning .....	3
Grdsn	2211	Storyboarding/Sequential Art .....	3

Program Electives .....			6
Select from any 1000-or 2000-level MPTV faculty adviser-approved courses			

**NURSING**

**AAS DEGREE, CERTIFICATE**

**AAS DEGREE**

The **Associate Degree Nursing (ADN)** program prepares its graduates to deliver nursing care in various health care environments. The graduates are eligible to take the state licensure examination for registered nurses. This program requires 69 credits in program requirements and general education as listed below.

ICCB Code 3156 | Field of Study Code: NURSI.AAS

**Program Requirements**

Nursi	1104	Introduction to Physical Assessment .....	1
Nursi	1105	Medical-Surgical I .....	7
Nursi	1206	Medical-Surgical II .....	3
Nursi	1207	Childbearing Family .....	5
Nursi	1208	Neuropsychiatric Nursing .....	5
Nursi	2109	Medical-Surgical III .....	5
Nursi	2110	Contemporary Issues in Nursing .....	2
Nursi	2201	Medical-Surgical IV .....	10
Nursi	2202	Clinical Decision Making .....	1
Anat	1551	Human Anatomy and Physiology I .....	4
AND			

Anat	1552	Human Anatomy and Physiology II.....	4
	OR		
Anat	1571	Anatomy and Physiology with Cadaver I .....	4
	AND		
Anat	1572	Anatomy and Physiology with Cadaver II .....	4
Engli	1101	English Composition I.....	3
Culin	1110	Basic Nutrition .....	3
Micro	1420	Microbiology.....	4
Psych	2237	Developmental Psychology: The Life Span .....	3
Speec	1100	Fundamentals of Speech Communication .....	3
	OR		
Speec	1120	Small-Group Communication.....	3
			63

General Education .....6  
(In addition to the courses listed above)

Total Credits Required .....69

#### CERTIFICATE

The **Practical Nursing (PN)** program prepares students to function under the direction of a licensed professional in a variety of health care settings. The curriculum integrates classroom, campus laboratory and clinical instruction to teach concepts and skills that the PN uses to contribute to the nursing care of patients. Completion of the program provides the foundation for continued education and career mobility in nursing. On successful completion of the PN program, the student is awarded a certificate and becomes eligible to take the National Council Licensure Examination-Practical Nurse (NCLEX-PN).

The **Practical Nursing (PN) certificate** requires a minimum of 44 credits in the courses listed below.

ICCB Code 4160 | Field of Study Code: NURSP.CER

Nursp	1101	Practical Nursing Concepts and Skills I.....	10
Nursp	1102	Pharmacology for the Practical Nurse.....	4
Nursp	1103	Practical Nursing Concepts and Skills II .....	5
Nursp	1104	Practical Nursing Concepts and Skills III .....	7
Nursp	1105	Practical Nurse Role Transition.....	5
Nursp	1106	Issues and Trends in Practical Nursing .....	3
Anat	1500	Survey of Human Anatomy and Physiology .....	4
	OR		
Anat	1551	Human Anatomy and Physiology I.....	4
	AND		
Anat	1552	Human Anatomy and Physiology II.....	4
	OR		
Anat	1571	Anatomy and Physiology with Cadaver I .....	4
	AND		
Anat	1572	Anatomy and Physiology with Cadaver II .....	4
Psych	1100	General Psychology.....	3
Psych	2237	Developmental Psychology: The Life Span .....	3

### OFFICE TECHNOLOGY INFORMATION

THREE AAS DEGREES, SIX CERTIFICATES

#### AAS DEGREES

The **Office Technology Information program** prepares students by developing and enhancing their skills using current technologies in today's office. Courses are designed for students entering the Office Technology Information curriculum for the first time and for students preparing for a return to the workforce.

The **Administrative Assistant degree** program requires a minimum of 64 credits in program requirements, electives and general education as listed below.

ICCB Code 3276 | Field of Study Code: OFTI.AAS.AAST

Program Requirements

Ofti	1110	Document Formatting .....	4
Ofti	1120	Speed Development Keyboarding .....	2
Ofti	1130	Business Correspondence .....	3
Ofti	1200	MS Office for Professional Staff .....	3
Ofti	1203	E-Mail and Electronic Communication .....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business Professionals .....	2
Ofti	2305	Word Processing Transcription .....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures .....	4
			33

Electives .....13  
Select 13 credits from any 1000- or 2000-level courses.

General Education.....18 to 22  
(In addition to the courses listed above)

Total Credits Required .....64 to 68

The **Executive Assistant degree** requires 64 credits in program requirements and general education as listed below.

ICCB Code 3291 | Field of Study Code: OFTI.AAS.EXEC

#### Program Requirements

Ofti	1110	Document Formatting .....	4
Ofti	1120	Speed Development Keyboarding .....	2
Ofti	1130	Business Correspondence .....	3
Ofti	1200	MS Office for Professional Staff .....	3
Ofti	1203	E-Mail and Electronic Communication .....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business Professionals .....	2
Ofti	2305	Word Processing Transcription .....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures .....	4
Accou	1140	Financial Accounting.....	4
Busin	1100	Introduction to Business .....	3
Buslw	2211	Business Law I .....	3
Manag	2210	Principles of Management.....	3
			46

General Education .....18  
(In addition to the courses listed above)

Total Credits Required .....64

The **Administrative Assistant and Meeting/Event Planning degree** prepares the student for an administrative support position and requires a minimum of 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3294 | Field of Study Code: OFTI.AAS.MEET

#### Program Requirements

Ofti	1110	Document Formatting .....	4
Ofti	1120	Speed Development Keyboarding .....	2
Ofti	1130	Business Correspondence .....	3
Ofti	1200	MS Office for Professional Staff .....	3
Ofti	1203	E-Mail and Electronic Communication .....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business Professionals .....	2
Ofti	2305	Word Processing Transcription .....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures .....	4

Trav	2201	Fundamentals of Meeting and Event Planning	.....3
Trav	2203	Incentive Travel and Planning	.....3
Trav	2205	Meetings, Conventions and Trade Shows	.....3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries	.....3
			45

Program Electives .....1  
 One credit hour in Travel and Tourism program required.

General Education .....19 to 21  
 (In addition to the courses listed above)

Total Credits Required .....65 to 67

**CERTIFICATES**

The **Executive Assistant certificate** requires 46 credits in the courses listed below.

ICCB Code 4275 | Field of Study Code: OFTI.CER.EXEC

Ofti	1110	Document Formatting	.....4
Ofti	1120	Speed Development Keyboarding	.....2
Ofti	1130	Business Correspondence	.....3
Ofti	1200	MS Office for Professional Staff	.....3
Ofti	1203	E-Mail and Electronic Communication	.....2
Ofti	1210	Word Processing I	.....3
Ofti	1215	Word Processing II	.....2
Ofti	1218	MS Word Desktop Publishing	.....2
Ofti	1250	Electronic Presentations for Business Professionals	.....2
Ofti	2305	Word Processing Transcription	.....3
Ofti	2600	Professional Development	.....3
Ofti	2605	Professional Office Procedures	.....4
Accou	1140	Financial Accounting	.....4
Busin	1100	Introduction to Business	.....3
Buslw	2211	Business Law I	.....3
Manag	2210	Principles of Management	.....3

The **Administrative Assistant certificate** requires 33 credits in the courses listed below.

ICCB Code 4276 | Field of Study Code: OFTI.CER.AAST

Ofti	1110	Document Formatting	.....4
Ofti	1120	Speed Development Keyboarding	.....2
Ofti	1130	Business Correspondence	.....3
Ofti	1200	MS Office for Professional Staff	.....3
Ofti	1203	E-Mail and Electronic Communication	.....2
Ofti	1210	Word Processing I	.....3
Ofti	1215	Word Processing II	.....2
Ofti	1218	MS Word Desktop Publishing	.....2
Ofti	1250	Electronic Presentations for Business Professionals	.....2
Ofti	2305	Word Processing Transcription	.....3
Ofti	2600	Professional Development	.....3
Ofti	2605	Professional Office Procedures	.....4

The **Office Technology Information Essentials certificate** requires 22 credits in the courses listed below.

ICCB Code 4277 | Field of Study Code: OFTI.CER.INFO

Ofti	1100	Introduction to Computer Keyboarding	.....2
		OR	
Ofti	1120	Speed Development Keyboarding	.....2
Ofti	1110	Document Formatting	.....4
Ofti	1130	Business Correspondence	.....3
Ofti	1200	MS Office for Professional Staff	.....3
Ofti	1203	E-Mail and Electronic Communication	.....2
Ofti	1210	Word Processing I	.....3
Ofti	1215	Word Processing II	.....2
Ofti	2600	Professional Development	.....3

The **Word Specialist certificate** requires 7 credits in the courses listed below.

ICCB Code 4290 | Field of Study Code: OFTI.CER.WORD

Ofti	1210	Word Processing I	.....3
Ofti	1215	Word Processing II	.....2
Ofti	1218	MS Word Desktop Publishing	.....2

The **Medical Office certificate** prepares the student for an entry-level administrative support position into the medical office environment. This certificate requires 23 credits in the courses listed below.

ICCB Code 4291 | Field of Study Code: OFTI.CER.MEDOF

Ofti	1110	Document Formatting	.....4
Ofti	1130	Business Correspondence	.....3
Ofti	1200	MS Office for Professional Staff	.....3
Ofti	2600	Professional Development	.....3
Hlths	1110	Biomedical Terminology	.....4
Hlths	1130	Medical Assistant Administrative Procedures	.....3
Hlths	2211	Legal and Ethical Aspects of Health Care	.....3

The **Administrative Assistant and Meeting/Event Planning certificate** prepares the student for an administrative support position with a focus on meeting and event planning and requires 46 credits in the courses listed below.

ICCB Code 4294 | Field of Study Code: OFTI.CER.MEET

Ofti	1110	Document Formatting	.....4
Ofti	1120	Speed Development Keyboarding	.....2
Ofti	1130	Business Correspondence	.....3
Ofti	1200	MS Office for Professional Staff	.....3
Ofti	1203	E-Mail and Electronic Communication	.....2
Ofti	1210	Word Processing I	.....3
Ofti	1215	Word Processing II	.....2
Ofti	1218	MS Word Desktop Publishing	.....2
Ofti	1250	Electronic Presentations for Business Professionals	.....2
Ofti	2305	Word Processing Transcription	.....3
Ofti	2600	Professional Development	.....3
Ofti	2605	Professional Office Procedures	.....4
Trav	2201	Fundamentals of Meeting and Event Planning	.....3
Trav	2203	Incentive Travel and Planning	.....3
Trav	2205	Meetings, Conventions and Trade Shows	.....3
Trav	2207	Marketing for the Travel, Tourism, and Meetings Industries	.....3
			45

Program Electives .....1  
 One credit hour in Travel, Tourism and Event Planning program required

**PARALEGAL STUDIES**

AAS DEGREE, CERTIFICATE

AAS DEGREE

The **Paralegal program** prepares its graduates to perform substantive legal work under the supervision of an attorney. Although paralegals cannot provide legal services directly to the public, except as permitted by law, paralegals assist attorneys in a variety of legal environments by performing tasks such as drafting legal documents, performing legal research, maintaining corporate records and minutes books, interviewing witnesses and clients, and assisting in trial preparation. There is a separate admission process requiring students to be accepted into the program after completing initial prerequisites. To apply for admission, students complete a program application and submit it to the program coordinator. Further information is available at <http://www.cod.edu/paralegal/admission.htm>. This degree requires a minimum of 67 credits in program requirements and program electives as listed below.

Program Requirements

Plgl	1100	Introduction to Paralegal Studies	3
Plgl	1150	Drafting Legal Documents	3
Plgl	1200	Civil Litigation	3
Plgl	1250	Legal Ethics and Law Office Organizations	3
Plgl	1500	Intro Legal Research and Writing	3
Plgl	2100	Advanced Legal Research and Writing	3
Plgl	2600	Paralegal Practicum	3
Biolo	1110	Environmental Biology	4
	OR		
Chem	1105	Contemporary Chemistry	4
	OR		
Earth	1101	Physical Geology of Earth's Interior	4
Buslw	2211	Business Law I	3
Cis	1150	Introduction to Computer Information Systems	3
Engli	1101	English Composition I	3
Math	1218	General Education Mathematics	3
	OR		
Math	1100	Business Mathematics	3
	AND		
Psych	1100	General Psychology	3
	OR		
Socio	1100	Introduction to Social Science	3
Ofci	1200	MS Office for Professional Staff	3
Ofci	2600	Professional Development	3
Philo	1110	Ethics	3
Pols	1101	American Politics	3
Speec	1100	Fundamentals of Speech Communication	3
			52 to 55

Program Electives .....15

Select 15 credits from 1000- and 2000-level Paralegal courses or the Criminal Justice courses listed below.

Crimj	1151	Constitutional Law	3
Crimj	1153	Rules of Evidence	3

General Education

In order to be admitted into the program, students must have completed English 1101 and Speech 1100, or equivalent, with a grade of C or better, or demonstrate proficiency in these subjects by passing the Credit by Demonstrated Competency exams, or obtain consent of the program coordinator.

Total Credits Required .....67 to 70

CERTIFICATE

The **Paralegal Studies certificate** requires 33 credits in the courses listed below.

Program Requirements

Plgl	1100	Introduction to Paralegal Studies	3
Plgl	1150	Drafting Legal Documents	3
Plgl	1200	Civil Litigation	3
Plgl	1250	Legal Ethics and Law Office Organizations	3
Plgl	1500	Intro Legal Research and Writing	3
Plgl	2100	Advanced Legal Research and Writing	3
Plgl	2600	Paralegal Practicum	3
Buslw	2211	Business Law I	3
Ofci	1200	MS Office for Professional Staff	3
			27

Program Electives .....6

Select six credits from any 1000- and 2000-level Paralegal course.

General Education

In order to be admitted into the program, students must have completed English 1101 and Speech 1100, or equivalent, with a grade of C or better, or demonstrate proficiency in these subjects

by passing the Credit by Demonstrated Competency exams, or obtain consent of the program coordinator.

**PHOTOGRAPHY**

AAS DEGREE, CERTIFICATE

AAS DEGREE

The **Photography degree** program is designed to provide the student with a broad working knowledge and the fundamental skills to create and produce high quality black-and-white, color and digital images. This degree requires 64 credits in program requirements, program electives and general education as listed below.

Program Requirements

Photo	1100	Fundamentals of Photography	3
Photo	1101	Foundations of Digital Photography	3
Photo	1102	Foundations of Film Photography	3
Photo	1105	History of Photography	3
Photo	1200	Intermediate Photography	3
Photo	1201	Tools and Techniques for Digital Photography	3
	OR		
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1300	Studio Photography I	3
Photo	1400	Color Photography I	3
Photo	2100	Extended Photographic Project	3
Photo	2400	Color Photography II	3
Photo	2700	Professional Photographic Practices	3
Photo	2750	Portfolio Presentation	3
			36

Program Electives .....10

Select from the courses below.

Photo	1201	Tools and Techniques for Digital Photography	3
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1250	Advanced Digital Imaging	3
Photo	1260	Alternative Photographic Processes	3
Photo	1450	Nature Photography	3
Photo	1500	Photojournalism	3
Photo	1820	Selected Topics I	1
Photo	1821	Selected Topics II	2
Photo	1840	Independent Study — Individualized	1 to 4
Photo	2200	Portrait Photography	3
Photo	2300	Studio Photography II	3
Photo	2350	Studio Photography III	3
Photo	2375	Studio Digital Capture	3
Photo	2860	Cooperative Education/Internship (Occupational)	1 to 4
Photo	2865	Cooperative Education/Internship Advanced (Occupational)	1 to 4

General Education .....18  
(In addition to the courses listed above)

Total Credits Required .....64

CERTIFICATE

The **Photography Technology certificate** requires 46 credits in the courses listed below.

Program Requirements

Photo	1100	Fundamentals of Photography	3
Photo	1101	Foundations of Digital Photography	3
Photo	1102	Foundations of Film Photography	3
Photo	1105	History of Photography	3
Photo	1200	Intermediate Photography	3
Photo	1201	Tools and Techniques for Digital Photography	3
	OR		
Photo	1202	Tools and Techniques for Film Photography	3



Photo	1300	Studio Photography I	3
Photo	1400	Color Photography I	3
Photo	2100	Extended Photographic Project	3
Photo	2400	Color Photography II	3
Photo	2700	Professional Photographic Practices	3
Photo	2750	Portfolio Presentation	3
			36

Program Electives .....10  
 Select from the following courses.

Photo	1201	Tools and Techniques for Digital Photography	3
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1250	Advanced Digital Imaging	3
Photo	1260	Alternative Photographic Processes	3
Photo	1450	Nature Photography	3
Photo	1500	Photojournalism	3
Photo	1820	Selected Topics I	1
Photo	1821	Selected Topics II	2
Photo	1840	Independent Study — Individualized	1 to 4
Photo	2200	Portrait Photography	3
Photo	2300	Studio Photography II	3
Photo	2350	Studio Photography III	3
Photo	2375	Studio Digital Capture	3
Photo	2860	Cooperative Education/Internship (Occupational)	1 to 4
Photo	2865	Cooperative Education/Internship Advanced (Occupational)	1 to 4

## PHYSICAL EDUCATION

### TWO CERTIFICATES

For students who wish to prepare for an entry-level position in the health and fitness profession. The **Fitness Instructor certificate** requires a minimum of 29.5 credits in the courses listed below.

ICCB Code 4101 | Field of Study Code: PHYS.CER.FITN

#### Program Requirements

Phys	1171	Weight Training I	1
Phys	1554	Healthy Eating	1
Phys	2251	Living with Health	3
Phys	2254	First Aid and CPR	3
Phys	2260	The Science of Physical Fitness	2
Phys	2261	Applied Kinesiology	3
Phys	2262	Fitness Instructor Training I – Group	2
Phys	2263	Fitness Instructor Training II – Personal	2
Phys	2863	Cooperative Education/Internship (Occupational)	3
Phys	1106	Aerobics I	1
OR			
Phys	1143	Aerobic Fitness Combo I	1
OR			
Phys	1601	Dancercise I	1
OR			
Phys	1603	Zumba I	5-1
OR			
Phys	1181	Spinning I	1
Phys	1131	Cardio Kickboxing I	1
OR			
Phys	1123	Boot Camp Fitness I	1
OR			
Phys	1111	Bench Step Aerobics I	1
OR			
Phys	1421	Water Aerobics I	1
Phys	1184	Body Sculpting I	1
OR			
Phys	1901	Hatha Yoga I	1
OR			
Phys	1911	Pilates I (Mat)	1
OR			
Phys	1921	Power Yoga I	1

Anat	1500	Survey of Human Anatomy and Physiology	4
OR			
Anat	1551	Human Anatomy and Physiology	4
Biolo	1151	Principles of Biological Science	5
Psych	1100	General Psychology	3
OR			
Busin	1100	Introduction to Business	3
OR			
Busin	1111	Customer Service	3
OR			
Busin	1161	Entrepreneurship	3
OR			
Marke	1100	Consumer Marketing	3
OR			
Marke	1175	Customer Relationship Management	3
OR			
Marke	2200	Principles of Selling	3

The **Sport Performance Training certificate** program is designed for the individual seeking an entry level position in the fitness and sports performance profession. Students will develop skills in leading athletes through advanced fitness workouts with emphasis on sport related performance both physically and mentally. This certificate requires a minimum of 42 credits in the courses listed below.

ICCB Code 4103 | Field of Study Code: PHYS.CER.PERF

#### Program Requirements

Phys	1171	Weight Training I	1
Phys	1190	SAQSP Training	1
Phys	1500	Performance Nutrition	1
Phys	2201	Introduction to Coaching	3
Phys	2240	Introduction to Sport Psychology	3
Phys	2251	Living with Health	3
Phys	2254	First Aid and CPR	3
Phys	2260	The Science of Physical Fitness	2
Phys	2261	Applied Kinesiology	3
Phys	2263	Fitness Instructor Training II – Personal	2
Phys	2264	Sports mechanics for Coaches	2
Phys	2265	Biophysical Foundations of Human Movement	2
Phys	2870	Cooperative Education/Internship Transfer	1-4
Anat	1551	Human Anatomy and Physiology	4
Anat	1552	Human Anatomy and Physiology II	4
Busin	1161	Entrepreneurship	3
Psych	1100	General Psychology	3

#### Electives

One course must be taken from the courses listed below. Some courses range from one to three credit hours.

Busin	1111	Customer Service	3
Marke	1100	Consumer Marketing	3
Marke	1175	Customer Relationship Management	3
Marke	2220	Principles of Selling	3
Phys	1123	Boot Camp Fitness I	1
Phys	1131	Cardio Kickboxing I	1
Phys	1141	Cross Training I	1
Phys	1143	Aerobic Fitness Combo I	1
Phys	1181	Spinning I	1
Phys	1341	Soccer I	1
Phys	1351	Softball	1
Phys	1361	Tennis I	1
Phys	1381	Volleyball I	1
Psych	2205	Physiological Psychology	3
Psych	2237	Developmental Psychology: The Life Span	3

## PHYSICAL THERAPIST ASSISTANT

AAS DEGREE

AAS DEGREE

The **Physical Therapist Assistant program** prepares its graduates to provide skilled direct patient care under the direction and supervision of a licensed physical therapist. Goals of treatment include relieving pain, improving strength and mobility, and helping patients to attain maximum function. Physical therapist assistants are employed in a variety of settings, including hospitals, rehabilitation centers, long-term care facilities, sports medicine clinics and home health care agencies. Graduates must take the state licensure examination for physical therapist assistants. The Physical Therapist Assistant program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). This degree requires a minimum of 69.5 credits in program requirements and general education.

ICCB Code 3186 | Field of Study Code: PHYTA.AAS

### Program Requirements

Phyta	1100	Introduction to Physical Therapy	2
Phyta	1107	Pathophysiology	2
Phyta	1109	Basic Health Care Skills and Principles of Soft Tissue Techniques	3
Phyta	1110	Documentation	1.5
Phyta	1111	Kinesiology I	2
Phyta	1112	Kinesiology II	3
Phyta	1114	Total Patient Care	1
Phyta	1201	Therapeutic Modalities	4
Phyta	1202	Therapeutic Exercise	2
Phyta	1211	Therapeutic Assessment and Basic Intervention	4
Phyta	1221	Clinical Practicum I	1
Phyta	2203	Neuromuscular and Cardiopulmonary Rehabilitation	3
Phyta	2204	Special Patient Populations	2
Phyta	2212	Advanced Orthopedic Rehabilitation	4
Phyta	2214	Professional Issues	1
Phyta	2222	Clinical Practicum II	1.5
Phyta	2223	Clinical Practicum III	2.5
Phyta	2224	Clinical Practicum IV	3
Anat	1551	Human Anatomy and Physiology I	4
		AND	
Anat	1552	Human Anatomy and Physiology II	4
		OR	
Anat	1571	Anatomy and Physiology with Cadaver I	4
		AND	
Anat	1572	Anatomy and Physiology with Cadaver II	4
Hlths	1110	Biomedical Terminology	4
			54.5

General Education ..... 15 to 17  
(In addition to courses listed above)

Total Credits Required ..... 69.5 to 71.5

## REAL ESTATE

AAS DEGREE, CERTIFICATE

AAS DEGREE

The **Real Estate program** meets the needs of students entering the real estate business as well as those already employed in the field who wish to continue their professional growth. In addition, the program fulfills the academic requirements for students taking the Illinois Real Estate Salesperson and Broker License examinations. The **Real Estate degree** program requires a minimum of 64 credits in program requirements, program electives and general education as listed below.

ICCB Code 3272 | Field of Study Code: REALE.AAS

### Program Requirements

Reale	1130	Real Estate Broker Pre-License Topics	5
Reale	1131	Real Estate Broker Pre-License Applied Real Estate Principles	1
Accou	1140	Financial Accounting	4
Busin	1100	Introduction to Business	3
Busin	1161	Entrepreneurship	3
Buslw	2211	Business Law I	3
Cis	1150	Introduction to Computer Information Systems	3
Econo	1110	Consumer Economics and Personal Finance	3
Manag	1100	Supervision	3
Manag	2210	Principles of Management	3
Marke	2210	Principles of Marketing	3
Ofiti	1130	Business Correspondence	3
			37

### Program Electives ..... 9

Select a minimum of 9 credits from the courses below.

Busin	1120	Fundamentals of Personal Investing	3
Buslw	2212	Business Law II	3
Marke	1100	Consumer Marketing	3
Marke	1175	Customer Relationship Management	3
Marke	2240	Advertising	3
Ofiti	1200	MS Office for Professional Staff	2
Reale	1152	Basic Appraisal Principles	2
Reale	1820	Selected Topics I	3

General Education ..... 18 to 22  
(In addition to the courses listed above)

Total Credits Required ..... 64 to 68

## CERTIFICATE

The **Real Estate Appraisal certificate** requires five credits in the courses listed below.

ICCB Code 4273 | Field of Study Code: REALE.CER.APP

Reale	1152	Basic Appraisal Principles	2
Reale	1153	Basic Appraisal Procedures	2
Reale	1154	Uniform Standards of Professional Appraisal Practice	1

## RESPIRATORY CARE

AAS DEGREE

AAS DEGREE

Respiratory Care health professionals are responsible for life support and related systems as applied to the management of patients with cardiopulmonary disease. The **Respiratory Care program** prepares eligible students to provide entry-level and advanced-level management of respiratory care to patients primarily seen in hospitals, intensive care units, emergency rooms and diagnostic laboratories. Classroom, laboratory and clinical instruction train the student in diagnostic, therapeutic, technologic and administrative arts as applied to the critically ill adult, neonatal and pediatric patient. This degree requires 77 credits in program requirements and general education as listed below.

ICCB Code 3182 | Field of Study Code: RESPAAS

### Program Requirements

Resp	1101	Basic Respiratory Care	3
Resp	1102	Intermediate Respiratory Care	3
Resp	1103	Advanced Respiratory Care	3
Resp	1105	Respiratory Assessment and Procedures	4
Resp	1111	Clinical Practice I	4
Resp	1112	Clinical Practice II	4
Resp	1113	Intensive Respiratory Care Clinical Practice	3
Resp	1120	Applied Cardiopulmonary Anatomy and Physiology	4

Resp	1121	Applied Science for Respiratory Care .....	4
Resp	2201	Advanced Life Support, Monitoring and Trends .....	3
Resp	2202	Pulmonary Function Testing .....	3
Resp	2205	Neonatal and Pediatric Intensive Respiratory Care.....	3
Resp	2206	Advanced Intensive Respiratory Care — Adult .....	4
Resp	2207	Advanced Intensive Respiratory Care — Neonatal-Pediatric .....	3
Resp	2250	Respiratory Care Board Review .....	3
Resp	2280	Advanced Clinical Assessment and Protocol .....	4
			55
General Education .....			22
(In addition to the courses listed above.)			
Total Credits Required .....			77

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT AAS DEGREE

### AAS DEGREE

The **Speech Language Pathology Assistant (SLPA) program** prepares students for employment as support personnel under the supervision of a certified Speech Language Pathologist in early intervention, schools, and clinics. Graduates of the SLPA program are eligible to apply for licensure through Illinois Department of Financial and Professional Regulations. This degree requires 64 credits in program requirements and general education as listed below.

ICCB Code 3132 | Field of Study Code: SLPA.AAS

#### Program Requirements

Slpa	1101	Introduction to Speech Language Pathology .....	4
Slpa	1105	Phonetics.....	3
Slpa	1106	Speech Disorders and Intervention Across the Lifespan I .....	4
Slpa	1107	Speech Disorders and Intervention Across the Lifespan II .....	2
Slpa	1109	Language Development .....	3
Slpa	1110	Language Disorders and Intervention Across the Lifespan .....	4
Slpa	1112	Introduction to Audiology .....	2
Slpa	2101	Clinical Methods and Documentation .....	4
Slpa	2102	Professional Issues and the SLPA.....	4
Slpa	2104	Augmentative and Alternative Communication.....	3
Slpa	2112	Clinical Practicum.....	6
			39

General Education .....

(Select a minimum of 18 credits to satisfy AAS general education requirements and an additional 7 credits in any electives to equal a total of 25 credits.)

Total Credit Required .....

## SURGICAL TECHNOLOGY AAS DEGREE, TWO CERTIFICATES

### AAS DEGREE

The **Surgical Technology program** teaches students to set up the operating room, prepare surgical instruments and assist in their use. Prepare patients for surgery and perform other tasks that ensure a safe surgical environment. Surgical technologists (STs) are employed in hospital operating rooms, delivery rooms, emergency departments and ambulatory care areas. This degree requires a 65 credits in program requirements and general education. The following list contains the required courses, some of which may be used to meet general education requirements.

ICCB Code 3192 | Field of Study Code: SURGT.AAS

#### Program Requirements

Surgt	1101	Surgical Technology Concepts I.....	15
Surgt	1102	Surgical Technology Concepts II.....	8
Surgt	1103	Surgical Technology Concepts III.....	14
Surgt	1111	Central Processing Distribution Technician .....	5
Anat	1500	Survey of Human Anatomy and Physiology .....	4
OR			
Anat	1551	Human Anatomy and Physiology I.....	4
AND			
Anat	1552	Human Anatomy and Physiology II.....	4
OR			
Anat	1571	Anatomy and Physiology with Cadaver I .....	4
AND			
Anat	1572	Anatomy and Physiology with Cadaver II .....	4
Engli	1101	English Composition I.....	3
OR			
Engli	1105	Introduction to Technical Writing .....	3
Hlths	1110	Biomedical Terminology .....	4
Math	1100	Business Mathematics .....	3
OR			
Math	1102	Mathematics for Health Sciences .....	3
OR			
Psych	2280	Statistics for Social and Behavioral Sciences .....	3
OR			
Socio	2205	Statistics for Social and Behavioral Sciences .....	3
Speec	1100	Fundamentals of Speech Communication .....	3
OR			
Speec	1120	Small-Group Communication.....	3
OR			
Speec	1150	Introduction to Business Communication.....	3
			59 to 62

General Education .....

3 credits in Humanities and 3 credits in Social Behavioral Sciences  
(In addition to the courses listed above.)

Total Credits Required .....

#### CERTIFICATE

The **Surgical Technology certificate** requires a minimum of 50 credits in the courses listed below.

ICCB Code 4192 | Field of Study Code: SURGT.CER

Surgt	1101	Surgical Technology Concepts I.....	15
Surgt	1102	Surgical Technology Concepts II.....	8
Surgt	1103	Surgical Technology Concepts III.....	14
Surgt	1111	Central Processing Distribution Technician .....	5
Anat	1500	Survey of Human Anatomy and Physiology .....	4
OR			
Anat	1551	Human Anatomy and Physiology I.....	4
AND			
Anat	1552	Human Anatomy and Physiology II.....	4
OR			
Anat	1571	Anatomy and Physiology with Cadaver I .....	4
AND			
Anat	1572	Anatomy and Physiology with Cadaver II .....	4
Hlths	1110	Biomedical Terminology .....	4

The **Central Processing Distribution Technician Program** is designed to provide the content and clinical collaboration for students to be successful and meet the standards of the Sterile Processing Distribution Technician Profession. This is a one semester certificate program that provides the student with the basic fundamentals of central processing, supplies, services, and distribution of hospital instrumentation, supplies, and equipment. This program will provide the student with didactic instruction and clinical practice in aseptic techniques, patient care concepts, and theories and practices of central services departments. Students

who successfully complete the program will be eligible to sit for the International Association of Healthcare Central Service Material Management (IAHCSSM) National Certifying Examination. The Central Processing Distribution Technician certificate requires a minimum of 13 credits in the courses listed below.

ICCB Code 4193 | Field of Study Code: SURGT.CER.CPDT

Surgt	1111	Central Processing Distribution Technician .....	5
Anat	1500	Survey of Human Anatomy and Physiology .....	4
		OR	
Anat	1551	Human Anatomy and Physiology I.....	4
		AND	
Anat	1552	Human Anatomy and Physiology II.....	4
		OR	
Anat	1571	Anatomy and Physiology with Cadaver I .....	4
		AND	
Anat	1572	Anatomy and Physiology with Cadaver II .....	4
Hlths	1110	Biomedical Terminology .....	4

## TRAVEL, TOURISM AND EVENT PLANNING

TWO AAS DEGREES, SIX CERTIFICATES

### AAS DEGREES

The **Travel, Tourism and Event Planning program** is designed for individuals who plan to enter the travel, tourism or meetings industries or professionals who desire to update their skills. Career opportunities are available in an exciting variety of areas, including meeting planning, tourist boards, convention and visitors bureaus, hoteliers, airlines, rental car companies, travel agencies, receptive tourism, destination management companies, consolidators, cruise lines, tour operators and as home-based/outside sales independent contractors.

The **Travel and Tourism Professional degree** requires 66 credits in program requirements, program electives and general education as listed below.

ICCB Code 3281– FIELD OF STUDY CODE: TRAV.AAS.PROF

#### Program Requirements

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries .....	3
Trav	1122	Introduction to World Destinations .....	3
Trav	1123	Fundamentals of Fares and E-Ticketing.....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette .....	3
Trav	1202	Business Management for the Travel Professional..	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2230	Travel Sales and Customer Service.....	3
			30

#### Program Electives.....12

Select 12 credits from the courses below.

Trav	1126	North American Destinations .....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2
Trav	1150	Outside Sales for the Home-Based and Independent Contractor .....	3
Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2201	Fundamentals of Meeting and Event Planning.....	3
Trav	2203	Incentive Travel and Planning.....	3

Trav	2205	Meetings, Conventions and Trade Shows .....	3
Trav	2210	Advanced Global Distribution Systems.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2240	Tour Escorting, Planning and Operations .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	2253	Professional Meeting and Event Management.....	3
General Education .....			24

The following are required General Education courses.

Busin	1100	Introduction to Business .....	3
Cis	1110	Using Computers: An Introduction.....	2
Earth	1140	Fundamentals of Earth Science .....	4
Engli	1101	English Composition I.....	3
Math	1100	Business Mathematics .....	3
Philo	1114	Business Ethics .....	3
Psych	1150	Adjustment .....	3
Spec	1100	Fundamentals of Speech Communication .....	3

Total Credits Required .....

The **Meeting and Event Planning degree** can benefit all levels of meeting and event professionals by focusing on management issues critical to the meeting industry. The Meeting and Event Planning degree requires 65 credits in program requirements, program electives and general education as listed below.

ICCB Code 3282– FIELD OF STUDY CODE: TRAV.AAS.EVENT

#### Program Requirements

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries .....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette .....	3
Trav	2201	Fundamentals of Meeting and Event Planning.....	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Advanced Meeting and Event Planning.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Busin	1100	Introduction to Business .....	3
Cis	1110	Using Computers: An Introduction.....	2
Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	2203	Professional Catering and Banquet Management ..	3
Hosp	2253	Professional Meeting and Event Management.....	3
			35

#### Program Electives.....11

Select 11 credits from the courses below.

Trav	1122	Introduction to World Destinations .....	3
Trav	1123	Fundamentals of Fares and E-Ticketing.....	3
Trav	1126	North American Destinations .....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2
Trav	1202	Business Management for the Travel Professional..	3
Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2230	Travel Sales and Customer Service.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2240	Tour Escorting, Planning and Operations .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational) ..	1
Hosp	1111	Front Office Operations.....	3



Hosp	1140	Quality Management of Service in the Hospitality Industry.....	3
General Education .....			19
Complete the following 19 credits. Program requirements include Busin 1100 and Cis 1110, which fulfills the Contemporary Life Skills requirement.			
Earth	1140	Fundamentals of Earth Science .....	4
Engli	1101	English Composition I.....	3
Math	1100	Business Mathematics .....	3
Philo	1114	Business Ethics .....	3
Psych	1150	Adjustment .....	3
Speec	1100	Fundamentals of Speech Communication .....	3
Total Credits Required .....			65

**CERTIFICATES**

The **Meeting and Event Planning certificate** requires 23 credits in the courses listed below.

ICCB Code 4279 | Field of Study Code: TRAV.CER.EVENT

**Program Requirements**

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries.....	3
Trav	1122	Introduction to World Destinations .....	3
Trav	2201	Fundamentals of Meeting and Event Planning.....	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Meetings, Conventions and Trade Shows .....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
			18

**Program Electives .....**

Select 5 credits from the list below:

Trav	1123	Fundamentals of Fares and E-Ticketing.....	3
Trav	1124	Introduction to Travel Documentation and Business Etiquette .....	3
Trav	1126	North American Destinations.....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2
Trav	1202	Business Management for the Travel Professional..	3
Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2230	Travel Sales and Customer Service.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2240	Tour Escorting, Planning and Operations .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	1111	Front Office Operations.....	3
Hosp	1140	Quality Management of Service in the Hospitality Industry .....	3
Hosp	2203	Professional Catering and Banquet Management ..	3
Hosp	2253	Professional Meeting and Event Management.....	3

The **Travel and Tourism Professional certificate** requires 21 credits in the courses listed below.

ICCB Code 4281 | Field of Study Code: TRAV.CER.PROF

**Program Requirements**

Trav	1202	Business Management for the Travel Professional..	3
Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	2220	Internet Navigation Skills for the Travel .....	3

		Professional .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Trav	2230	Travel Sales and Customer Service.....	3
			15

**Program Electives .....**

Select 6 credits from the list below.

Trav	1126	North American Destinations.....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2
Trav	1150	Outside Sales for the Home-Based and Independent Contractor .....	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2201	Fundamentals of Meeting and Event Planning.....	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Advanced Meeting and Event Planning .....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2210	Advanced Global Distribution Systems.....	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2240	Tour Escorting, Planning, and Operations .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Hosp	1100	Introduction to the Hospitality Industry .....	3
Hosp	2253	Professional Meeting and Event Management.....	3

The **E-Travel and Tourism certificate** requires 16 credits in the courses listed below.

ICCB Code 4282 | Field of Study Code: TRAV.CER.ETRAV

**Program Requirements**

Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	2210	Advanced Global Distribution Systems.....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
			9

**Program Electives .....**

Select 7 credits from the list below.

Trav	1150	Outside Sales for the Home-Based and Independent Contractor .....	3
Trav	1202	Business Management for the Travel Professional..	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2201	Fundamentals of Meeting and Event Planning.....	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Meetings, Conventions and Trade Shows .....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2230	Travel Sales and Customer Service.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2240	Tour Escorting, Planning and Operations .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational).....	1 to 4

The **Tour Escort certificate** requires 17 credits in the courses listed below.

ICCB Code 4286 | Field of Study Code: TRAV.CER.ESCORT

**Program Requirements**

Trav	1122	Introduction to World Destinations .....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette .....	3

Trav	2240	Tour Escorting, Planning and Operations .....	3
			<u>9</u>
Program Electives .....			8
Select 8 credits from the list below.			
Trav	1123	Fundamentals of Fares and E-Ticketing.....	3
Trav	1126	North American Destinations .....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2
Trav	1150	Outside Sales for the Home-Based and Independent Contractor .....	3
Trav	1202	Business Management for the Travel Professional..	3
Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2210	Advanced Global Distribution Systems.....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2230	Travel Sales and Customer Service.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational).....	1 to 4

The **Fundamentals of Travel and Tourism certificate** requires 17 credits in the courses listed below.

ICCB Code 4289 | Field of Study Code: TRAV.CER.FUND

**Program Requirements**

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries .....	3
Trav	1122	Fundamentals of Fares and E-Ticketing.....	3
Trav	1123	Fundamentals of Fares and E-Ticketing.....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette .....	3
			<u>12</u>

**Program Electives .....**

Select 5 credits from the list below.

Trav	1126	North American Destinations .....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2
Trav	1150	Outside Sales for the Home-Based and Independent Contractor .....	3
Trav	1202	Business Management for the Travel Professional..	3
Trav	1210	Introduction to Global Distribution Systems .....	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2210	Advanced Global Distribution Systems.....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
Trav	2229	International Fares and E-Ticketing .....	3
Trav	2230	Travel Sales and Customer Service.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2240	Tour Escorting, Planning and Operations .....	3
Trav	2820	Advanced Selected Topics .....	3
Trav	2860	Cooperative Education/Internship (Occupational).....	1 to 4

The **Travel Geography Specialist certificate** requires 18 credits in the courses listed below.

ICCB Code 4292 | Field of Study Code: TRAV.CER.GEOG

**Program Requirements**

Trav	1122	Introduction to World Destinations .....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries .....	3
Trav	2220	Internet Navigation Skills for the Travel Professional .....	3
Trav	2221	World Cultures and International Tourism Issues ..	3
			<u>12</u>

**Program Electives .....**

Select three credits from the list below:

Trav	1126	North American Destinations .....	2
Trav	1127	European Destinations.....	2
Trav	1128	Asian and South Pacific Destinations.....	2
Trav	1129	Central and South American Destinations .....	2
Trav	1130	African Destinations .....	2

Select three credits from the list below:

Trav	1150	Outside Sales for the Home-Based and Independent Contractor .....	3
Trav	1202	Business Management for the Travel Professional..	3
Trav	1820	Selected Topics .....	3
Trav	2130	Airline Operations and Security Procedures.....	3
Trav	2230	Travel Sales and Customer Service.....	3
Trav	2236	Cruise Industry Sales Specialization .....	3
Trav	2820	Advanced Selected Topics .....	3

## WELDING TECHNOLOGY

### CERTIFICATE

The **Welding Technology program** provides a competency-based, individualized method of instruction. This program provides training at various levels of competency in the four most common methods of metal joining: shielded metal arc (stick), gas tungsten arc (TIG), oxyacetylene (gas) and gas metal arc (MIG). Plasma welding and cutting, both manual and semi-automatic, are included in various courses. This certificate requires 30 credits in the courses listed below.

ICCB Code 4995 | Field of Study Code: WELD.CER

**Program Requirements**

Weld	1100	Welding I.....	3
Weld	1112	Oxy-Fuel, Welding, Plasma Cutting and Brazing...	3
Weld	1122	Shielded Metal Arc (SMAW) .....	3
Weld	1132	Gas Metal Arc (MIG).....	3
Weld	1142	Gas Tungsten Arc (TIG) .....	3
Weld	1151	Pipe Welding and Fabrication.....	3
Weld	1160	Skill Assessment .....	3
Manuf	1101	Industrial Design/CAD.....	3
Manuf	1151	Machine Shop I .....	3
Math	1115	Technical Mathematics I.....	3



How to Get Started

## ADMISSIONS POLICIES AND PROCEDURES

Admission is open to anyone who is a high school graduate, has earned a GED or is at least 18 years old and can benefit from college-level instruction. Admission can be granted to others by the Coordinator of Admission Services (Board Policy 20-50). The college will not discriminate in its programs and activities on the basis of race, color, religion, creed, national origin, sex, age, ancestry, marital status, sexual orientation, arrest record, military status or unfavorable military discharge, citizenship status, physical or mental handicap or disability (Board Policy 20-5).

Prospective students should apply to the Admissions office well in advance of their expected starting date. Applications are available online at [www.cod.edu](http://www.cod.edu), in this *Catalog*, or in the Admissions and Information Services office.

Students should submit official transcripts from high schools and colleges they have attended. Students should make a formal request to the Records office to have their transcripts evaluated to determine successful completion of prerequisites, to allow registration in COD courses and/or for evaluation of previous college credits earned for application toward a degree or certificate at COD. To request an evaluation, applicants should go online at [www.cod.edu](http://www.cod.edu), and click on "Records" and then "Transfer Evaluation," or call (630) 942-3829.

No tests are required for admission; however, test information is helpful to college advisors who assist students with their educational planning. Therefore, students are encouraged to take national college entrance tests such as the ACT. Placement tests in reading, writing and mathematics are required.

### FYI (For Your Information) and CVD (Campus Visit Day) Sessions

One-hour information sessions are provided for prospective or newly admitted students. Included is information about getting started at the College, programs of study, services available, transfer information and answers to your questions.

## COLLEGE DISTRICT RESIDENCY

Towns and villages in the College of DuPage district are:

Addison	Keeneyville
Argonne National Laboratory	La Grange
Aurora*	La Grange Park
Bensenville	Lemont
Bloomington	Lisle
Bolingbrook*	Lombard
Brookfield*	McCook
Burr Ridge	Medinah
Carol Stream*	Naperville
Clarendon Hills	Northwood
Countryside	Oak Brook
Darien	Oakbrook Terrace
Downers Grove	Plainfield*
Elk Grove Village*	Roselle*
Elmhurst	Villa Park
Eola	Warrenville
Fermilab	West Chicago*
Flowerfield	Western Springs
Glen Ellyn	Westmont
Glendale Heights	Wheaton
Hanover Park*	Willow Springs*
Hinsdale	Willowbrook
Hodgkins	Winfield
Indian Head Park	Wood Dale
Itasca	Woodridge

\*Only portions of these communities are in District 502. Call the Registration office at (630) 942-2377 for detailed information.

1. In-District Resident  
Students, excluding "International Residents" as defined below, who have occupied a dwelling within District 502 for at least thirty (30) days immediately prior to the beginning of the term will be classified as in-district residents.
2. Out-of-District Resident  
Students, excluding "International Residents" as defined below, who do not occupy a dwelling within District 502, but have resided within the State of Illinois for at least thirty (30) days immediately prior to the beginning of the term are classified as out-of-district residents.
3. Out-of-State Resident  
Students who have not occupied a dwelling within the State of Illinois for at least thirty (30) days prior to the beginning of the term are classified as out-of-state residents.
4. International Resident  
Students whose permanent residences are outside the United States and who wish to attend College of DuPage while on a valid student visa, other visa, or visa waiver program, that permits them to attend school while in the United States, are classified as international residents.
5. Exceptions to 1, 2 and 3  
Students who obtain residence within the College of DuPage district for reasons other than attending College of DuPage are exempt from the 30-day requirement if they provide documentation of a verifiable interest in establishing permanent residency. The Registration office makes the final determination of residency status.

Student residency classifications will be in accordance with provisions of the Illinois Community College Act and guidelines established by the Illinois Community College Board.

## CHARGEBACKS

Individuals who want to enroll in an Associate in Applied Science degree or certificate program not offered by their own community college or through the Cooperative Agreement program (described previously) may apply for a chargeback, which is financial assistance with the out-of-district portion of the tuition (Board Policy 25-50). Students should apply for a chargeback through the Admissions Office of their own community college at least 30 days prior to the beginning of the term for which they intend to enroll.

Chargebacks are available for community colleges within the State of Illinois. Most community college districts do not approve chargebacks for single courses within a curriculum, developmental courses, non-credit courses, and Associate in Arts or Associate in Science degrees.

## REGISTRATION PROCEDURES

New Student Registration Eligibility – New student registration begins the day after returning student registration ends.

For more information, call the Admissions office at (630) 942-2482.

### Returning Students

The registration date will be based on the number of credit hours a student has accumulated at COD. Check [myaccess.cod.edu](http://myaccess.cod.edu) for institutional completed credits earned.

If the returning student was not enrolled at College of DuPage for the previous term, go to [myaccess.cod.edu](http://myaccess.cod.edu) or call the Registration office, (630) 942-2377, for the registration eligibility date.



### **Late Registration**

Written permission must be obtained from the instructor to register for a class on or after the day the class begins. Registration is not permitted after the midpoint of the class.

### **Non-Credit Classes, Seminars and Workshops**

A student may register for non-credit classes, seminars and workshops anytime between the beginning of the registration period and up to the second meeting of the class.

### **Ways to Register**

When eligible to register, students may register in one of two ways.

1. Online Registration (myaccess.cod.edu)  
To use Online Registration, you must be an admitted or returning student with a Colleague Student I.D. The student I.D. number is sent in your COD acceptance letter.
2. In Person  
Visit the Registration office in the Student Resource Center (SRC), Room 2048, during office hours. The Regional Centers will also provide registration assistance.

### **Adding Courses**

A class may be added only up until the day before the first scheduled class meeting. Upon the day the class begins, written permission from the instructor is required in order to register. Credit classes cannot be added after midpoint of the class.

### **Auditing a Course**

Intent to audit a class must be indicated at the time of registration and the higher audit tuition charge will be assessed. After the class begins, written permission from the instructor is required in order to audit a class. Students may not request to audit a class after midterm. The audit grade of "X" is recorded on the permanent academic record: No credit is earned and the audit grade does not affect the grade point average (GPA).

### **Overload**

Students wishing to register for 20 or more credits during any term must have written permission from a counselor or advisor in Counseling and Advising Services, or the dean or associate dean in their academic area.

### **Withdrawal From Credit Classes**

A student may withdraw from a course up to the midterm date of the class. Withdrawal may be made by Online Registration or in person at the Registration office. After that date the student may withdraw only with written permission from the instructor, which must be brought to the Registration office or faxed to (630) 790-3785. If the student is not withdrawn through the Registration office before the end of the term, the grade will be recorded as an "F." Check the Registration schedule online ([www.cod.edu](http://www.cod.edu)) or the *Class Schedule* for information on dates for withdrawal.

### **Withdrawing From Credit Classes Due to a Medical Reason**

Direct a request for a medical withdrawal to the Office of the Dean of Admissions Services and Registrar, (630) 942-4284. Requests should be made in writing and accompanied by documentation from a physician or medical institution to verify the medical condition, date of onset and estimated length of treatment. Medical withdrawal forms are available in the Registration office and online at [home.cod.edu/registration/refunds.aspx](http://home.cod.edu/registration/refunds.aspx). Requests for medical withdrawals are reviewed individually. Refunds are issued when appropriate within the guidelines of the College of DuPage refund policy. The student will receive written notification of the decision within three weeks from the Office of the Dean of Admissions Services and Registrar.

### **Withdrawing From Adult Non-Credit Classes, Seminars and Workshops**

A student may withdraw up until the end of the class, seminar or workshop.

## **TUITION AND FEES FOR CREDIT CLASSES**

### **Admissions/Recording Fee**

A \$20 non-refundable admission fee is charged the first time a student applies to the College for credit courses. The fee is not charged to district residents age 65 or older.

### **In-District Tuition**

Students who meet the criteria of an in-district resident pay in-district tuition.\*

### **Out-of-District Tuition**

Students who meet the criteria of an out-of-district resident pay out-of-district tuition.\*

### **Out-of-State Tuition**

Students who meet the criteria of an out-of-state and/or international resident pay out-of-state tuition.\*

### **Special Tuition Categories**

1. Employed Full-Time In-District  
Students whose permanent residence is outside of College of DuPage district, but who work 35 or more hours within District 502, are charged in-district tuition upon presenting the proper documentation to the Registration office. For more information, contact the Registration office at (630) 942-2377.
2. Cooperative Agreements/Chargebacks  
Illinois residents whose permanent residence is outside of District 502 may be eligible to pay in-district tuition through a cooperative agreement or chargeback if their local community college does not offer a certificate or degree program offered at College of DuPage. For more information, students should contact the Admissions office of their local community college at least 30 days prior to the start of a semester.
3. Senior Citizens  
Senior citizens (age 65 or over) whose permanent residence is within District 502 pay a reduced tuition rate.\* Students 65 years of age and older may receive free tuition if their annual household income is less than the threshold amount in Section 4 of the Senior Citizen Tax Relief Act.
4. COD Online Courses  
Students who register for COD online courses are charged in-district tuition regardless of their residency, with the exception of F-1 international students, who are charged the regular international student rate.
5. Students who audit courses (taken for no credit) are charged a higher tuition rate.\*

### **Service Fee**

A service fee is included in the tuition for each semester credit hour.\*

### **Payment Plan Fee**

Students who choose the payment plan are charged a payment plan fee. An additional fee is assessed per semester should an automatic bank payment or credit card payment be returned.\*

### **Returned Check/Charge Card Fee**

Students are charged a fee for each check or charge card rejected by the bank.\*

**Course Fees**

Certain courses require the payment of course fees. Course fees are printed in the class listing of the *Class Schedule*.\*

\*Current tuition rates and fees are printed in the *Class Schedule* and are available online.

**REFUNDS**

Students seeking refunds for credit classes shall be reimbursed according to the procedure printed in the current *Class Schedule*. Refund dates are posted for each class on the student’s class schedule at myACCESS.cod.edu.

**STUDENT FINANCIAL AID**

Financial aid programs strive to reduce financial barriers to a college education.

Most of the major financial aid programs are based on demonstrated financial need. Financial need is the difference between the resources of the student and/or family and the cost of attending college.

Financial aid is available to any eligible student enrolled in an eligible degree or certificate program. Grants, loans, on-campus employment and local scholarships are aid options available to help students meet their educational expenses.

All federal/state financial aid programs are subject to government review and control, and are subject to change.

The Free Application for Federal Student Aid (FAFSA) is available from high schools, public libraries, the College of DuPage regional centers and/or the Office of Student Financial Aid as well as on the web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). Students planning to attend College of DuPage in the fall may apply for financial aid in January of the same year. Those who apply and qualify before April 10 will be given first consideration. Others will be awarded funds according to the date of their completed financial aid file, financial need and fund availability.

In general, a student may qualify for most federal and state financial aid if the following conditions are met:

- The student must be enrolled at least half-time as a regular student in an eligible program.
- The student must be a U.S. citizen or an eligible non-citizen.
- The student must demonstrate financial need.
- The student must maintain satisfactory academic progress in his/her course of study.
- The student must not be in default on a Perkins, Stafford or PLUS/SLS loan.
- The student cannot owe a refund on a Pell Grant, a Supplemental Educational Opportunity Grant, or an Academic Competitiveness Grant.
- The student must have signed a Statement of Selective Service Compliance.

For additional information, contact the Student Financial Aid office, (630) 942-2251.

**Grants**

Federal Pell Grants help undergraduate students who have not earned a bachelor’s or professional degree from either a U.S. or foreign college to pay for their education. The Pell Grant is the largest federal student aid grant. For many students, these grants provide a “foundation” of financial aid, to which aid from other sources may be added. Pell Grants may be used to pay for tuition, books and indirect educational expenses. Pell Grants do not have to be paid back.

**Illinois Student Assistance Commission Monetary Award Program**

is a need-based state funded program designed to assist undergraduate students. The Monetary Award Program pays only in-district tuition charges. Monetary award amounts vary depending on the student’s demonstrated financial need.

**Federal Supplemental Educational Opportunity Grant (FSEOG)**

FSEOG is awarded to undergraduate students to help pay for educational expenses. Students can receive up to \$3,000 a year with priority given to students with exceptional financial need who receive the Pell Grant. FSEOG awards are also based on the availability of FSEOG funds. An FSEOG does not need to be repaid.

**Student-to-Student Grant (STS)**

Student-to-Student awards are offered to assist undergraduate students at state-supported colleges. Students must demonstrate exceptional financial need and must be concurrent Pell Grant recipients. Students who receive an FSEOG are not considered for the STS grant. STS grants are based on available funds and do not have to be repaid.

**Silas Purnell Illinois Incentive for Access (IIA) Grant**

The IIA Grant provides assistance for freshmen who have a zero Expected Family Contribution (EFC) based on their Federal Financial Aid application. The maximum grant is \$500 paid in disbursements of \$250 per term for two terms.

**Federal Work Study**

Federal Work-Study provides students with financial need the opportunity to earn money to assist them in meeting their education expenses. A variety of jobs are available to students both on and off campus.

**Loans**

The William D. Ford Federal Direct Loan Program, provided by the federal government, offers low-interest, long-term educational loans to qualified students.

This Program includes both subsidized and unsubsidized loans.

Subsidized loans are made to students who demonstrate financial need, as determined by a federal needs test. In contrast, eligibility for unsubsidized loans is not based on financial need.

The primary difference between the two loan types is that the borrower is responsible for paying the interest on the unsubsidized loan from the date the funds are disbursed. Interest on subsidized loans is paid by the federal government while the borrower is in school at least half-time, throughout the grace period and during periods of deferment.

**Loan Limits**

The following charts indicate the Federal Stafford loan limits that apply to a combination of both subsidized and unsubsidized loans at the time of this writing.

**Dependent Undergraduate Students**

Academic Level	Combined Subsidized and Unsubsidized Loan Limits*
Freshman .....	\$5,500
Sophomore .....	\$6,500

**Independent Undergraduate Students**

Academic Level	Combined Subsid. and Unsubsid. Loan Limits	Additional Unsubsidized Loan Limits	Total Limits
Freshman	\$3,500	\$6,000	\$9,500
Sophomore	\$4,500	\$6,000	\$10,500

\* These loan maximums will be lower for some undergraduate programs less than a year’s duration.

**Federal Direct PLUS Loan** (Parent Loans for Undergraduate Students, provided by the federal government, offers long-term educational loans to qualified persons. PLUS loans made for periods of enrollment beginning on or after July 1, 1987, have a variable interest rate. Under the PLUS Program a parent or legal guardian is eligible to borrow on behalf of dependent undergraduate students.

The maximum loan amount that a parent may borrow per academic level on behalf of each dependent student cannot exceed the cost of attendance minus any financial aid received.

A borrower is obligated to repay the full amount borrowed (including the insurance premium and any origination fees), plus interest. The repayment period begins on the day the loan is disbursed, and interest begins to accrue on that day. The first payment is due within 60 days of the disbursement date.

These loan programs are governed by federal regulations and are subject to change.

### **Veterans Financial Aid**

The Illinois Veterans Grant (IVG) is administered by the Illinois Student Assistance Commission (ISAC). IVG will pay for tuition and certain fees for qualified veterans attending ISAC-approved Illinois state universities and community colleges.

A qualified applicant shall be any member of the Armed Forces of the United States, a reserve component of the Armed Forces, or the Illinois National Guard who:

- served at least one year of federal active duty service and whose separation from such service has been characterized as honorable provided he/she
- was a resident of Illinois at the time of entering federal active duty service or within six months prior to entering the service; or
- was a student at an Illinois public university or community college at the time of entering federal active duty service;
- established or plans to establish Illinois residency within six months after leaving federal active duty service;
- is not in default on any student loan nor owes a refund of any state or federal grant; and
- is maintaining an acceptable grade point average as determined by the institution pursuant to a published policy.

Recipients may use their grant assistance up to a maximum of 120 eligibility units.

Applications for the Illinois Veterans Grant are available in the Office of Student Financial Aid.

Montgomery G.I. Bill – Federal Education Benefit  
Phone (630) 942-2444 Fax (630) 858-9390  
Records Office  
Student Resource Center (SRC), Room 2015

Applications and Certifications are processed through the:  
St. Louis Regional Processing Office  
Veteran Affairs Regional Office  
P.O. Box 66830  
St. Louis, MO 63166-6830  
Phone: (888) 442-4551

All benefit inquiries regarding entitlement should be directed to Veteran Affairs at (888) 442-4551 or the VA web site:  
[www.gibill.va.gov](http://www.gibill.va.gov).

Any documentation submitted directly to the St. Louis office should be copied and submitted to the certifying official in the Records office as well.

### **Covered Programs**

Chapter 30 Montgomery G.I. Bill for Active Duty  
Chapter 31 Veterans Vocational Rehabilitation which is handled in the Office of Financial Aid  
Chapter 32 Post-Vietnam Era Veterans Education Assistance (VEAP)  
Chapter 33 Post 9/11 Montgomery GI Bill  
Chapter 35 Survivors and Dependent Educational Assistance Program  
Chapter 1606 Montgomery G.I. Bill (Selected Reserve)  
Chapter 1607 Reserve Educational Assistance Program (REAP)

Required Documentation to be submitted with applications:

- Duty Discharge 214 (DD 214)
- Leave of Earning Statement (LES) or kicker
- Notice of Basic Eligibility (NOBE)

### **MIA/POW Scholarships**

Legal dependents of Illinois veterans who have been declared by the Department of Defense or Veterans Administration to be missing in action or prisoners of war (MIA/POW), or who died or were permanently disabled (with 100 percent disability) from service-connected causes are eligible for scholarships.

Children must begin using the scholarship before their 26th birthday; spouses must begin prior to 10 years from the effective date of a veteran's eligibility.

The scholarship will pay for in-district tuition and certain fees for four years of study at Illinois state-supported schools. Students have 12 years to complete a course of study from the initial term of study. Applicants should contact the Student Financial Aid office for an application form.

### **Illinois National Guard/Illinois Naval Militia Scholarships (ING/INM)**

are for active members of the guard or militia who have served at least one year. The scholarships pay in-district or out-of-district tuition and matriculation fees at state-supported schools. Benefits under this program will be terminated if the recipient ceases to be a member of the guard or militia. Eligible scholarship recipients are entitled to payment of tuition and fees for eight semesters or 12 quarters or the equivalent at Illinois state-controlled universities or public community colleges, for either full-time or part-time undergraduate or graduate study. Applications are available in the Office of Student Financial Aid.

### **Vocational Rehabilitation (Chapter 31)**

Veterans with service-connected disabilities of at least 20 percent and more as rated by the Veterans Administration may be eligible for in-district or out-of-district tuition and matriculation fees, books and supplies, and a monthly allotment depending on marital status, dependents and number of hours enrolled. A DD214 or separation paper is required. Apply to Veterans Administration, P.O. Box 8136, Chicago, IL 60680. For information, call (312) 353-4015.

### **Scholarships**

Scholarships may be difficult to find but are worthwhile. It is often necessary to search all possible sources to obtain financial aid to help pay for educational expenses.

Local scholarships are available from a number of private sources, including community agencies, foundations, banks, churches, civic and cultural groups, and area businesses. Local scholarship requirements vary depending on the donor. Eligibility requirements may include financial need, but may also consider academic achievement, honors, religious affiliation, community activities, artistic talent, athletic ability, career plans and special interests.

Detailed information about the scholarship requirements, awards and application process is available in the Office of Student Financial Aid and in the Financial Aid section of [www.cod.edu](http://www.cod.edu).

Scholarship information can be reviewed in the Scholarship Source Book available in the Advising Assistance Center,

Admissions and Information office, the College Library, the Center for Independent Learning, the Office of Student Financial Aid, other College offices and locations or the financial aid section of the College website at [www.cod.edu](http://www.cod.edu).

### **Institutional Employment Program**

A variety of on- and off-campus jobs are available to students at College of DuPage.

If you are enrolled for a minimum of six credit hours and have a cumulative GPA of 2.0, or if you are a new student currently

enrolled in 6 credit hours, you may apply for a job through the Human Resources office. Due to the immigration and naturalization reform act of 1986, you will be required to prove identity and eligibility for employment. If you are interested in an on-campus job, please contact the Human Resources office, Student Resource Center (SRC).







Academic Divisions, Programs,  
and Special Populations

## ACADEMIC AFFAIRS

### Adult Fast Track

Adult Fast Track (AFT) offers an accelerated approach to degree or certificate completion and is specifically designed to accommodate the needs of adults who lead busy lives and are seriously committed to continuing their education. AFT currently offers an Associate in Arts (AA) degree, an Associate in Applied Science (AAS) degree in Management and, beginning Fall 2011, select certificates. Students may also enroll in one or several AFT courses and apply the credits earned to all other COD degrees and certificate programs. AFT courses are offered in an eight-week format and students generally attend one regularly scheduled four-hour class session per week. Classes typically meet in the evenings from 6 to 9:50 p.m. and are currently offered at four convenient locations: the main campus in Glen Ellyn, and the Westmont, Addison, and Naperville Regional Centers. (Please note that all AFT classes may not be available at all locations.) Any student who is 21 years of age or older may enroll in AFT classes any time prior to the start date of a new eight-week session (as determined by his/her assigned registration date). For more information, call (630) 942-FAST or log on to [www.cod.edu/fast](http://www.cod.edu/fast).

### Field and Experiential Learning

Field and Experiential Learning courses include field-based, "hands-on" experiences that complement classroom curriculum. Courses take students out of the classroom to a variety of destinations locally, throughout the United States and around the world. For more information about Field and Experiential Learning, contact (630) 942-2356 or visit [www.cod.edu/ACADEMIC/field/field\\_Int.htm](http://www.cod.edu/ACADEMIC/field/field_Int.htm).

### Global Education/Study Abroad

Global Education serves the international and multicultural interest of the College through faculty and curriculum development, global organizations and cultural events. Study Abroad provides opportunities to earn college credit in a variety of disciplines while living and studying in countries around the world. For more information about Global Education/Study Abroad, contact (630) 942-2356 or visit [www.cod.edu/ACADEMIC/field/field\\_Int.htm](http://www.cod.edu/ACADEMIC/field/field_Int.htm).

### Honors Program

The College of DuPage (COD) Honors Program offers academically ambitious students courses that emphasize critical and creative thinking, providing them opportunities to delve deeper into course materials and gain insight through lively classroom discussions in an enriched learning environment. Our program is designed for new and current COD students who are highly motivated, enjoy learning and want to make the most of their college years and beyond.

Both full-time and part-time students may join the Honors Program at anytime. To become an honors student, a student must meet the following criteria:

College students must have completed no fewer than 8 semester college-level credits with a cumulative grade point average (GPA) of at least 3.2 on a 4.0 scale.

Students new to college must meet one of the following criteria: high school cumulative GPA of 3.5 on a 4.0 scale or ACT score of 25 or above.

New COD students who meet the Honors criteria should visit the Admissions office in the Student Resource Center (SRC), Room 2046 or call (630) 942-2380 to complete their registration. Current COD students who meet the Honors Program criteria should visit Counseling and Advising Services in SRC 2044 or call (630) 942-2259.

Tuition is not waived for Honors classes, however, COD grants a limited number of full-tuition scholarships to select students. Interested students may apply and compete for either the Presidential Scholars or Academic Scholars awards. For further information regarding these scholarships, please contact the Admissions office at (630) 942-2482.

Honors courses differ from regular courses by the type of work required and how the course is taught in terms of content depth, workload and pace. Honors courses promote advanced thinking skills, such as application and analysis. Most Honors courses fulfill the general education requirements that are part of the core curriculum for any major; some meet the elective credit hours needed to earn an associate's degree or complete a certificate program.

For a student to earn an Honors designation on their COD diploma/transcript, 15 credits of Honors courses must be earned which include completing an Honors seminar and/or Humanities 2210, Leadership Development, course. In addition, COD recognizes Honors Scholars each spring at the Celebration of Academic Excellence.

A COD Honors designation can open many doors for an Honors student who is continuing their education. Honors students enjoy a significant advantage when it comes to competing for transfer scholarships.

For further information, contact the Office of Academic Affairs at (630) 942-3249 or visit [www.cod.edu/honors](http://www.cod.edu/honors).

### Workforce Development

Workforce Development efforts at College of DuPage are very comprehensive and integrated into how the institution serves students and communities in District 502. It is directly tied to the mission of the College through guiding principles and institutional priorities related to access, affordability, workplace readiness, career and technical education, community development, and obtaining skills associated with cutting-edge technology. The College establishes and maintains positive working relationships and special partnerships with area employers, non-profit agencies, industry and trade associations, school districts, and colleges and universities. Workforce Development educational opportunities and support services are focused on the needs of unemployed/underemployed residents in the area as well as those seeking a new career which requires specialized short-term training, and/or a college certificate or degree. For more information about Workforce Development, contact the Office of Academic Affairs at (630) 942-3249.

Note: Individuals who receive financial assistance through the Workforce Investment Act (WIA) to attend college should contact the Office of Admissions at (630) 942-2482 or the COD staff located at the WorkNet DuPage Center, 2525 Cabot Drive in Lisle, (630) 955-2070 for more information and assistance.

## BUSINESS AND TECHNOLOGY DIVISION

Always aware of the current and emerging trends in business, industry and computer technology, the Business and Technology division prepares its students with the skills needed for success in the job market and with a solid academic base for continuing their education at a baccalaureate-granting institution.

Faculty program coordinators work closely with business and industry through advisory committees, creating state-of-the-art curricula and providing up-to-date information to students. Faculty have real-world experience that they bring to their classes, ensuring that students receive realistic career guidance and practical career skills.

Business programs include Accounting, Business/Management/Marketing, Paralegal Studies, Facilities Management, Culinary Arts, Hospitality Management, Travel and Meeting Planning, Real Estate and Business Law. Technology and information systems programs encompass Computer and Internetworking Technologies, Computer Information Systems, Office Technology Information, Library and Information Technology. Career programs focus on service and design industries, including Architecture; Automotive Service Technology; Construction Management; Cosmetology; Heating, Air Conditioning and Refrigeration; Interior Design; Horticulture; Fashion Merchandising and Design; Manufacturing, Welding, Electronics Technology and Electro-Mechanical Technology.

### **Center for Entrepreneurship**

The Center for Entrepreneurship includes:

- The Small Business Development Center assists entrepreneurs and small business managers in the areas of business management, marketing, finance and operations, and assistance in disaster preparedness, including business continuity and recovery planning.
- The Illinois Procurement Technical Assistance Center is designed for increasing business with the government, or improving the current level of government contracting.
- The Illinois International Trade Center offers free market research and consulting assistance to Illinois companies that are interested in exporting their products or services.

For more information about the Business and Technology Division, call (630) 942-2592 or visit [www.cod.edu/Academic/Bus\\_Tech/](http://www.cod.edu/Academic/Bus_Tech/).

### **CONTINUING EDUCATION AND EXTENDED LEARNING DIVISION**

Non-credit classes are offered on campus in Glen Ellyn and at more than 25 off-campus locations including COD Regional Centers, high schools, local businesses and other convenient locations. Contact the Continuing Education Division for more information at (630) 942-2208 or visit [www.cod.edu/conted](http://www.cod.edu/conted).

Continuing Education/Extended Learning is designed to identify and meet regional educational needs and special interests of non-degree program students. Continuing Education/Extended Learning conducts rapid research and program development to serve the ever evolving educational needs/interests of the region's citizens and businesses. Flexible schedules, varied pricing, and multiple delivery models allow Continuing Education/Extended Learning to increase accessibility to education whether for personal enrichment or professional development.

Particular attention is paid to the non-traditional student, with an emphasis on connecting learning experiences and exploring career pathways. Continuing Education and Extended Learning also seeks to be a platform of exchange, connecting individuals, professionals, companies and organizations in support of educational outcomes that improve the quality of life and regional economic vitality.

### **ADULT BASIC EDUCATION, GED PREPARATION, AND ESL**

#### **Adult Education Program**

Tuition-free Adult Education classes are funded by state and federal grants. Adult Education classes assist adults in becoming literate, in obtaining knowledge and skills necessary for employment and self-sufficiency, in obtaining educational skills necessary to become full partners in their children's education, and in completing their secondary school education. Eligible participants in the program are adults who are not enrolled or required to be enrolled in secondary school and who lack sufficient mastery of basic educational skills to enable the individuals to function effectively in society; do not have a secondary school diploma or its recognized equivalent and have achieved an equivalent level of education; or who are unable to speak, read or write the English language.

#### **Adult Literacy and Basic Education**

Tuition-free Adult Basic Education (ABE) courses serve adults who do not have a high school diploma and who need to develop basic skills reading, spelling, grammar, writing, math or problem-solving skills. Adults reading below sixth-grade level are advised to begin their GED Test preparation here. For more information, call (630) 942-3697.

#### **U.S. Citizenship**

This tuition-free course serves adults who are preparing to take the test for U.S. citizenship. It provides an overview of American

history; federal, state and local government; U.S. customs, institutions, citizenship rights and responsibilities; and the Illinois and U.S. Constitutions. Instruction is restricted to English. For more information, call (630) 942-3697.

#### **Pre-GED Preparation**

Tuition-free Adult Basic Education (ABE) courses serve adults who do not have a U.S. high school diploma and who need to refine their skills in reading, spelling, grammar, writing, math or problem solving. Many adults begin their preparation for the GED Test in the Pre-GED program. Recommended for adults reading at a 6.0 to 8.9 level. For more information, call (630) 942-3697.

#### **GED Preparation**

Tuition-free General Education Development courses serve adults who lack a U.S. high school diploma, have a 9.0 reading level and need to prepare to take the GED test to earn a High School Equivalency Certificate. Instruction is offered in the six areas covered on the GED Test: Reading, Writing, Mathematics, Science, Social Studies, and the U.S. and Illinois Constitutions. Instruction also prepares students to write the required essay. Instruction is available in English or Spanish. Recommended for students reading at least at a 9.0 level. For more information, call (630) 942-3697.

#### **Online GED Preparation**

Tuition-free Illinois State authorized GED-I is used to help students prepare for the GED test via computer under the guidance of a College of DuPage instructor. To qualify for this online course, a student must score 9.0 in reading and 8.0 in math on the required placement test.

#### **Adult ESL**

Tuition-free Adult ESL classes serve adults whose first or primary language is not English and who wish to understand, speak, read and write English for everyday use. Beginning through advanced-level courses are offered at locations throughout the district. This program helps adults engage more fully in the community and the workplace by improving their English skills. For more information, call (630) 942-3697.

#### **ESL Family Literacy**

Tuition-free ESL Family Literacy is an integrated program of instruction that helps non-English language background parents learn the English language and other skills needed to become primary teachers for their children and economically self-sufficient. For more information, call (630) 942-3697.

#### **Adult Enrichment**

These courses are designed to meet a wide variety of educational needs, life enhancement and recreation interests through Adult Continuing Education, Online Ed2Go, Daytime Classes, Older Adult Institute, Adult Basic Education/GED/English as a Second Language, and Test Prep.

Examples of courses offered include:

Acting	Knitting
Art	Languages
Automobile	Makeup
Beverages	Massage
Computers	Music
Cooking	Photography
Dance	Professional Education
Film	Religion
Finance	Sewing
Fitness	Test Prep
Gardening	Travel
Golf	Tutoring
Homes	Woodworking
Humanities	Writing
Jewelry	



**Early Childhood Education and Care Center**

The Early Childhood Education and Care Center at College of DuPage provides educational experiences for students who are pursuing coursework in Early Childhood Education, Education, Psychology, or Speech and Language Pathology. Students may observe or interact with young children in the Center dependent on their class assignments. The classrooms are staffed by teachers who provide curriculum supportive of the developmental needs of children. The Center offers full-time toddler, preschool and kindergarten classes and part-time preschool classes, scheduled either all day (7 a.m. to 6 p.m.) or part day (8:45 to 11:15 a.m., Monday to Friday, or 1:15 to 3:45 p.m., Tuesday to Friday) and provides children time to play and learn in a class prepared to enhance their development.

Learning experiences and discipline techniques are appropriate for the age and development of each child. All classes provide play-based curriculum planned to foster the physical, social, emotional and intellectual development of each child.

For more information about either enrolling of a child in the Early Childhood Education and Care Center or using the Center as an observation site, call (630) 942-4223.

**COD Business Solutions – Career and Professional Development**

Business Solutions meets the evolving needs of regional employers and employees. Business Solutions offers affordable, customized contract training, healthcare certificate programs, Emergency Planning and First Responder courses, online Ed2Go and Gatlin certificates, Test Prep, as well as the Suburban Law Enforcement Academy.

**Older Adult Institute**

The Older Adult Institute (OAI) is focused on continuing education for persons 55 years of age and older who seek intellectual stimulation. OAI provides a wide range of educational opportunities for the mature learner to satisfy curiosity, foster community and to support lifelong learning. Courses are offered at the Glen Ellyn campus and at several other convenient locations.

**Suburban Law Enforcement Academy (SLEA)**

The College of DuPage is proud to be the home of one of only six accredited law enforcement academies in Illinois. The Suburban Law Enforcement Academy is comprised of the Basic Academy and the Law Enforcement Continuing Education program. The Basic Academy conducts several 11-week cycles of instruction each year to train new recruits to become law enforcement professionals and also earn college credit. The Continuing Education program within the Suburban Law Enforcement Academy delivers a wide variety of non-credit law enforcement training opportunities to qualified law enforcement veterans throughout the district and beyond. For more information about Suburban Law Enforcement Academy programs and courses, please call (630) 942-2677 or visit [www.cod.edu/slea](http://www.cod.edu/slea).

**Youth Education**

The Youth Academy offers a year-round, wide spectrum of enrichment and reinforcement opportunities to children and youth from 15 months through high school. The Youth Academy includes:

- The Early Childhood Education Center (Daycare and Kindergarten)
- Elementary, Middle School and High School Enrichment
- Explorer Camp
- Home Schooling
- Teen Extreme
- High School Credit (Advancement and Recovery)
- Talent Search
- Test Prep
- Tutoring

**HEALTH AND SCIENCES DIVISION**

The Health and Sciences Division is comprised of five sub-divisions: Health and Biological Sciences, Nursing, Math and Physical Sciences, Physical Education, and Social and Behavioral Sciences. Information about each area is provided below.

**Health and Biological Sciences**

Students in the Health Sciences and Biological Sciences sub-division are prepared for direct entry into professional, semiprofessional, technical and skilled employment. Some students, however, elect to continue their education through articulated capstone programs at baccalaureate-granting colleges and universities either at the time of graduation or after several years of clinical practice.

Knowledge and skill requirements are constantly changing in the health and sciences fields. The Health and Sciences Division keeps pace with these changes through an expert faculty with work experience and professional degrees, up-to-date technological resources, and the guidance of advisory committees comprised of representatives from business and industry, health and public service agencies, and institutions. Through these mechanisms the division strives to advise students about current job requirements and labor market conditions, facilitate employment, and meet the diverse manpower needs of the College district.

Located in a state-of-the-art facility, the Health and Science Center houses classrooms and laboratories. Supervised clinical health care experiences are provided at area hospitals and clinics. Due to the prerequisite education required, as well as limited technological and clinical resource availability, the College has special admissions processes for the following health care programs: Dental Hygiene, Health Information Technology, all Diagnostic Medical Imaging programs (Vascular and General Ultrasound, Nuclear Medicine, Radiologic Technology, Radiation Therapy, Mammography, Medical Assistant, Physical Therapist Assistant, Respiratory Care, Speech/Language Pathology Assistant and Surgical Technology. Candidates for these programs must submit applications with an application fee, and meet admissions criteria beyond that required for enrollment at College of DuPage. Group advising sessions are offered regularly for the majority of these programs. For information about admission into the various Health Sciences and Nursing programs, contact the Admissions office, (630) 942-2380.





Other health science career programs such as Emergency Medical Technician, Paramedic, Long-Term Care Administration, Phlebotomy/EKG, and Physician Office Coding and Billing are open enrollment and, while do not require separate admission, do require verification of program requirements prior to admission. Additional programming in other areas is currently under consideration.

The biological sciences in this sub-division include Anatomy/Physiology, Biology, Botany, Chemistry, Microbiology, and Zoology. These disciplines examine the components of the living world and their interactions with the physical world. Applications of the life sciences to the environment, the ecosystem and living organisms are an integral part of these courses. Chemistry is the science that deals with the composition, structure, and properties of substances and the changes they undergo. For more information, call (630) 942-8331 or visit [www.cod.edu/hsadmissions](http://www.cod.edu/hsadmissions).

### **Nursing**

Students in the Nursing Department sub-division are prepared to take certifying exams and enter a career in nursing as a Registered Nurse, Licensed Practical Nurse or Certified Nursing Assistant. Additionally, opportunities exist for continued education both at College of DuPage and through articulated capstone programs at baccalaureate-granting colleges and universities either at the time of graduation or after several years of clinical practice.

Knowledge and skill requirements are constantly changing in the health science fields. The Nursing Department keeps pace with these changes through an expert faculty with work experience and professional degrees, up-to-date technological resources, and the guidance of advisory committees comprised of representatives from business and industry, health and public service agencies, and institutions. Through these mechanisms the division strives to advise students about current job requirements and labor market conditions, facilitate employment, and meet the diverse manpower needs of the College district.

The Nursing program is located in the Health and Science Center, a state-of-the-art facility that houses classrooms and laboratories. Supervised clinical health care experiences are provided at area hospitals, nursing homes and clinics. Due to the prerequisite education required, as well as limited technological and clinical resource availability, the College has special admissions processes for the Nursing Department programs. These include the Practical Nursing (LPN), Associate Degree Nursing (RN), and Certified Nursing Assistant (CNA) programs. Candidates for these programs must submit applications with an application fee, and meet admission criteria beyond that required for enrollment at College of DuPage. Group advising sessions are offered regularly for the majority of these programs. For information about admission into the various Health Sciences and Nursing programs, contact the Admissions office, (630) 942-2380.

Also, as a part of the admission process and/or prior to placement in the clinical setting, the student must complete select clinical participation requirements. These may include but are not limited to: CPR, Criminal Background checks, and meeting of health requirements, including drug screening.

For more information please check out these web pages:

- Nursing Department  
<http://home.cod.edu/academics/programsDegrees/nursing>
- Associate Degree Nursing  
<http://home.cod.edu/academics/programsdegrees/nursing/adn.aspx>
- Practical Nursing  
<http://home.cod.edu/academics/programsdegrees/nursing/lpn.aspx>
- Certified Nursing Assistant  
<http://home.cod.edu/academics/programsdegrees/nursing/cna.aspx>

### **Math and Physical Sciences**

The study of math provides the tools that enable an understanding of quantitative relationships found in business and technology, as well as natural and social sciences. Engineering combines the principles of sciences and math with the principles of problem solving to provide advances in technology. Physical science courses include physics and earth, space and atmospheric sciences offerings designed to teach natural laws and theories governing interactions of particles from the infinitesimally small to the astronomically large. The applications of the laws of nature to human endeavor continue to astonish learners. For more information, call (630) 942-2010 or visit [home.cod.edu/academics/healthandsciences/math](http://home.cod.edu/academics/healthandsciences/math)

### **Physical Education**

Physical Education prepares students who intend to study kinesiology, exercise science, sports, and teaching professions, as well as students who wish to take elective credit and obtain the knowledge, skills, and practical fitness experience that will enable them to achieve and maintain a healthy and active lifestyle. Traditional and non-traditional students of all ages take classes through Physical Education to improve their personal wellness and learn how physical fitness, exercise, recreational and sports activities contribute to lifetime health and wellness. The Fitness Instructor certificate prepares students for successful completion of national certifying fitness instructor exams and entry-level positions in the health and fitness profession. For more information, call (630) 942-2364 or visit [www.cod.edu/studlife/physed](http://www.cod.edu/studlife/physed)

### **Social and Behavioral Sciences**

Faculty in the social and behavioral sciences seek to cultivate in students a broad perspective on human behavior, our cultural heritage and our relationships with others, our social institutions, and the environment. Eleven subject areas are included: Anthropology, Criminal Justice, Economics, Early Childhood Education and Care, Education, Geography, Human Services, Political Science, Psychology, Social Science and Sociology. In addition to imparting knowledge of academic disciplines, the faculty challenges the learner to critically examine values, ideologies, social structures, political arrangements and accepted assumptions. Degrees and certificates are offered in the disciplines of Criminal Justice, Early Childhood Education and Care, and Human Services. For more information, call (630) 942-2010 or visit [home.cod.edu/academics/healthandsciences/science](http://home.cod.edu/academics/healthandsciences/science)

## **LEARNING RESOURCES DIVISION**

The Learning Resources Division encompasses a number of academic support departments, including the Library, the Centers for Independent Learning, the Online College, the Academic Support Center and the Testing Center.

### **Academic Support Center**

The Academic Support Center offers student support services in the areas of mathematics, writing, speech, reading and tutoring assistance. The services are free of charge and are meant to assist students who may be having difficulty completing their coursework in one or more classes. The center is staffed with college faculty and peer tutors. Students may access the services by scheduled appointments or walk-in. For questions, call (630) 942-3941.

### **COD Online (Internet Courses)**

Internet or online courses are designed to offer students a flexible alternative to traditional classes, which eliminates the constraints of fixed class schedules and locations. Although Internet courses are flexible, instructors expect regular participation, computer literacy and student-initiated contact. Some courses require a visit to a testing location for proctored exams. Internet courses contain the same content as the traditional classroom versions and are recorded on the student's transcript in the same manner. Courses needed to complete an associate's degree as well as several



certificates are available online. Students should visit the COD Online website at [www.cod.edu/online](http://www.cod.edu/online) for a current course list and specific technology requirements for Internet-delivered courses.

### Learning Commons

The Learning Commons provides Flexible Learning (Flex) courses, Testing Services, Tutoring Services, COD Library Resources, technological access and support as well as Reading, Writing and Math Assistance for students. The off-campus Learning Commons sites at the Bloomingdale, Naperville, and Westmont Centers provide digital library resources, a wide range of support services for students, learning software and technical assistance. Students are able to meet with an instructor, conduct research, obtain reference course assistance, tutorial assistance, write papers, take tests, work independently or collaborate in small groups on projects in a one-stop shopping mode.

### Flexible Learning (Flex)/Centers for Independent Learning (CIL)

Students may enroll in flexible, self-paced courses that fit their busy schedules and their lifestyles. Flexible Learning courses cover the same content and instructional goals as the classroom version and carry the full credit course listed in this *Catalog*. The content is delivered via printed materials, audiovisual media and the Internet. Course offerings include numerous courses in subject areas such as English, Communications, Foreign Languages, Health, Social and Behavioral Sciences, Mathematics, and Natural Sciences.

These courses are listed in the *Class Schedule* as Flexible Learning Courses. These telecourse and appointment-based courses are offered through the Center for Independent Learning on campus in Glen Ellyn and at three off-campus Learning Commons which are located at the Bloomingdale, Naperville and Westmont Regional Centers.

The Center for Independent Learning and the Learning Commons are open day, evening and weekend hours at the following locations:

Center for Independent Learning — Glen Ellyn  
425 Fawell Blvd.  
Glen Ellyn, IL 60137-6599  
(630) 942-2131

Learning Commons — Bloomingdale  
Bloomingdale Regional Center  
162 S. Bloomingdale Road  
Bloomingdale, IL 60108-1435  
(630) 942-4900

Learning Commons — Naperville  
Naperville Regional Center  
1223 Rickert Drive  
Naperville, IL 60540-0954  
(630) 942-4750

Learning Commons — Westmont  
Westmont Regional Center  
650 Pasquinelli Drive  
Westmont, IL 60559-1252  
(630) 942-4850

### Information Literacy Instruction Program

The mission of the Library's Information Literacy Instruction Program is to teach students to be effective users and producers of ideas and information. The program provides students with varied opportunities for acquiring the needed knowledge and skills to become information literate. The program is administered through class sessions with library faculty, free workshops, and the library's Research 101 online tutorial <http://www.cod.edu/library/research/research101/>

### Library

The Library serves on- and off-campus programs at College of DuPage, providing teaching and learning materials to support and enrich students' educational experience. The 100,000-square-foot facility in the Student Resource Center on the Glen Ellyn campus provides comfortable seating, individual study space, group study rooms, public computers and AV equipment for use by students. The Library houses a wide variety of informational resources for students, faculty, staff and community members. These materials include more than 245,000 books, 500 periodicals, and many non-print materials such as DVDs, music CDs and audiobooks.

The Library's website, [www.cod.edu/library](http://www.cod.edu/library), is the gateway to a wide variety of library services and research resources. An online catalog provides easy look-up of library materials. Also available are many specialized research databases with factual information and references to journal, magazine and newspaper articles, many of them full text. These, too, may be accessed remotely by registered Library users. Every public computer in the Library also has full Internet access and a variety of applications such as word processing, spreadsheet and presentation software.

Library services include the circulation of print and non-print materials, reference service, library and information literacy instruction, interlibrary loan and access to computers. Specialized collections include the College and Career Information Center (CCIC) and the Natural Sciences Center, as well as a large and varied collection of historical and fine art prints displayed throughout the facility. The Circulation Desk provides borrowers' services, and checks out audiovisual equipment to students, faculty and staff. Classroom delivery of equipment is provided upon the request of the instructor. For more information about the Library and its services, call (630) 942-2350, or visit [www.cod.edu/library](http://www.cod.edu/library).

## Testing Center

The Testing Center serves community members and students. Various tests and inventories (including COMPASS Placement Tests, Credit by Demonstrated Competence, and other tests) are available to assist individuals in satisfying course, College or program requirements; identifying academic strengths and weaknesses; clarifying interests, values and personality traits; and completing a specialized testing need. For more information, please contact (630) 942-2400 or visit [www.cod.edu/testing/testing\\_center.htm](http://www.cod.edu/testing/testing_center.htm).

## GED Testing

College of DuPage is the official site for administration of the General Educational Development (GED) Tests for DuPage County residents. GED Testing offers adults who have not completed high school the opportunity to take the GED Tests and earn the Illinois High School Equivalency Certificate from the State of Illinois. The GED Tests are offered on a regular basis in English, Spanish and French. No formal preparation is required to take the GED Tests, however; individuals may take GED preparation courses through the College to prepare for the tests. For registration information, guidelines and testing schedules, contact the GED Testing office, (630) 942-2852. For information about GED preparation courses prior to taking the GED Tests, contact Continuing Education at (630) 942-2562 or visit [www.cod.edu/Academic/ABE\\_GED/](http://www.cod.edu/Academic/ABE_GED/).

## LIBERAL ARTS DIVISION

The Liberal Arts Division is comprised of three subdivisions: Communications, Fine and Applied Arts, and Humanities.

### Communications

Communications includes studies in English Composition, Developmental Reading and Writing, Creative Writing, Technical Writing, Linguistics, Literature, Journalism and Speech. These disciplines provide an educational framework within which students develop their abilities to think independently and to express themselves clearly, effectively and creatively. Instructors focus on the skills of communications and the contexts in which human expression occurs. Many of the courses in Communications satisfy the general education requirements for graduation and can be transferred to other institutions.

Students in Communications are provided educational opportunities to:

- develop effective listening, reading, speaking and writing practices;
- develop skills in acquiring, analyzing, synthesizing and evaluating information and ideas;
- develop creative expression and aesthetic insight;
- read closely and analyze texts thoughtfully;
- enhance awareness of and respect for personal, social and cultural diversity;
- consider multiple viewpoints and perspectives in forums requiring communication;
- explore various styles and genres and cultural contexts for ideas and texts;
- apply various tools and technologies to communicate effectively.

Communications faculty sponsor participatory activities, including the student feature magazine, the student newspaper, the student literary magazine and the Forensics team. For more information, call (630) 942-2047 or visit <http://home.cod.edu/academics/liberalArts>.

The Academic ESL program offers upper-level, tuition-based courses to prepare individuals for study at U.S. colleges and for professional employment in the United States. This program offers courses in listening and speaking, reading, writing and grammar. Language and culture courses focus on cross-cultural communication. For more information, call (630) 942-2047 or visit <http://home.cod.edu/academics/liberalArts>.

The English Language Institute (ELI) is an intensive ESL program for individuals who want or need to improve their English quickly for academic or professional purposes. The tuition-based program requires full-time study (12 credit hours) in integrated skills courses focusing on listening, speaking, reading, vocabulary, writing and grammar. Language and culture courses focus on cross-cultural communication. Community residents, international and foreign-born professionals, and F-1 International Students are eligible. Language assessment is required. For more information or to apply for admission, call (630) 942-2047 or visit <http://home.cod.edu/academics/liberalArts>.

### Fine and Applied Arts

Fine and Applied Arts encompass a broad range of arts courses and programs that provide students with an opportunity to create, perform, study and participate in the arts. Disciplines and programs in Fine and Applied Arts include transfer courses in the Fine Arts (Drawing, Painting, Computer Art, Ceramics, Jewelry, Printmaking, Sculpture), Music and Music Technology, Applied Music, and Theater. Many of the courses in the Fine Arts satisfy the general education requirement for graduation and can be transferred to other institutions. The applied programs include transfer and career and technical education training in Graphic Design, Graphic Arts Technology, Motion Picture/Television, and Photography. Both associate's degrees and certificates are offered in the applied arts programs.

Students in the Fine and Applied Arts are provided opportunities to:

- develop original ideas, tap creative impulses and create works of art;
- develop an appreciation for and insights into the visual and performing arts;
- develop analytical and evaluative skills and the ability to articulate critical insights into the arts;
- participate in theatrical and musical performances;
- study practical, commercial, historical, social and cultural contexts for the arts;
- study and employ appropriate tools, technologies and supplies in the creation of works of art;
- apply skills, talents and creative abilities, in public and practical settings;
- produce works of art for performance and visual display.

The faculty members in the Fine and Applied Arts are working artists and performers themselves, and those in the Applied Arts have industry experience. The faculty is committed to providing students with a full understanding of the arts and opportunities to participate in and perform in a broad range of student performance groups, including groups in music and theater, and in exhibiting work in the Student Art Gallery and other venues on and off-campus. For more information about the Fine and Applied Arts, call (630) 942-2048 or visit <http://home.cod.edu/academics/liberalArts>.

### Humanities

Humanities includes subject areas that address the question of what it means to be human. Subject areas in the Humanities include History, Humanities, Languages, Philosophy and Religious Studies. The study of Humanities frees students to think beyond personal and cultural boundaries and to consider informed actions that have constructive outcomes for the future. Many of the courses in Humanities satisfy the general education requirements for graduation and can be transferred to other institutions.

Students in Humanities are provided educational opportunities to:

- develop skills in analysis, synthesis, and evaluation of readings and writings related to the Humanities;
- develop an understanding of history, philosophy, religious studies, the arts and cultural contexts;
- develop an awareness of human spiritual, intellectual, social and political aspirations;



- develop insight into various cultures through the study of history, world languages, the arts, philosophical and religious texts;
- develop creative and critical thinking skills.

Humanities faculty are committed to providing high quality educational and intellectual opportunities that challenge students to reflect critically on themselves and the world around them.

For specific information about History, Humanities, Languages, Philosophy and Religious Studies, call (630) 942-2047 or visit <http://home.cod.edu/academics/liberalArts>.

#### **McAninch Arts Center**

The McAninch Arts Center (MAC) at College of DuPage is a state-of-the-art facility, housing three performance spaces, an art gallery and classrooms for the College's academic programming. This unique facility has presented theater, music, dance and visual arts to more than 1.5 million people since its opening in 1986 and last year welcomed more than 75,000 patrons from the greater Chicago area to more than 230 performances.

The MAC offers free parking and group discounts and is home to Buffalo Theatre Ensemble, and the New Philharmonic. The result is a collection of touring, resident and student ensembles that foster enlightened education and encourage artistic expression, promote a lasting relationship between people and art, and enrich the cultural vitality of the community.

The MAC's extensive community outreach program includes pre-performance lectures, classes with visiting artists and the SchoolStage program which provides area K-12 students with an interactive, educational arts experience. These and other efforts to increase community access to arts earned the MAC the Illinois Arts Council's Partners in Excellence designation which recognizes 40 of the most significant cultural institutions in the state. For more information, call (630) 942-3008 or visit [www.atthemac.org](http://www.atthemac.org).







## Academic Policies and Procedures

## EARNING COLLEGE CREDIT

### Credits Defined

College of DuPage uses the semester system for awarding college credit. The academic year is divided into two semesters of approximately 16 weeks each and a summer term. The number of semester hours of credit granted for each course varies. (The "Course Descriptions" section of this *Catalog* lists the value of each course in credit hours.) A student must be enrolled in a minimum of 12 hours to be considered full-time. Half-time status is 6 to 11 semester credits. In addition to standard semesters, the College also offers some terms that vary in length from the standard and may affect determination of status.

### Class Standing

A student who has earned fewer than 30 semester credits is considered a freshman. A student with 30 or more hours has sophomore standing.

### Semester Grades, Types of Grades and Grade Points

Final course grades may be accessed online at [www.myaccess.cod.edu](http://www.myaccess.cod.edu).

The following abbreviations appear on student grade records (transcripts):

- A High degree of excellence in achievement
- B Better than average achievement
- C Average/acceptable achievement
- D Minimum standard of achievement
- F Failure to complete minimum requirements
- S Satisfactory
- I Incomplete
- W Withdrawal
- X Audit

The following grade point values are assigned to letter grades:

- A 4 for each semester hour of credit
- B 3 for each semester hour of credit
- C 2 for each semester hour of credit
- D 1 for each semester hour of credit
- F 0 for each semester hour of credit

Grades of "S," "I," "R," "W" and "X," and grades for courses numbered below 1000 are not included in the official grade point average (GPA), but will be shown on a student's transcript.

### Satisfactory/Fail (S/F) Grade Option

Certain classes, as identified in the College of DuPage *Class Schedule*, offer only "Satisfactory/Fail" grades. In all other classes, the student and the instructor may choose "Satisfactory/Fail" grading. The instructor retains the prerogative to determine whether the "Satisfactory/Fail" option is applicable to the course. It is the responsibility of the instructor to set deadlines for students' grade option decisions and communicate these deadlines to the students during the first week of instruction. All students desiring the "Satisfactory/Fail" option must sign a contract with the instructor confirming the use of the "Satisfactory/Fail" grading option contract.

The contract must be submitted to the Registration office no later than one week prior to the end of the class. The "Satisfactory/Fail" contract cannot be revoked after the grade has been posted. The satisfactory or "S" grade will not be computed in the student's GPA; the fail or "F" grade will be computed. Credits earned in the Communication, Physical/Life Sciences, Mathematics, Humanities/Fine Arts and Social and Behavioral Sciences categories may NOT be graded with a satisfactory/fail grade if the student is seeking any degree other than the Associate in General Studies degree or the Associate in Applied Science degree. Only 12 hours of "S" credit may apply toward any degree.

### Grade of Incomplete

The instructor of record may give an incomplete or "I" grade when a student has been unable to complete the course within the prescribed time due to unforeseen circumstances. The student is responsible for contacting the instructor of record or, when the instructor of record is no longer employed at the College, the appropriate dean regarding course completion. Course work must be completed within the time limits prescribed by the instructor but not to exceed twelve (12) months from the end of the term in which the "I" grade was assigned. The "I" grade may be changed within the time limit prescribed by the instructor of record. If the "I" has not been changed by the instructor of record at the end of the twelve (12) month period, the "I" will automatically change to an "F." During the time the "I" is on the student's record, it will not be calculated into the cumulative grade point average.

## CREDIT BY DEMONSTRATED COMPETENCE

The College of DuPage Credit by Demonstrated Competence program offers students the opportunity to demonstrate their learning achievements outside the traditional college classroom and earn college credit for competencies equivalent to existing college courses. Students may complete 42 of the 64 semester credits needed toward an associate's degree through this approach. Credit can be earned by the following methods: Credit by Proficiency or Articulated Credit.

### Credit Earned by Proficiency

This method offers an opportunity to gain college credit for knowledge that students have acquired in an occupation or educational environment outside of college or through other experiences that are related to specific College of DuPage courses. Through this process, students who can demonstrate that they have mastered the body of knowledge normally needed to complete a COD course can gain college credit without taking the course. Proficiency credit can be earned through the following methods:

#### 1. Credit by Proficiency through Established Examinations

Several established exams developed by COD Faculty or National Exams are available on a walk-in basis.

#### Credit by National Examinations

Offers a student an opportunity to demonstrate knowledge in a particular subject area by submitting scores from the nationally recognized Advanced Placement Program (AP) or the College-Level Examination Program (CLEP).

##### a. Advanced Placement Program

The Advanced Placement Program (AP) is a program of college courses offered in high school in cooperation with the College Board of Princeton, NJ. College of DuPage accepts credit for course areas in which a student has completed an Advanced Placement Program course examination with an acceptable score. The amount of credit accepted for each Advanced Placement Program course examination is determined by its College of DuPage equivalent.

##### b. College-Level Examination Program

College of DuPage is a national test center for the College-Level Examination Program (CLEP). This national program is established by the Educational Testing Service and provides college-level, content-specific tests given to determine competency. All CLEP tests are computer-based.

CLEP exams are given by appointment. The fee for taking each CLEP Examination is determined by the College Board. Registration materials, fee information and a list of CLEP exams accepted at COD are available from the Testing Center office, (630) 942-2401.



## 2. Credit by Proficiency through an Instructor

If an established exam does not exist, contact the appropriate division office for permission to gain credit through proficiency. Procedures for earning credit are available from the Testing Center office.

Contact the Testing Center office, (630) 942-2401, for fee information and a list of exams.

### Credit through Articulation

College of DuPage has entered into articulation agreements with some district high schools for classes that are equivalent to college classes. The agreements stipulate that when agreed-upon conditions are met, a student may apply for and receive credit at College of DuPage for these high school classes. The purpose of this cooperative effort is to eliminate needless duplication of content, save the student time and money, and to provide better continuity between high school and college curricula.

To obtain articulated credit, a student will follow application procedures included on the Application for Articulated Credit form available in the Records office. Application for the credit must be filed within two years of high school graduation. The student is responsible for an official transcript being sent to the College of DuPage Records office directly from the high school. Articulated credit for a particular high school course will be recorded on a student's transcript only after the student has successfully completed at least one credit course at College of DuPage.

### Grade Review and Appeal Procedure (Board Policy 20-165)

College of DuPage recognizes that the responsibility for grading rests solely with faculty. This grade review procedure is available for a student to review a final course grade alleged to be arbitrary and capricious. Before requesting a formal review, a student is urged to

make every effort to resolve the grievance informally with the instructor who issued the final grade. The student may terminate the formal procedure at any point, but when the procedure reaches full closure, the student must abide by the final disposition of the appeal and will be precluded from seeking review of the matter under any other college procedure. The Grade Review Procedure is fully outlined in Administrative Procedure 20-165.

A student may initiate a formal grade review if it is felt an arbitrary or capricious grade has been given, which means:

- a. The assignment of a course grade to a student on some basis other than performance in the course; or
- b. The assignment of a course grade to a student by resorting to unreasonable standards different from those which were applied to other students in the class; or
- c. The assignment of a course grade by a substantial, unreasonable and unannounced departure from the instructor's previously articulated standards. (factual and computational errors are included in this definition.)

#### Step 1. Student Consultation with Instructor and/or Dean/Supervisor

- a. Contact the instructor to discuss the grade and to work toward a mutual understanding of the basis and procedure used to determine the final grade must be initiated by the student within forty-five (45) calendar days of the last day of the academic term for which the grade was assigned. If the instructor is not available, the student must register the request for the review with the instructor's dean/supervisor.
- b. If the problem is not resolved between the student and the instructor at Step 1, Step 2 must be initiated by the student within ten (10) days following the meeting with the instructor or dean/supervisor.



**Step 2. Calling of Grade Review Committee**

- a. Student requests that the dean/supervisor initiate a formal grade review by the division's standing Grade Review Committee. Each division will determine its unit process for establishing its committee, but all committees will consist of three voting faculty members from within the division and will exclude the instructor who issued the grade under review.
- b. Student receives a Grade Review Form from the dean/supervisor and completes it in writing.
- c. Student submits the completed Grade Review Form to the dean/supervisor within ten (10) days of receiving the form.
- d. The dean/supervisor sends the instructor a copy of the student's completed Grade Review Form within five (5) days, to be returned with a written response from the instructor within ten (10) days after receiving the form from the dean/supervisor.
- e. The dean/supervisor will call the Grade Review Committee and the committee will meet within ten (10) days of receipt of the completed Grade Review Form from the instructor to determine whether to dismiss or hear the case.
- f. The Grade Review Committee will dismiss the appeal if:
  1. The student has submitted the same, or substantially the same, complaint to any other formal grievance procedure; or
  2. The allegations, even if true, would not constitute arbitrary and capricious grading; or
  3. The appeal was not timely; or
  4. The student has not conferred with the instructor or with the instructor's dean/supervisor in accordance with Step 1 of these procedural steps.
- g. If the request for review is not dismissed, Step 3 follows.

**Step 3. Actions of the Grade Review Committee**

- a. The Grade Review Committee will submit a copy of the student's written statement to the instructor with a request for a written reply within ten (10) working days if this step has not been taken prior to the convening of the committee. (See Step 2, d. above) If it then appears that the dispute may be resolved without recourse to the procedures specified in Step 3: b., which follows, the committee will attempt to arrange a mutually agreeable solution between the student and instructor.
- b. If a mutually agreeable solution is not achieved, the Grade Review Committee will proceed to hold an informal, non-adversarial, fact-finding meeting concerning the allegations. Both the student and the instructor will be entitled to be present throughout this meeting and to present any relevant evidence. Neither the student nor the instructor will be accompanied by an advocate or representative. This meeting will not be recorded by any parties and will not be open to the public.
- c. The Grade Review Committee will deliberate privately at the close of the fact-finding meeting. If a majority of the committee members finds the allegation supported by any clear and convincing evidence, the committee members will take any action which they feel would bring about substantial justice and includes, but is not limited to:
  1. Directing the instructor to re-evaluate the student's work.
  2. Directing the instructor to administer a new final examination or paper in the course.
  3. Directing the cancellation of the student's registration in the course.
  4. Directing the award of a grade of "pass" in the course, except that such a remedy should be used only if no other reasonable alternative is available.

- d. The Grade Review Committee is not authorized to award a letter grade or to reprimand or otherwise take disciplinary action against the instructor. The decision of the committee will be final and will be promptly reported in writing to the parties. The dean/supervisor will be responsible for implementing the decision of the Grade Review Committee.

**COURSE WITHDRAWALS AND SPECIALIZED REGISTRATION****Withdrawal from a Class**

Students are encouraged to consult directly with the instructor when considering a course withdrawal. Students will not receive a grade when withdrawing during the 100 percent refund period. Students may withdraw up until the "Last Day to Withdraw without Instructor Permit" (refer to the Registration Calendar) through myACCESS or in person at the Registration office, Student Resource Center (SRC), Room 2048. After the "Last Day to Withdraw without Instructor Permit" date (refer to the Registration Calendar), a student may withdraw only with an instructor's written permission.

**Administrative Withdrawal**

Students not actively pursuing the completion of course objectives may be withdrawn from the class by the instructor. Instructors of courses numbered below 1000 may assign a final grade of "W" without an official withdrawal through the Registration office.

**Repeating a Course**

A student may repeat any course taken at College of DuPage. Repeated courses are indicated with an "R" following the assigned grade on the student's official transcript. This indicates that the course was repeated and the student received the same or a higher grade. The cumulative grade point average (GPA) no longer reflects the original grade received as of the term it was retaken. Repeated courses will be granted credit only once except as noted in the "Course Descriptions" section of the *Catalog*.

**Auditing a Course**

A grade of "X" will be recorded on a student's academic record (transcript) when the intent to audit is indicated at the time of registration and the appropriate tuition charged. The audit grade of "X" earns no credit and does not affect the cumulative grade point average.

**STANDARDS OF ACADEMIC PROGRESS****Good Standing**

Students are considered to be in good standing unless disciplinary or academic sanctions have been placed against them or they have overdue financial obligations to the College.

**Academic Warning and Probation**

Students are placed on academic warning when less than 12 attempted College of DuPage semester credit hours are recorded and the cumulative grade point average is below 1.50 on a 4.0 scale. Academic warning does not restrict registration but students are encouraged to discuss the lack of satisfactory progress with a faculty advisor or counselor.

Students are placed on academic probation when their cumulative grade point average is below the minimum for the cumulative attempted credit hours. Students are expected to maintain a 2.00 cumulative GPA upon reaching 12 cumulative attempted hours. Students placed on probation are required to review their academic progress with a counselor prior to enrollment for the next semester. Students are restricted from registration until they comply with this requirement. Students already enrolled in the next semester are restricted from further credit course registration until they comply. Students who have previously met with a



counselor and have a GPA of 2.00 or above for the most recent semester, but still have a cumulative GPA under 2.00 will continue on probation. Students on probation will continue to be required to see a counselor to review their academic progress, and a counseling “hold” will remain in effect for future registrations. Students will be restored to good standing when their cumulative GPA reaches 2.00.

### **Academic Suspension**

A student will be suspended for one semester if their current grade point average (GPA) remains below 2.00 and their cumulative GPA average continues below 2.00. A second occurrence will result in a three-semester suspension from the College.

### **Academic Reinstatement**

Following suspension from the College, a student must request reinstatement through an interview with a counselor. Once reinstated, course selection will be restricted. Failure to achieve reinstatement will result in denial of future registration. In the semesters following academic reinstatement, if the semester grade point average is 2.00 or above, students will be placed on continued probation status until the cumulative grade point average meets the minimum of 2.00. If the semester GPA is below 2.00 and the cumulative GPA is below 2.00, the student again will be suspended. Academic warning, probation and suspension notations are recorded on the student’s academic record (transcript).

### **Excessive Withdrawal Policy**

The following procedures exist for students with a recurring, overall pattern of withdrawal from College of DuPage courses.

1. Students who have withdrawn from four (4) courses (excluding withdrawals during the first week of classes) are sent a letter encouraging them to consult with a faculty advisor or counselor to discuss the possible negative impact of repeatedly withdrawing from classes.
2. Students who have withdrawn from eight (8) or more courses are required to meet with a counselor prior to their registering for their next term of course enrollment. Registration is not allowed until this requirement is met.
3. Students continuing this same non-completion pattern are again required to meet with a counselor and will be restricted from registering for every two (2) additional withdrawals.
4. Failure to make satisfactory academic progress as stated in the “Excessive Withdrawal Policy” will result in treatment consistent with the Standards of Academic Progress procedures.

### **Appeals for Standards of Academic Progress**

Appeals relating to the Standards of Academic Progress policy may be made to the Dean of Student Affairs. Appeals concerning stated academic policy may be made to the Academic regulations Committee through the Records office.

### **Academic Forgiveness Policy**

The College of DuPage Academic Forgiveness Policy is intended for those students who have experienced previous academic difficulty at COD and now wish to build an academic record that is not weakened by past failures.

## **ACADEMIC RECORDS**

### **Degree Audit**

A computerized degree audit reports a student’s progress toward the completion of the degree or certificate offered at College of DuPage. The audit lists the categories completed and in-progress, the requirements not met and courses from which the student may select to complete your degree or certificate.

If a student has earned college credit at COD and is working toward a degree or certificate, or are planning to transfer to another college or university, the student may check his/her progress by

running a degree audit online at [www.myaccess.cod.edu](http://www.myaccess.cod.edu). A student may run an audit of any degree or certificate; however, audits are run only under the current *Catalog* requirements. A student will need a Social Security (or assigned identification) number and PIN number to request a degree audit.

An Illinois Articulation Initiative (IAI) audit reports by category all courses a student have completed that fulfill the General Education Core curriculum. The audit also lists all other COD courses from which a student may select to complete the IAI General Education Core curriculum. The Illinois Articulation Initiative (IAI) is designed to facilitate the transfer of students from one Illinois institution to another. IAI audits can be requested at the Records office.

### **Official Transcripts**

A student may obtain a copy of his/her College of DuPage transcript online at [www.cod.edu](http://www.cod.edu). Click on “Quicklinks,” then “Records” and then “Ordering Transcript.”

### **Transfer Credit Evaluation**

Students intending to earn a degree or certificate at College of DuPage, and expecting to apply credit earned elsewhere, must contact institutions previously attended requesting an official transcript to be sent directly to the Records office. Credits earned at other colleges/universities for transfer to COD are evaluated upon request by the student. Transcripts with an accompanying evaluation request form will be evaluated starting the second week of the student’s first semester at COD.

## **RECOGNITION OF ACADEMIC ACHIEVEMENT**

### **Academic Honors**

Each semester College of DuPage recognizes students whose grades reflect outstanding achievement. All students who are enrolled in at least six (6) credit hours of 1000-level or above, and whose semester grade point average is 3.50 to 4.00 inclusive, will be listed on the Academic Honors List. These honors become part of the student’s permanent academic record.

### **Graduation Requirements**

The official determination of a student’s status relative to graduation is made through the Records office. Students should file a Petition for Degree or Certificate no sooner than two semesters before expected completion, so that evaluation results will be available for planning their last semester. Advisors and counselors, while not graduation evaluators, are knowledgeable about graduation requirements and can assist students with understanding graduation requirements, interpreting the graduation evaluation report, planning so that all requirements are met, or with resolving unanticipated problems.

### **Graduation Honors**

Graduation honors are indicated on the college degree transcript and are designated as follows: “Highest Honors” is awarded to students earning a minimum of 40 credits at College of DuPage and a cumulative COD grade point average of 4.00. “High Honors” is awarded to students with a cumulative COD grade point average of 3.60 to 4.00. “Honors” is awarded to students with a cumulative COD grade point average of 3.20 to 3.59. Graduation honors are determined from the cumulative grade point average in the semester in which the student completes degree requirements. Students must take at least 8 semester hours of credit for letter grades (excluding “S”) to be eligible for honors recognition at graduation.





Student Services and  
General Student Information



## STUDENT SERVICES

College of DuPage provides many services to assist students in making appropriate academic and career plans, addressing other issues and enriching their College of DuPage experience through co-curricular activities.

### Academic Advising and Counseling Services

Advising and Counseling Services at College of DuPage is focused on assisting students with their academic and personal needs as they pursue their educational goals. Advisors can assist students for planning their class schedules, degree and certificate plans, as well as provide support for the student's academic and professional interests, including transfer options to institutions granting the bachelor's degree. Counselors are available to assist with non-academic concerns, personal development, and special situations which may interfere with the student's educational and personal goals. Services provided by advisors and counselors are available to all full- and part-time students enrolled at all locations of College of DuPage as well as those students taking courses online. Each student is encouraged to seek assistance when needed.

Academic advisors and counselors services are available to assist students on a walk-in basis daily. Students may also schedule an appointment through Advising and Counseling Services by calling (630) 942-2259, e-mail at [www.cod.edu/advising](http://www.cod.edu/advising), or by stopping by the new Student Services Center which is scheduled to open in fall 2011. Advising and Counseling Services are also provided at several community locations within District 502.

### Special Student Services

Students with disabilities are entitled to reasonable accommodations under guidelines established by Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act (ADA). Students with disabilities must be able to meet all academic requirements of the college. All students requesting services need to self identify with the Office of Special Student Services and provide appropriate documentation of their disability. Documentation should include a diagnosis of disability and how it impacts in the educational setting. Information regarding student's academic history and recommendations for accommodations may be requested. Accommodations are available for any student with a documented disability. Information given by students is voluntary and confidential. Accommodations include: notetaking paper, tape recorders, alternative testing, adaptive furniture and equipment, sign language interpreters, audio textbooks and other auxiliary services deemed appropriate. Tutoring is available for all students through the Academic Support Center. Manual and electric wheelchairs are available for short-term loans. For information on Special Student Services, call (630) 942-2154. The TDD number for hearing impaired is (630) 858-9692.

### International Student Services

Prospective students interested in applying for an F-1 or M-1 student visa for international admission to College of DuPage should first contact the International Admission Specialist at (630) 942-2979 or visit the International Student Services office.

The International Student Services office serves students in F-1 and M-1 non-immigrant status who have already received an I-20 document for international admission to College of DuPage. The International Student Services office provides F-1 and M-1 immigration advising, basic academic advising, cross-cultural and personal advising, and logistical assistance to international students as they pursue their studies at College of DuPage. Service is provided on an appointment basis, with limited scheduled hours for walk-in advising. Please call (630) 942-3328 for further information.

### Career Services Center

The Career Services Center is a center for job and career-related information and options. Through a variety of resources and

services, this center provides students, alumni and community residents a connection with area employers and opportunities for paid and non-paid work experience. These include cooperative education, internships, full- and part-time employment and community service-learning opportunities. The Career Services Center is located in the Student Resource Center (SRC).

Career Services helps students find full- and part-time employment while in college or after they graduate. The office has a variety of resources, including:

- Employer resource information
- On-campus interviewing with corporate recruiters
- Career specialists and the Job Search Guide to assist students in their job search
- Internet job-matching system posts full- and part-time employment opportunities
- Successful job search class

For more information about Career Services, call (630) 942-2230.

### Math Assistance Area

The Math Assistance Area (MAA) offers mathematics help to students enrolled in COD mathematics courses from basic math to Calculus 2232. Students may be enrolled in online courses or in Glen Ellyn or at off-campus locations in a traditional classroom setting or flexible learning. Most students are served on a walk-in basis, but may schedule appointments during busy times. The MAA is staffed by COD faculty who are available to answer questions dealing with homework problems or to clarify concepts that students have found confusing in textbooks. The faculty members also provide mathematics advising and mathematics course recommendations. The MAA houses print and multimedia material for COD math courses. For more information, call (630) 942-3339.

### Tutoring Center

The Tutoring Center provides tutoring on a first-come, first-served basis, for a variety of COD courses. Students must be enrolled in the courses for which they are requesting tutoring. Enrollment may be in Glen Ellyn, at off-campus locations or online. Online tutoring is available for a number of courses through the College's Blackboard site, [www.bb.cod.edu](http://www.bb.cod.edu). Face-to-face sessions occur mostly on the Glen Ellyn campus but are sometimes offered at COD off-campus locations.

Peer tutors are enrolled for at least 6 credit hours during the term they tutor (with the exception of summer), have a cumulative GPA of 2.0 or above, hold demonstrated master proficiency in the subjects they are tutoring, and have successfully completed the tutor application process and pre-service training. Peer Tutor applications are accepted online at [www.cod.edu/hrjobs/LoginPage.aspx](http://www.cod.edu/hrjobs/LoginPage.aspx)

To request tutoring assistance or obtain more information, please call (630) 942-3686.

### Speech Assistance Area

The Speech Assistance Area (SpAA) serves the speech communication needs of COD students and employees. The SpAA offers assistance in such areas as oral presentations, group presentations, speech organization and development, use of visual aids, use of electronic presentations and presentation materials, interviewing or conferencing, multicultural or international communication, and electronic as well as speech apprehension difficulties. For more information, call (630) 942-3366.

### Writing and Reading Center

The Writing and Reading Center (WRC) is open to all COD students and employees. This one-on-one assistance fosters a Writing Across the Curriculum approach for working with writers, ranging from idea generation to final draft. We provide all student readers with academic resources that aid them in becoming more successful students by offering strategies that strengthen their reading and study skills.



- The WRC assists individuals who
- Struggle with writing and reading challenges in 1000-level or above courses;
- Enroll in developmental writing and reading courses; or
- Need assistance increasing their writing and/or reading-related knowledge base.

The WRC coaches are either part-time faculty or student peers who work with writers on a variety of activities and projects. These activities might include narrowing a topic, focusing on a thesis, deciding on clear writing strategies and revising. Projects might range from writing a research project to writing a lab report. The coaches also work with readers on a variety of reading strategies for decoding and understanding assignments and textbooks and offer a variety of study skills such as organizing materials, note-taking and time management activities. Students may be referred to the WRC or seek assistance on their own. Coaching sessions last 30 to 45 minutes and are scheduled in advance or are impromptu either in Glen Ellyn or off campus. Appointments can be made online at <http://cod.mywconline.com/> or by calling (630) 942-3355.

### Library

The Library offers its collections and services to students, faculty, staff and community borrowers. The Library's website, [www.cod.edu/library](http://www.cod.edu/library), provides access to the Library's catalog as well as detailed information about the Library's services and links to resources for research.

The Library provides teaching and learning materials to support and enrich students' educational experiences. The Library offers an impressive array of print, audiovisual and electronic resources for students, faculty, staff and District 502 residents, and it provides assistance in how to locate information and use Library resources. The Library has public computers, a wireless network, audiovisual viewing facilities, group study rooms, individual study and video practice space. The Library's many special services and collections include interlibrary loan, classes and workshops, and the College and Career Information Center.

### Regular hours

Monday to Thursday .....7:30 a.m. to 10 p.m.  
 Friday.....7:30 a.m. to 4:30 p.m.  
 Saturday .....9 a.m. to 4:30 p.m.  
 Sunday .....noon to 6 p.m.

Special hours for intercessions, vacations and holidays will be posted.

## STUDENT RIGHTS AND RESPONSIBILITIES

### Student Code of Conduct (Board Policy 20-35)

Conduct which interferes with college purposes is not acceptable, yet a member of the college community can rightfully expect that the College will exercise with restraint its power to regulate student behavior and that rules and regulations will be adopted only when the educational process clearly and directly requires such action. Students are accountable for their own conduct. Sanctions for violations of College rules and regulations for conduct which interferes with college affairs will be addressed by the College. Student conduct which involves an alleged violation of criminal law will be referred to appropriate civil authorities.

Students at College of DuPage are expected to demonstrate qualities of morality, integrity, honesty, civility, honor and respect. Behavior which violates these standards for which discipline may be imposed includes, but is not limited to, the following:

- Cheating, plagiarism, forgery, misrepresentation and all forms of academic dishonesty.
- Purposely furnishing false information to any college official, faculty member or office.
- Forgery, alteration or misuse of any college document, record, form or instrument of identification.

- Failure to meet college financial obligations.
- Verbal abuse, physical abuse, assault, threats, intimidation, harassment, sexual harassment, coercion or other conduct which threatens or endangers the health and safety of any person on college premises.
- Intentional damage, destruction, attempt to damage or destroy, theft or attempted theft of college property or the property of college personnel, other students or any other person or the property of independent contractors maintained or stored on college premises.
- Theft, attempted theft or mutilation of library materials.
- Disruption or obstruction of any operation of the College, including, but not limited to, teaching, learning, disciplinary proceedings, college activities, public service functions on or off-campus or other authorized non-college activities when the act occurs on college premises.
- Illegal or unauthorized use of computing resources as defined in the Information Technology "Electronic Communications Guidelines" located in the Office of the Vice President of Information Technology and on the Information Technology website at [www.cod.edu/it](http://www.cod.edu/it) including, but not limited to:
  - Unauthorized entry into a file to use, read or change the contents or for any other purpose.
  - Unauthorized transfer of a file.
  - Unauthorized use of a computer account, identification number or password.
  - Use of computing facilities to interfere with any other person's work.
  - Use of computing facilities to interfere with the operation of the college computing system or any other computing system.
  - Unauthorized use or copying of copyrighted software.
  - Use of computing facilities to send obscene or abusive messages or images.
  - The installation or use of a program whose effect is to damage computer systems, media or files.
  - Unauthorized use of computer time for personal or business purposes.
- Unauthorized use of college telephones, facsimile (fax) machines or other college equipment.
- Unauthorized possession, duplication or use of keys to any college premises, unauthorized entry or attempted unauthorized entry to college premises, unauthorized occupancy or use of college premises.
- Conduct, behavior or involvement in an activity which causes or may reasonably lead College authorities to anticipate substantial injury or disruption or material interference with college activities or the rights of others.
- Possession, use, distribution or attempt to use or distribute an illegal or controlled substance or look-alike. Refer to Board Policy 25-5, Drug Free School.
- Possession, use, distribution or attempt to use or distribute alcoholic beverages. Refer to Board Policy 25-5, Drug-Free Schools.
- Use of tobacco products is prohibited in all indoor college facilities, owned or leased, and in all college-owned vehicles. Refer to Board Policy 10-160, Smoke-Free Campus.
- Use or possession of a firearm, weapon or explosive, including, but not limited to, a pistol, revolver, switchblade knife, bomb or any object containing noxious or dangerous chemicals, unless such use or possession is authorized by the College of DuPage Police Department.
- Gambling of any kind.

- R. Violation of published College Board Policies as stated in the College of DuPage Board Policy Manual, College of DuPage Administrative Procedures, departmental policies and procedures and College of DuPage Police Department procedures.
- S. Violation of federal, state or local law on college premises or at college-sponsored or supervised activities.
- T. Abuse of the judicial system, including, but not limited to:
1. Failure to obey the summons of a judicial body or college official.
  2. Falsification, distortion or misrepresentation of information before a judicial body.
  3. Disruption or interference with the orderly conduct of a judicial proceeding.
  4. Initiation of a judicial proceeding knowingly without cause.
  5. Attempting to discourage an individual's proper participation in, or use of, the judicial system.
  6. Attempting to influence the impartiality of a member of a judicial body prior to, and/or during the course of the judicial proceeding.
  7. Influencing or attempting to influence another person to commit an abuse of the judicial system.

#### **Violation of Federal, State or Local Laws (Board Policy 20-40)**

- A. College disciplinary proceedings may be initiated against a student charged with a violation of a federal, state or local law which is also a violation of the Student Code of Conduct; that is, if both violations result from the same factual situation, without regard to pending civil litigation in court or criminal arrest and prosecution. Proceedings under this code may be carried out prior to, simultaneously with or following civil or criminal proceedings off-campus.
- B. When a student is charged by federal, state or local authorities with a violation of law, the College will not request or agree to special consideration for that individual because of the individual's status as a student. If the alleged offense is also the subject of a proceeding before a judicial body under the Student Code of Conduct (Refer to the College Catalog), however, the College may advise off-campus authorities of the existence of the Student Code of Conduct and how such matters will be handled internally within the college community. The College will cooperate fully with law enforcement and other agencies in the enforcement of criminal law on College of DuPage premises. Individual students and college employees, acting in their personal capacities, remain free to interact with governmental representatives as they consider appropriate.

For more information, contact the Dean of Student Affairs.

#### **Prohibition of Discrimination, Harassment and Sexual Harassment (Board Policies 15-10 and 15-11)**

No student, employee, Board member, or visitor will discriminate against or harass a student, employee or visitor on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation or any other unlawful basis. The College will not tolerate discrimination or harassment. Individuals found to have violated this policy will be subject to disciplinary action up to and including termination and/or expulsion from the College as determined by such administrative or Board action as is required by Illinois law or by Board policy. Sexual harassment is illegal and violates state and federal laws. It is the policy of College of DuPage that no staff member or student shall be subject to sexual harassment. Student complaints should be filed with the:

- Affirmative Action Officer, Vice President of Human Resources, if against an employee;
- College of DuPage Police Department, if against a visitor;
- Dean of Student Affairs, if against a student.

#### **Grievance Policy**

Grievances may be categorized by appeal for the following reasons:

1. Discrimination because of race, color, sex, religion, national origin, ancestry, age, marital status, disability, unfavorable military discharge or sexual orientation in programs, courses, activities, facilities, financial aid or student employment.
2. Arbitrary and capricious grading
3. Disciplinary sanctions
4. Academic regulations
5. Privacy of educational record

Efforts will be made to resolve the grievance at the point of origin. The following procedures should be followed in sequence:

1. Consult with the instructor, advisor, coordinator or person responsible for the area concerned.
2. Appeal to the director, associate dean, dean, associate vice president, or vice president for the area concerned.
3. Appeal to the appropriate board or individual: Academic Regulations Committee, Executive Vice President for ADA Compliance issues, Judicial Review Board, Traffic Appeals Committee, or Financial Aid Committee.

#### **Communicable Diseases (Board Policy 20-10)**

Students are to inform the Dean of Student Affairs Office if they have or are a carrier of a reportable Communicable disease as defined by the Illinois Department of Public Health (DPH). Upon being informed that a student is suspected of having a communicable disease, the Dean of Student Affairs may consult with appropriate College personnel, public health personnel, the College's legal counsel and the student. Pending determination, a student who has a reportable communicable disease, or is a carrier of a reportable communicable disease or a student who is reasonably suspected of having a reportable communicable disease or being a carrier, may be temporarily excluded from the College. For more information, contact the Dean of Student Affairs Office.

## **STUDENT APPEALS PROCEDURES (ADMINISTRATIVE PROCEDURE 20-165)**

#### **Academic Regulations Committee**

The committee considers student petitions regarding matters such as students' unresolved concerns about their academic records. The Academic Regulations Committee considers each case on its individual merits. Its decisions are final. An appeal to the Academic Regulations Committee is submitted through the Records office and must be for classes in which an "F" grade was received for a class taken less than five years before the petition is submitted.

#### **Financial Aid Committee**

The Financial Aid Committee, comprised of staff and faculty representatives, is responsible for the awarding of selective scholarships and for Financial Aid Standards of Academic Progress appeal reviews. Scholarship applications and Standards of Progress appeals must be submitted to the Office of Student Financial Aid by the posted deadlines. All decisions of the committee are final.

#### **Judicial Review Board (Administrative Procedure 20-40)**

The Judicial Review Board is comprised of faculty, staff and student representatives approved by the College President. This body conducts appeals from students who feel the college judicial officer did not provide a fair hearing during a disciplinary inquiry for violations of the Student Code of Conduct. An appeal to the Judicial Review Board is submitted through the Dean of Student Affairs Office.

### **Traffic Appeals Committee**

This committee, composed of staff and students, considers appeals of students who feel they have been wrongly ticketed for traffic violations on campus. An initial appeal form must be obtained through the Cashiers office. Appellants must appeal in writing through the Dean of Student Affairs Office. Failure to submit a written appeal results in forfeiture of a student's right to a future hearing. The decision of the Traffic Appeals Committee is final.

### **ADA Compliance**

Appeals regarding accessibility can be made to the Dean of Student Affairs, who serves as the ADA Compliance Officer. Recommendations regarding program and physical accessibility for qualified individuals with disabilities are handled by the Office of Special Student Services.

### **Student Privacy**

Notification of Students' Rights Under The Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within 45 days of the day College of DuPage Records office receives a request for access. Students should submit to the Records office written requests that identify the record(s) they wish to inspect. The College will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the college official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes is inaccurate or misleading. Students may ask College of DuPage to amend a record that they believe is inaccurate or misleading. They should write the college official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If College of DuPage decides not to amend the record as requested by the student, the College will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to consent to disclosures of personally identifiable information (not "Directory Information") contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception that permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by College of DuPage to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:  
Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, D.C. 20202-4605

### **Computer Lab Security Policy**

Several computing labs are available on campus for student use. The College has a computer security policy on all computer access/use which follows: Any access/use of the College of DuPage computer systems is restricted to duly authorized individuals only. Any unauthorized access/use by any individuals, including administrators, faculty, classified staff, students and the public, of the computer systems, computer network, computer programs, computer software, computer supplies, documentation and/or data will be subject to disciplinary action, civil action and/or criminal prosecution. For more details, see COD Board of Trustees Policy Manual, Administrative Procedure 10-126, Part II: "Electronic Communications."

### **Smoking Policy**

College of DuPage is a non-smoking campus. Use of tobacco products is prohibited in all indoor college facilities (owned or leased), within designated non-smoking entrances, and in all college-owned vehicles.

Possession of any tobacco products is prohibited by any person under the age of eighteen (18) years.

### **Disclosure of Directory Information**

The items listed below are designated as "Directory Information" by College of DuPage Board Policy and Procedure 20-15 and may be released for any purpose at the discretion of the College. Under provision of the Family Educational Rights and Privacy Act of 1974, as Amended, a student has the right to withhold the disclosure of any or all of the categories of "Directory Information" listed below. The student should consider very carefully the consequences of any decision to withhold "Directory Information." Should a student decide to inform the College not to release any or all of this "Directory Information," any future requests for such information from non-college persons or organizations will be refused. The College will honor a student's request to withhold the information listed below but cannot assume responsibility to contact the student for subsequent permission to release the information. Regardless of the effect upon the student, the College assumes no liability for honoring the student's instructions that such information be withheld. Directory Information consists of the following: Name, community, terms attended, last educational institution attended, major field of study, awards, degrees and awards received, participation in officially recognized sports and activities, height and weight of members of athletic teams. If a student wishes to withhold the directory information, complete the "Student Request to Prevent Disclosure of Directory Information" form and submit it by the fourth week of the term to the Office of the Dean of Admission Services and Registrar. Forms are available both there and in the Records office. If the form is not received in the Office of the Dean of Admission Services and Registrar by the fourth week of the term, it is assumed that the above information may be disclosed.

Forms are available for students who wish to disclose non-directory information and are available in the Office of the Dean of Admission and Registrar, the Records office, as well as various other offices. This form needs to be completed each term.

### **Printed Materials Guidelines**

Individuals and organizations have the right to distribute printed material on the College of DuPage campus. Such material must not be contrary to local, state or federal laws and no items may be sold or money solicited. However, the board does reserve the right to control the place, time and manner such printed material is distributed. The administrative procedures concerning the distribution of printed materials are available in the Office of Student Life, Student Resource Center, and on the college website under Board Policies.



## GENERAL STUDENT INFORMATION

### Bookstore

The campus bookstore is located on the first floor of the Student Resource Center. The bookstore carries all required textbooks for student purchase, and offers a rental option on select textbooks. The bookstore also carries imprinted and non-imprinted school supplies, greeting cards, and College of DuPage emblematic gifts and clothing. Additional services provided include fax service, small copy services, and free gift wrapping for any items purchased from the bookstore. The bookstore is open Monday to Saturday, with extended hours during the first week of classes each semester. For hours of operation, contact the bookstore at (630) 942-2360.

During the Fall and Spring semesters, the bookstore operates satellite locations at select off-campus centers to sell books during the first week of the 12-week session. Textbooks can be ordered online at [www.codbooks.com](http://www.codbooks.com) for shipping or convenient in-store pick-up at the campus bookstore. Online orders can be placed by using the course information on your student schedule.

### Closing the College – Severe Weather and Other Emergencies

In the event that it becomes necessary to close the campus or to cancel classes and other activities due to inclement weather, notices will be made several times an hour on 90.9fm WDCB, the college's public radio station. Other stations are notified by the college and may announce cancellations: WBBM-AM (780) and WGN-AM (720). The following television stations air closing or cancellation notices: Channel 2 (CBS); Channel 5 (NBC); Channel 7 (ABC); Channel 9 (WGN) morning news; Channel 32 (FOX); and CLTV News. Students can also check closing status at [www.emergencyclosings.com/ecc/home.jsp](http://www.emergencyclosings.com/ecc/home.jsp). All announcements will contain specific information concerning off-campus classes.

College of DuPage students and staff can sign up for Rave Alert and Rave Guardian, two broadcasting alert and personal safety systems. Rave Alert uses e-mails, text messages, voice messages and RSS feeds to notify subscribers of both emergency and non-emergency situations, such as weather-related class cancellations. Rave Guardian is a mobile phone application that notifies the campus police department of an emergency. To sign up, visit [www.getrave.com/login/cod](http://www.getrave.com/login/cod).

### Dining Services

The campus Dining Services department offers a variety of meal options at two convenient service locations. The E.E. Gibson Café is located on the first floor of the Student Resource Center with hours of operation during the regular academic year from 6:30 a.m. to 7 p.m., Monday through Thursday, and 6:30 a.m. to 2 p.m. on Friday. An additional satellite facility is located in the McAninch Arts Center with convenient hours from 8 a.m. to 6:30 p.m. Monday through Thursday, and 8 a.m. to 2:30 p.m. on Friday during the regular academic year. The McAninch Arts Center (MAC) Café features Einstein Brothers Bagels. This location is open daily for breakfast, lunch and dinner. There are also vending machines located campus-wide. For further information on foodservice or catering functions, contact Dining Services at (630) 942-3343 or (630) 942-2666.

### College of DuPage Police Department

The College of DuPage Police Department is a professional 24-hour law enforcement agency. The department's police officers have full police powers and are responsible for maintaining a secure environment in which educational activities are conducted and assets are protected.

Contact the College of DuPage Police Department to report a crime, for emergency first aid, to report lost items, or to report a motor vehicle or personal-injury accident on campus.

The College of DuPage Police Department also provides assistance with disabled vehicles and lockouts and, if needed, provides escort service to your vehicle or class.

The office can be reached at (630) 942-2000, ext. 2000, 24 hours a day, seven days a week.

### Campus Parking

The parking lots on campus are available to faculty, staff, students and visitors. The College reserves the right to tow illegally parked vehicles at the owner's expense. Some designated parking areas require a parking permit. There is a 20 m.p.h. speed limit on all the entrance drives and roads around the campus and a 10 m.p.h. speed limit in all parking lots. Penalties for parking violations range from \$15 to \$100. Fines may be paid by mail or in person to the Cashiers office. To appeal a traffic citation, one must file a form with the Cashiers office within five days of issuance.

### Public Transportation

Pace provides bus transportation to and from the campus in Glen Ellyn. Bus shelters are located in front of the Berg Instructional Center (BIC) and next to Building K. Two Pace routes serve the campus directly, No.714 and No.715. These routes connect with many others, as well as with the Metra and Northwestern train lines. Please check the Pace website, [www.pacebus.com](http://www.pacebus.com) or call (847) 364-PACE, for up-to-date schedules, fares and route maps. All routes are subject to change.

Pace schedules are available on campus in the Admissions office and the Office of Student Life. A variety of Pace discount passes are for sale in the Office of Student Life. Regular student discounts are available on Pace buses with a student ID card.







## Student Life and Leadership Opportunities

## ACADEMIC HONOR SOCIETIES

### Alpha Beta Gamma

Alpha Beta Gamma is the International Business Honor Society of Community, Junior and Technical Colleges. College of DuPage is home to the Beta Iota chapter, chartered in 2006. The society recognizes and encourages students enrolled in business and business-related technology curricula and provides opportunities for leadership training, service, scholarship funds, and the intellectual exchange of ideas. An invitation to join ABG reflects exceptional academic achievement. For more information on events or membership, contact the Business and Technology Division Office at (630) 942-2592 or visit [www.cod.edu/dept/stud\\_act/honors\\_societies\\_clubs.htm](http://www.cod.edu/dept/stud_act/honors_societies_clubs.htm)

### Alpha Mu Gamma

Alpha Mu Gamma Honor Society recognizes students who have achieved an outstanding record in the study of world language (or ESL if the student's native language is not English). For more information on events or membership, please visit [www.cod.edu/dept/stud\\_act/honors\\_societies\\_clubs.htm](http://www.cod.edu/dept/stud_act/honors_societies_clubs.htm)

### Phi Theta Kappa

Phi Theta Kappa, the International Honor Society for two-year colleges is very active on the local, regional and international levels. Any student may participate in the activities of this organization. However, to accept full membership in the society, students must have 12 cumulative hours with a 3.5 cumulative G.P.A. A one-time membership fee is required. The Phi Beta chapter at COD implements a full range of activities in the areas of society's hallmarks of leadership, scholarship, fellowship and service. For more information on PTK membership, contact (630) 942-3053 or visit [www.cod.edu/dept/stud\\_act/honors\\_societies\\_clubs.htm](http://www.cod.edu/dept/stud_act/honors_societies_clubs.htm)

### Psi Beta

Psi Beta is the National Honor Society in Psychology for community and junior colleges. The mission of Psi Beta is professional development of Psychology students through promotion and recognition of excellence in scholarship, leadership, research and community service. For more information on events or membership, please visit [www.cod.edu/dept/stud\\_act/honors\\_societies\\_clubs.htm](http://www.cod.edu/dept/stud_act/honors_societies_clubs.htm)

### Tau Upsilon Alpha

Tau Upsilon Alpha Honor Society is the National organization for Human Services Honor Society. The mission of Tau Upsilon Alpha is to honor academic excellence, to foster life-long learning, leadership and development and to promote excellence in service to humanity. For more information, please visit [www.cod.edu/dept/stud\\_act/honors\\_societies\\_clubs.htm](http://www.cod.edu/dept/stud_act/honors_societies_clubs.htm)

## APPLIED AND PERFORMING ARTS

Since the opening of the McAninch Arts Center in fall 1986, opportunities to participate have increased: During the past year, the Performing Arts program created more than 2,000 opportunities for student and community members to perform. Performance spaces in the McAninch Arts Center include the 800-seat Mainstage for concerts, musical comedy, opera and professional touring shows; the 200-seat Theatre 2 for drama and smaller musical recitals; the flexible Studio Theatre, which seats 75 to 90; and the 88-seat Lecture Hall for lectures, poetry readings, and workshop theater productions. For more information, call (630) 942-3008 or visit [AtTheMAC.org](http://AtTheMAC.org) for performance information.

### Choral Music

Singers of all levels and interests will find opportunities in the College's three choral ensembles. The DuPage Chorale (Monday evening) and Concert Choir (11 a.m. Monday, Wednesday and

Friday) are open to all students and community members. The Chamber Singers is a specialized group for more advanced singers and can be joined by audition. Call (630) 942-3008 for more information.

### Band Music

The DuPage Community Concert Band (Monday evening) is open to all student and community musicians, and rehearses one night a week. Call (630) 942-3008 for more information.

### Guitar

Guitar Ensemble (Tuesday and Thursday afternoon) offers a small group performing experience for those interested in exploring jazz guitar.

### Jazz

This program offers a wide array of performing opportunities during the day and evenings. Small Group Jazz (Tuesday, Wednesday and Thursday noon) is open to any musician interested in exploring the small group jazz idiom. DuPage Community Jazz Ensemble (Wednesday evening) is open to any interested musician. For more information, call (630) 942-2369 or 942-3008.

### Orchestra

The student chamber orchestra rehearses Monday afternoons. For more information on Chamber Orchestra, call (630) 942-3008.

### Percussion

Percussion Ensemble (Tuesday and Thursday afternoon) is open to any student interested in exploring the instruments, methods, compositions and writings related to percussion playing and performance.

### Theater

From August through May, four fully staged and designed theater productions are offered, which are produced in one of the three performance spaces. In addition, students may participate in the Freestage program, which offers opportunities for students to direct, write and act in their own productions. Each summer, two more productions are included in the Summer Repertory Theater.

Auditions are open to all district residents. Students and community members may also help in costumes, set construction and crew for all productions. For more information, call (630) 942-3008.

## ATHLETICS

College of DuPage has one of the most successful community college athletic programs in the nation, winning numerous national, district and regional championships in various sports. COD participates in the North Central Community College Conference (N4C) along with Joliet, Rock Valley, Triton and Harper. The College is a member of the National Junior College Athletic Association (NJCAA).

Intercollegiate sports for men include baseball, basketball, cross country, football, golf, soccer, tennis, track and field. College of DuPage has women's teams in basketball, cross-country, soccer, softball, tennis, track and field, and volleyball. There is also a cheer team that performs at all home football and basketball games.

Students who zipped around the district to temporary classrooms when the College opened in 1967 reminded someone of roadrunners; hence, the chaparral became the school mascot. The College colors are forest green and silver.

Intramural activities are also offered to provide students, faculty and staff the opportunity to participate in a variety of competitive or recreational sports activities.

For more information call the Athletic Department at (630) 942-2365, or visit [www.cod.edu/athletics](http://www.cod.edu/athletics).

## FORENSICS TEAM

The Forensics Team at College of DuPage is one of the most competitive speech and debate teams in the state of Illinois. As many as 30 students participate in the program, which includes readers' theater, public address, debate, oral interpretation and acting. Teams compete in tournaments with other community colleges and universities throughout the state and nation. The Forensics teams have won numerous national championships and have ranked in the top 10 in the nation each of the past 20 years. Many forensics team members have been recipients of scholarships at four-year schools. Beginners as well as seasoned performers are welcome. For more information, call (630) 942-2054.

## STUDENT ACADEMIC PUBLICATIONS

### *The Prairie Light Review*

*The Prairie Light Review* is the Liberal Arts magazine for College of DuPage. It publishes poetry, prose, photography and art from students, staff and community members from District 502. To work on the magazine, students enroll in English 2210, a one credit-hour class, where they evaluate submissions, work on layout, and handle publicity. For additional information, contact the PLR office at (630) 942-2733.

### ESSAI

Michel de Montaigne, the great 16th-century French philosopher and writer, created a new literary genre called "essays" to demonstrate his "attempts" or "trials" in his writing exercises. The award-winning *ESSAI* reflects Montaigne's seminal design and annually publishes some of the best academic "trials" and "attempts" of COD students' writing endeavors across the curriculum and at all levels of learning. A professor first selects and then nominates a paper to the editors of *ESSAI* for consideration for publication. Each journal's volume includes a variety of written assignments and exemplifies the special talent, fresh scholarship, and intellectual sophistication of COD students, all expressed with clarity, eloquence, and grace.

## STUDENT ACTIVITIES AND CLUBS

Student Life coordinates First Year Experience programs, including campus-wide welcome events during Chaparral Days and the Living Leadership Program for emerging leaders. More than 60 student clubs provide many opportunities for students to interact through a connection with academic programs, topical interest sharing, sharing of leisure-time activities and social interaction. Practicing leadership, business and organizational skills outside the classroom enhances students' life and career goals.

For a list and description of student clubs and organizations, stop in the Office of Student Life; call (630) 942-2243; or check the College's website ([www.cod.edu](http://www.cod.edu)) under Student Life and then Clubs and Organizations. Current students may also log on to [inside.cod.edu](http://inside.cod.edu) and click the Organizations' tab.

Planning and implementing events for College of DuPage students is the primary function of the Student Program Board

producers oversee several areas of operation and earn a stipend each term. The crew members assist with the multitude of tasks required to make any event a success.

The Program Board sponsors a daytime series ("Oasis") at many campus locations, featuring local and national acts, including comedians, music of many genre, hypnotists and magicians, as well as interactive games. The evening "Alter Ego" series brings up-and-coming local groups to the College. Other events are implemented as students' creativity and training increases.

If you're interested in becoming involved with the planning and implementation of a variety of events, contact the Student Program Board at (630) 942-2712 or visit the Office of Student Life in the Student Resource Center (SRC).

## STUDENT LEADERSHIP COUNCIL

The Student Leadership Council represents the student body to the administration and provides a place for students to become involved in the college community. The Student Leadership Council was formed from the Student Government Association in 2002-03 to strengthen the "Student Voice" and encourage students to "Speak for Yourself" through direct participation.

Various levels of involvement are available for students who wish to supplement their education with practical leadership experiences. Students are encouraged to contact the S.L.C. officers in their office in the Student Resource Center (SRC), to attend meetings and workshops held weekly in the same location and to check the S.L.C. web page on [inside.cod.edu](http://inside.cod.edu). More inclusive voting procedures allow any student who participates consistently to vote on issues before the Council.

Students are needed to serve on such college committees as Dining Services, Curriculum, Traffic Appeals, Bookstore and others. Elections for Student Body President, Vice President and Student Trustee are held in March of each year; appointment of three coordinators takes place following those elections. Small stipends may also be earned in several S.L.C. positions.

For more information, call (630) 942-2095 or stop by the S.L.C. office in the Student Resource Center (SRC).

## STUDENT NEWSPAPER AND FEATURE MAGAZINE

A perennial award-winner for content and design, the *Courier* student newspaper circulates to students and staff on campus, and online at [www.cod.edu/courier](http://www.cod.edu/courier) throughout the college district. Editors and reporters work in paid positions and can receive college credit in Cooperative Education for writing, editing, photography, layout and circulation. The *Courier* staff also publishes the 52-page *Chaparral* feature magazine twice yearly with student-written articles on travel, career, holiday and human interest. For more information, call (630) 942-2650. Publications are viewable at [www.cod.edu/courier](http://www.cod.edu/courier).









# Course Descriptions

## ACCOUNTING

Also see courses listed under Business, Management and Marketing.

### ACCOUNTING 0430

#### **Bookkeeping**

1 credit hour

Introduction to the accounting cycle of a service company, emphasizing rudimentary accounting concepts. (1 lecture hour)

### ACCOUNTING 1110

#### **Accounting Procedures**

3 credit hours

The accounting cycles of service organizations and merchandisers focusing on the recording of business transactions and the preparation of financial statements for such organizations. Includes specific accounting concepts relating to current assets, long-term assets, current liabilities, payroll and the operations of corporations. (3 lecture hours)

### ACCOUNTING 1140

#### **Financial Accounting**

4 credit hours

An introduction to financial accounting concepts. A study of the accounting cycles of service organizations and merchandisers emphasizing the recording of business transactions, and the preparation of financial statements for such organizations. Emphasis is also placed on the accounting principles relating to the measurement, valuation and reporting of assets, liabilities and equity, and related internal control considerations. (4 lecture hours)

### ACCOUNTING 1150

#### **Managerial Accounting**

4 credit hours

An introduction to managerial accounting and cost concepts. A study of the accounting cycle of manufacturers emphasizing the recording of business transactions relating to the manufacture of inventory and the preparation of financial statements. Emphasis is also placed on analysis of cost behavior, budgeting concepts, standard cost systems and variance analysis, and the use of accounting information to make decisions. **Prerequisite:** Accounting 1140 or consent of instructor (4 lecture hours)

### ACCOUNTING 1175

#### **Microcomputer Accounting**

2 credit hours

Introduction to a general ledger software package on a microcomputer. Keyboarding and mouse skills are required. **Prerequisite:** Accounting 1110 or Accounting 1140, or consent of instructor (2 lecture hours)

### ACCOUNTING 1840

#### **Independent Study in Accounting**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

### ACCOUNTING 2200

#### **Income Tax Return Preparation**

3 credit hours

Individual income tax return preparation emphasizing the completion of basic tax returns. Resources are provided under the Volunteer Income Tax Assistance (VITA) program is administered by the Internal Revenue Service. **Prerequisite:** Accounting 1140 or consent of instructor (3 lecture hours)

### ACCOUNTING 2205

#### **Federal Taxation I**

3 credit hours

Federal income tax concepts relating to individuals and sole proprietorships. **Prerequisite:** Accounting 1150 or consent of instructor (3 lecture hours)

### ACCOUNTING 2206

#### **Federal Taxation II**

3 credit hours

Federal income tax concepts relating to corporations, partnerships, S-corporations, trusts and exempt organizations. Also includes the tax consequences of international transactions. **Prerequisite:** Accounting 2205 or consent of instructor (3 lecture hours)

### ACCOUNTING 2241

#### **Intermediate Accounting I**

4 credit hours

In-depth study of the theory and concepts of accounting emphasizing the income statement and balance sheet and the accounting for cash, receivables, inventory, plant assets, intangible assets, current liabilities and contingencies. CIS 1221 recommended. **Prerequisite:** Accounting 1140 or consent of instructor (4 lecture hours)

### ACCOUNTING 2242

#### **Intermediate Accounting II**

4 credit hours

In-depth study of the theory and concepts of accounting emphasizing the measurement and valuation of long-term liabilities, stockholders' equity, corporate investments in securities, revenue recognition, postretirement benefits, leases, interperiod tax allocations, accounting changes, full disclosure, ratio analysis and the preparation and presentation of the statement of cash flows. **Prerequisite:** Accounting 2241 or consent of instructor (4 lecture hours)

### ACCOUNTING 2251

#### **Cost Accounting**

3 credit hours

In-depth study of methods used by managers for decision making, budgeting and performance evaluation. Emphasizes cost accounting systems and procedures for data accumulation and cost control. **Prerequisite:** Accounting 1150 or consent of instructor (3 lecture hours)

### ACCOUNTING 2260

#### **Advanced Accounting**

3 credit hours

In-depth study of the accounting and reporting issues related to consolidated financial statements with an emphasis on consolidation theory, procedures for eliminating various intercompany transactions, and accounting for business combinations. Other topics include partnership accounting, international operations and corporate insolvency. **Prerequisite:** Accounting 2242 or consent of instructor (3 lecture hours)

### ACCOUNTING 2265

#### **Governmental and Not-for-Profit Accounting**

3 credit hours

In-depth study of governmental and not-for-profit entity theory, practice and reporting issues. Emphasis on accounting principles relating to governmental agencies, colleges and universities, health care and not-for-profit organizations. Completion of Accounting 2241 is recommended prior to enrollment. (3 lecture hours)

## ACCOUNTING 2271

### **Auditing I**

3 credit hours

An introduction to the role of the public accountant, professional standards, attestation and other assurance services, audit evidence and documentation, and reports on audited financial statements, with particular emphasis on the auditor's decision-making process by integrating coverage of the components of audit risk with tests of controls and substantive tests that relate to selected transaction cycles. **Prerequisite:** Accounting 2241 or 2242, or consent of instructor (3 lecture hours)

## ACCOUNTING 2272

### **Auditing II**

3 credit hours

Further study of auditing and other assurance services emphasizing professional standards and ethics, legal liability of auditors, regulation of the public accounting profession, internal controls in information technology systems, the components of audit risk, tests of controls and substantive tests relating to selected transaction cycles, audit sampling applications, other services performed by auditors, and related reporting requirements. **Prerequisite:** Accounting 2271 or consent of instructor (3 lecture hours)

## ACCOUNTING 2280

### **Forensic Accounting-Fraud Examination**

3 credit hours

Introduction to financial fraud, including analysis of major fraud schemes, investigative strategies and financial controls. Emphasis on detection and prevention of financial fraud in the organization. **Prerequisite:** Accounting 2241 or equivalent, or consent of instructor (3 lecture hours)

## ACCOUNTING 2860

### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

## ACCOUNTING 2865

### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## ACCOUNTING 2870

### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written

permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## ACCOUNTING 2871

### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## ADULT BASIC EDUCATION

### ADULT BASIC EDUCATION 0700

#### **Reading Skills Development I**

3 credit hours

Introduces basic word recognition and word attack skills, including pre-reading skills, sight words, phonics skills and structural analysis skills; comprehension and advanced reading skills in relation to words, sentences, selections and sequence; specialized skills in locating and organizing information, reading maps, interpreting graphs, tables or diagrams; and the development of personal reading skills. Mandatory testing. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (3 lecture hours)

### ADULT BASIC EDUCATION 0701

#### **Reading Skills Development II**

3 credit hours

Reinforces and reviews basic word recognition and word attack skills, including pre-reading skills, sight words, phonics skills and structural analysis skills; comprehension and advanced reading skills in relation to words, sentences, selections and sequence; specialized skills in locating and organizing information, reading maps, interpreting graphs, tables or diagrams; and the development of personal reading skills. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. (3 lecture hours)

### ADULT BASIC EDUCATION 0702

#### **Pre-GED Reading Skills I**

3 credit hours

Reinforces and reviews word recognition and word attack skills of structural analysis; comprehension and advanced reading skills, including deriving meaning from words, sentences, selections and identifying sequence; specialized reading skills, including locating and organizing information, reading maps and interpreting graphs, tables or diagrams. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (3 lecture hours)

## ADULT BASIC EDUCATION 0703

**Pre-GED Reading Skills II**

3 credit hours

Introduces personal reading skills and reading in the social studies and science content area. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. (3 lecture hours)

## ADULT BASIC EDUCATION 0710

**Basic English Skills I**

3 credit hours

Introduces basic English grammar and usage, spelling/vocabulary/dictionary use, capitalization and punctuation. Mandatory testing. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (3 lecture hours)

## ADULT BASIC EDUCATION 0711

**Basic English Skills II**

3 credit hours

Expands knowledge of English grammar, usage and sentence structure, and includes composition of English paragraphs and essays. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Mandatory testing (3 lecture hours)

## ADULT BASIC EDUCATION 0720

**Basic Mathematical Skills I**

3 credit hours

Introduces basic arithmetic skills, including the fundamental operations with whole numbers, decimals, fractions and mixed numbers; verbal reasoning; and measurement systems. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (3 lecture hours)

## ADULT BASIC EDUCATION 0721

**Pre-GED Mathematical Skills II**

3 credit hours

Reinforces and reviews arithmetic skills, including the fundamental operations with decimals, fractions and mixed numbers; verbal reasoning; and measurement systems. Introduces percents, ratio and proportion, and charts and graphs. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (3 lecture hours)

For additional information, please contact the Continuing Education/Extended Learning Division at (630) 942-3697 or [www.cod.edu/Academic/ABE\\_GED](http://www.cod.edu/Academic/ABE_GED)

**ADULT SECONDARY EDUCATION**

## ADULT SECONDARY EDUCATION 0840

**Citizenship Preparation**

2 credit hours

Intended for individuals preparing for naturalization and for successfully completing the oral interview and written test required for U.S. citizenship. The course provides an overview of significant historical events; facts and concepts of federal, state and local government; current political, governmental and social information; and explanations of United States' culture and institutions. The naturalization process and the One Hundred Questions developed by the Bureau of Citizenship and Immigration Services (BCIS) are also covered. May be repeated up to three times. This course can

only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (2 lecture hours)

For additional information, please contact the Continuing Education/Extended Learning Division at (630) 942-3697 or [www.cod.edu/Academic/ABE\\_GED](http://www.cod.edu/Academic/ABE_GED)

**AIR CONDITIONING**

## AIR CONDITIONING 1100

**Refrigeration Principles**

3 credit hours

Basic laws of matter, fluids, gases, compression systems, refrigeration controls, refrigerants and components. Included are Pressure Enthalpy (PH) charts, evaporators, condensers, metering devices, compressors and an introduction to service refrigeration systems. (2 lecture hours, 2 lab hours)

## AIR CONDITIONING 1105

**Introduction to Safety, Materials and Equipment**

3 credit hours

The use and care of hand tools, special tools used in air conditioning, pipe fitting, copper tubing, brass fitting, flaring, soldering and safety. Orientation to job entry specification and occupational opportunities. (2 lecture hours, 2 lab hours)

## AIR CONDITIONING 1108

**Refrigerant Certification**

1 credit hour

Environmental Protection Agency (EPA) regulations, refrigerant handling, refrigerant equipment and certification types are covered. Federal Government requires all individuals who open a system or container holding refrigerant to be certified. EPA refrigerant certification test given. (1 lecture hour)

## AIR CONDITIONING 1110

**Introduction to Controls**

3 credit hours

Practical study of electricity, electrical hardware and electrical test instruments that are used in the heating, air conditioning and refrigeration industry. Basic electricity, circuits, schematics, power distribution, electrical components and motors. (2 lecture hours, 2 lab hours)

## AIR CONDITIONING 1112

**Residential Refrigeration**

3 credit hours

Analysis of the operation of refrigeration systems, leak detection, leak repair, charging, component, replacements, schematic reading and troubleshooting domestic refrigerator and window air conditioning units. **Prerequisite:** Air Conditioning 1100, 1105 and 1110 or consent of instructor. (2 lecture hours, 2 lab hours)

## AIR CONDITIONING 1161

**Introduction to Sheet Metal**

2 credit hours

Basic fitting layouts. Various types of seams, elbows and triangulation used in constructing various square and round fittings. Drawing and fabrication of the fittings are required. (4 lab hours)

## AIR CONDITIONING 1180

**Introduction to Heating**

5 credit hours

Gas combustion, venting, operation of a heating unit, electrical circuitry, zoning and accessories. Servicing, troubleshooting and repairing mechanical and electrical components, and proper installation of heating units. **Prerequisite:** Air Conditioning 1110 or consent of instructor (4 lecture hours, 2 lab hours)



AIR CONDITIONING 1186

**Introduction to Hydronics**

3 credit hours

Principles of steam, water, piping and their components are covered with respect to boilers, water treatment and electrical circuitry. **Prerequisite:** Air Conditioning 1180 or consent of instructor (1 lecture hour, 2 lab hours)

AIR CONDITIONING 1187

**Central Heating Plants**

3 credit hours

Theory of large boiler systems operation. Low and high pressure boilers, air handling equipment, heat exchangers, pumps, controls, water treatment, accessories, service and preventive maintenance are covered. Field trips to central heating plants are included.

**Prerequisite:** Air Conditioning 1180 or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 1827

**Selected Topics**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour)

AIR CONDITIONING 1840

**Independent Study in Air Conditioning**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

AIR CONDITIONING 2201

**Residential Air Conditioning**

3 credit hours

Split and package air conditioning systems, proper installation, operation, servicing, repair of mechanical and electrical components, and air treatment. **Prerequisite:** Air Conditioning 1100, 1105 and 1110 or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2202

**Commercial Air Conditioning**

3 credit hours

Commercial air conditioning equipment, mechanical and electrical components, service repair, operation, capacity control, proper installation, zone control and psychometrics. Includes mechanical components of rooftop heating systems and start-up procedures.

**Prerequisite:** Air Conditioning 1180 and 2201 or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2205

**Heat Pumps**

2 credit hours

Theory of the refrigeration cycle with respect to heat pumps and electrical heat. Includes mechanical and electrical operation, service, repair and proper installation. **Prerequisite:** Air Conditioning 1100, 1105 and 1110 or consent of instructor (1 lecture hour, 2 lab hours)

AIR CONDITIONING 2210

**Commercial Refrigeration**

5 credit hours

High, medium and low temperature refrigeration application, operation of mechanical and electrical components, service and repair of electrical circuitry, and mechanical components, capacity

controls, walk-ins, reach-ins, ice machines, supermarket refrigeration equipment, refrigeration piping, heat reclaim and start-up procedures. **Prerequisite:** Air Conditioning 1100, 1105 and 1110 or consent of instructor (4 lecture hours, 2 lab hours)

AIR CONDITIONING 2220

**Installation**

3 credit hours

Proper installation of heating, air conditioning and refrigeration systems, piping, duct installation, electrical circuitry and accessories. **Prerequisite:** Air Conditioning 1105 and 1110 or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2225

**Troubleshooting Systems**

3 credit hours

Systematic evaluation of system pressure, temperature, compressor efficiency, mechanical and electrical components. Study of system performance on live equipment. **Prerequisite:** Air Conditioning 2202 and 2210 or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2230

**Advanced Controls**

3 credit hours

Heating, Ventilation and Air Conditioning (HVAC) control systems in commercial buildings, including electric, pneumatic, electronic and Direct Digital Control (DDC) controls. **Prerequisite:** Air Conditioning 1100, 1105 and 1110 or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2231

**Direct Digital Control of HVAC Systems**

3 credit hours

Examines state-of-the-art Heating, Ventilation, Air Conditioning (HVAC) Direct Digital Control (DDC) systems. Emphasis is on system configurations, applications, installation and troubleshooting.

**Prerequisite:** Air Conditioning 2230 with a grade of "C" or better or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2232

**Energy Audits/Economics**

2 credit hours

Purpose, objectives and mechanics of the energy audit and economic processes include the audit procedures, heating, ventilation, air conditioning and refrigeration systems, lighting, auxiliary equipment, energy conserving, cost-saving measures and analysis techniques that are necessary for evaluation of energy projects. (1 lecture hour, 2 lab hours)

AIR CONDITIONING 2236

**Central Cooling Plants**

3 credit hours

Theory of centrifugal, absorption and screw systems, minor repairs, service, preventive maintenance of pumps, air-handling equipment and controls are covered. Field trips to central cooling plants are included. **Prerequisite:** Air Conditioning 1100, 1105 and 1110 or equivalent (2 lecture hours, 2 lab hours)

AIR CONDITIONING 2240

**Load Calculations and Duct Design**

5 credit hours

Techniques and procedures necessary to evaluate residential and commercial heat loss, heat gain and duct layout design. Heat transmission, infiltration, R-value, U-value, duct analysis, duct sizing, duct and register location and selection, and equipment sizing and selection. (4 lecture hours, 2 lab hours)

## AIR CONDITIONING 2241

**Industrial Air Conditioning Design**

3 credit hours

Design and application of industrial air conditioning, psychometrics, load calculation, equipment selection, ventilation, duct design, pipe design and automatic controls: **Prerequisite:** Air Conditioning 1100, 1105 and 2240 or concurrent enrollment and Math 1100 (or college equivalent) or Math 1115 (or college equivalent), or qualifying score on the mathematics placement test, or consent of instructor (2 lecture hours, 2 lab hours)

## AIR CONDITIONING 2250

**System Balancing**

2 credit hours

Covers air-delivery equipment, duct distribution, duct pressure, cubic feet per minute, fluid flow, pumps, piping, refrigeration systems, testing instruments, and fine tuning of systems.

**Prerequisite:** Air Conditioning 1100, 1105 and 1110 with a grade of "C" or better or consent of instructor (1 lecture hour, 2 lab hours)

## AIR CONDITIONING 2260

**Heating and Air Contracting**

3 credit hours

Principles of Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) contracting. Includes estimating, vendor selection and sales development in the context of starting and growing an HVACR business. (3 lecture hours)

## AIR CONDITIONING 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

## AIR CONDITIONING 2862

**Cooperative Education/Internship (Occupational)**

2 credit hours

Continuation of Cooperative Education/Internship I (Occupational). Participation in occupational area of work experience under supervision of an employer and faculty adviser. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Occupational), 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## AIR CONDITIONING 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study.

## AIR CONDITIONING 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study.

## AIR CONDITIONING 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study.

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**ANATOMY AND PHYSIOLOGY**

## ANATOMY AND PHYSIOLOGY 1500 (IAI L1 904L)

**Survey of Human Anatomy and Physiology**

4 credit hours

Essential principles of human anatomy and physiology are presented, including basic chemistry, cell and tissue studies, and an overview of all the body systems. Intended as a survey course for certain allied health and social service programs, and as a general natural science course. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

## ANATOMY AND PHYSIOLOGY 1551 (IAI L1 904L)

**Human Anatomy and Physiology I**

4 credit hours

First semester of a two-semester sequence dealing with the structure and function of the human body and mechanisms for maintaining homeostasis within it. Includes the study of cells, tissues and the integumentary, skeletal, muscular and nervous systems. Course is intended to be an alternative to Anatomy and Physiology 1571; credit toward graduation will be granted for Anatomy and Physiology 1551 or Anatomy and Physiology 1571, but not for both. Biology 1151 is strongly recommended.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

## ANATOMY AND PHYSIOLOGY 1552

**Human Anatomy and Physiology II**

4 credit hours

Continuation of the study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems, as well as the concepts of development, metabolism, fluid and electrolyte balance, and acid-base balance are included. Course is intended to be an alternative to Anatomy and Physiology 1572; credit toward

graduation will be granted for Anatomy and Physiology 1552 or Anatomy and Physiology 1572 but not for both. **Prerequisite:** Anatomy and Physiology 1551 or 1571 with a grade of "C" or better. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

ANATOMY AND PHYSIOLOGY 1571 (IAI L1 904L)

**Anatomy and Physiology with Cadaver I**

4 credit hours

First semester of a two-semester sequence dealing with the structure and function of the human body and mechanisms for maintaining homeostasis within it. Includes the study of cells, tissues and the integumentary, skeletal, muscular and nervous systems. Identification of anatomical structures on cadavers will be required in the laboratory. Course is intended to be an alternative to Anatomy and Physiology 1551; credit toward graduation will be granted for Anatomy and Physiology 1551 or Anatomy and Physiology 1571 but not for both. Biology 1151 is strongly recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

ANATOMY AND PHYSIOLOGY 1572

**Anatomy and Physiology with Cadaver II**

4 credit hours

Continuation of the study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems, as well as the concepts of development, metabolism, fluid and electrolyte balance, and acid-base balance are included. Identification of anatomical structures on cadavers will be required in the laboratory. Course is intended to be an alternative to Anatomy and Physiology 1552; credit toward graduation will be granted for Anatomy and Physiology 1552 or Anatomy and Physiology 1572 but not for both. **Prerequisite:** Anatomy and Physiology 1551 or 1571 with a grade of "C" or better. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

ANATOMY AND PHYSIOLOGY 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics in anatomy and physiology with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

ANATOMY AND PHYSIOLOGY 1821

**Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics in anatomy and physiology with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

ANATOMY AND PHYSIOLOGY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within anatomy and physiology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

ANATOMY AND PHYSIOLOGY 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative

education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

ANATOMY AND PHYSIOLOGY 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits.

**Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study.

ANATOMY AND PHYSIOLOGY 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study.

ANATOMY AND PHYSIOLOGY 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study.

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [www.cod.edu/academics/healthandsciences](http://www.cod.edu/academics/healthandsciences)

## ANTHROPOLOGY

ANTHROPOLOGY 1100 (IAI S1 901N)

**Cultural Anthropology**

3 credit hours

Introduces cultural anthropology as a subfield of anthropology that studies contemporary societies. Focuses on patterns in human behavior and on culture as the way people live and adapt to their various situations. Emphasis is on the diversity of cultural patterns throughout the world and the essential humanity of all people. Examples from a wide variety of cultures are presented in a variety of formats. (3 lecture hours)

## ANTHROPOLOGY 1101 (IAI S1 900N)

**Introduction to Anthropology**

3 credit hours

Introduces students to the four primary subfields of anthropology as well as the applications of anthropological work in addressing domestic, international, and cross-cultural issues and dilemmas. Emphasis is placed on the complementary and interrelated nature of archaeology, cultural anthropology, biological anthropology and linguistic anthropology. (3 lecture hours)

## ANTHROPOLOGY 1105 (IAI S1 904D)

**Practical Anthropology**

3 credit hours

Concentrates on how concepts, techniques and information from anthropology can be applied to helping people solve their problems and improve their lives. Emphasizes the relevance of anthropology to development issues and to concerns of many career fields such as business, medicine, social work, teaching and management. Course examples are drawn from diverse parts of the world. Individual project(s) relate to students' interests and/or careers. (3 lecture hours)

## ANTHROPOLOGY 1115

**Language and Culture**

3 credit hours

Introduces Linguistic Anthropology as a subfield of anthropology that explores how humans communicate. Focuses on language as the basis for social relations and culture. Emphasis is on the similarities and differences of human languages, the cognitive basis for language, the formation of communication systems, and the adaptive use of those systems in human societies. (3 lecture hours)

## ANTHROPOLOGY 1120 (IAI S1 903)

**Discovering Archaeology**

3 credit hours

Introduces archaeology as a subfield of anthropology that studies humanity's prehistory, history and present through the study of material remains and the archaeological record of human development from our origins to modern times. Laboratory work involves working with prehistoric and historic materials consisting of skeletal materials, artifacts, site maps, pottery, early writing, media and simulation. Students may also work with material from field archaeology sites in the United States and other regions in the world and in some terms archaeological field work may be done. (3 lecture hours, 1 lab hour)

## ANTHROPOLOGY 1125 (IAI S1 902)

**Race, Sex and Human Evolution**

3 credit hours

Introduces the field of physical anthropology, sometimes also known as biological anthropology. Topics include the scientific foundations for studying race and human variation as well as popular misconceptions about human genetic diversity; primatology, including a survey of living primate forms; evolutionary theory, the fossil record and the development of humans; and humanity's place in world ecology. Introduces forensic anthropology. Includes laboratory work centered on these topics, including skeletal biology. (3 lecture hours, 1 lab hour)

## ANTHROPOLOGY 1130 (IAI S1 904D)

**People and Cultures of the World**

3 credit hours

An introductory exploration of specific peoples and cultures in different areas of the world today, focusing on interaction between a people's culture and their environmental, societal and historical conditions. The peoples and cultures studied will be of different levels of complexity. Separate course sections focus on different world areas and may have different themes. Sections focusing on non-western cultures should fulfill the appropriate requirement for

an Illinois teaching certificate. See comment code published each term in the *Class Schedule* for focus and theme. (3 lecture hours)

## ANTHROPOLOGY 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.).

## ANTHROPOLOGY 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

## ANTHROPOLOGY 1840

**Independent Study in Anthropology**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## ANTHROPOLOGY 2150

**Culture and the Mind**

3 credit hours

Introduces an evolutionary approach to the understanding of how human nature was shaped in the Pleistocene Era and continues to have profound influences on contemporary behavior. Focuses on the evolution of traits that serve as the basis for human adaptations imposed by the needs related to subsistence, safety, sex, and sociality. Emphasis is on the role of culture and language as selective pressures in their own right, the evolved mental domains that have served our species, the basis for these adaptations, and the biological platforms for these systems. Anthropology 1101 and 1125 are recommended. **Prerequisite:** Psychology 1100 with a grade of "D" or better, or equivalent or consent of instructor (3 lecture hours)

## ANTHROPOLOGY 2200

**Introduction to Anthropological Methods**

4 credit hours

Provides an overview of the major methods of field work and research design in anthropology and related social and behavioral sciences. Students will analyze one or more topics using appropriate qualitative and quantitative methodological techniques. Some field work may be required. (2 lecture hours, 4 lab hours)

## ANTHROPOLOGY 2240

**Field Archaeology**

3 credit hours

Introduces the techniques and theory of field archaeology through actual excavation of prehistoric and historic field archaeological



sites and work with actual artifacts and other materials from those sites. Check the anthropology lab or semester listings of the timing and location of archaeological field schools. **Prerequisite:** Any course in Anthropology or consent of instructor (1 lecture hour, 4 lab hours)

#### ANTHROPOLOGY 2245

##### **Laboratory Methods in Archaeology**

3 credit hours

Introduces the techniques and theory of archaeological lab analysis through the examination of materials from various sites in both the United States and other regions of the world. Individual projects may center around particular interests. **Prerequisite:** At least one course in Anthropology or consent of instructor (1 lecture hour, 4 lab hours)

#### ANTHROPOLOGY 2800

##### **Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor

#### ANTHROPOLOGY 2820

##### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

#### ANTHROPOLOGY 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

#### ANTHROPOLOGY 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study.

#### ANTHROPOLOGY 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study.

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [www.cod.edu/academics/healthandsciences](http://www.cod.edu/academics/healthandsciences)

## ARCHITECTURE

#### ARCHITECTURE 1100

##### **Introduction to Architecture**

3 credit hours

Introductory study of the theory, history, principles and practice of architecture. Basic principles of architectural analysis, criticism and aesthetic principles. Includes the roles and responsibilities of the design professions, including interior design, landscape architecture, urban planning and engineering and how they relate to each other. (3 lecture hours)

#### ARCHITECTURE 1101

##### **Basic Architectural Drafting**

2 credit hours

Fundamentals of hand drafting and architectural conventions. Includes use of tools, lettering, dimensioning, drafting techniques, and frame construction vocabulary and technology. (1 lecture hour, 2 lab hours)

#### ARCHITECTURE 1111

##### **Building Materials**

4 credit hours

Characteristics, properties and applicable standards of construction materials. Includes all major structural, enclosure and finish materials and standards for materials. Emphasis on the process of material selection and evaluation, including sustainability concepts and criteria. (4 lecture hours)

#### ARCHITECTURE 1121

##### **Architectural Design Communication**

4 credit hours

Introduction to 2-D and 3-D communication and presentation techniques as used in architecture. Includes orthographic, paraline, perspective and freehand drawing techniques and procedures. Covers basic model building and the use of drawing as a problem abstraction and diagramming technique. (1 lecture hour, 6 lab hours)

#### ARCHITECTURE 1130

##### **Blueprint Reading**

2 credit hours

A survey of graphic construction drawings, including paper and electronic mediums. Students learn to interpret construction drawings for residential, commercial and industrial structures. Includes architectural and engineering documents and graphic conventions. (1 lecture hour, 2 lab hours)

## ARCHITECTURE 1131

**Introduction to Architectural Design**

4 credit hours

Basic design theories and strategies related to the development of spatial concepts in architectural design, including composition, color, form, relationship of elements, and development of 2-D and 3-D design projects. Emphasis on concept generation and evaluation. **Prerequisite:** Architecture 1100 and 1121 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

## ARCHITECTURE 1141

**Construction Methods I**

2 credit hours

Survey of basic construction techniques and procedures through project applications. Topics include concrete, masonry, wood frame and lightweight steel construction methods and materials. Includes tool selection and use. Course is not designed to give students trade skills in these areas. (1 lecture hour, 2 lab hours)

## ARCHITECTURE 1211

**Basic Computer-Aided Drafting – AutoCAD**

3 credit hours

Fundamentals of Computer-Aided Drafting and Design (CADD). Introduces concepts, techniques and procedures necessary to facilitate a basic functional understanding of AutoCAD.

**Prerequisite:** Basic technical drafting course, drafting experience or consent of instructor (1 lecture hour, 4 lab hours)

## ARCHITECTURE 1212

**Advanced Computer-Aided Drafting – AutoCAD**

3 credit hours

Advanced functions of Computer Assisted Design/Drafting (CADD). Includes advanced commands, system customization and Internet applications. 3-D modeling and rendering will be introduced.

**Prerequisite:** Architecture 1211 with a grade of "D" or better or equivalent or consent of instructor (1 lecture hour, 4 lab hours)

## ARCHITECTURE 1301

**Introduction to Construction Management**

3 credit hours

Construction management as a project delivery system emphasizing the roles and responsibilities of construction managers, contractors, sub-contractors, owners and design professionals, and how they relate to each other. Fundamentals of project administration from pre-construction planning to project close-out through the study and review of case studies. Includes an overview of cost estimating, meetings, project safety and scheduling. (3 lecture hours)

## ARCHITECTURE 1411

**Introduction to BIM-Revit**

3 credit hours

Fundamentals of Building Information Modeling (BIM) as a construction documentation system. Introduces concepts and features of BIM. Includes software structure and features, modeling and editing techniques, and sheet creation and organization.

Recommended: Architecture 1101 and 1211 or architectural drafting class or experience or consent of instructor (1 lecture hour, 4 lab hours)

## ARCHITECTURE 1412

**Introduction to BIM-Revit**

3 credit hours

Advanced concepts of Building Information Modeling (BIM). Focuses on applying BIM software to develop a set of construction documents. Simulates project development and documentation.

**Prerequisite:** Architecture 1411 with a grade of "C" or better or equivalent or consent of instructor (1 lecture hour, 4 lab hours)

## ARCHITECTURE 1820

**Selected Topics in Architecture I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

## ARCHITECTURE 1821

**Selected Topics in Architecture II**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

## ARCHITECTURE 1827

**Selected Topics VIII**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour)

## ARCHITECTURE 1840

**Architectural Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (4 lecture hours, 8 lab hours)

## ARCHITECTURE 2102

**Detailing and Construction Documents**

5 credit hours

Study of wood frame, masonry, steel and concrete construction systems and techniques. Project-based class that simulates the process of a project's development in an architectural office. Includes analysis and applications of codes, regulations and standards, material review and selection, construction detailing and documentation, and office standards and procedures for computer-aided drafting and design (CADD) application. **Prerequisite:** Architecture 1101 and Architecture 1111 with a grade of "C" or better, and Architecture 1211 with a grade of "C" or better, or consent of instructor (2 lecture hours, 6 lab hours)

## ARCHITECTURE 2103

**Steel and Concrete Construction**

4 credit hours

Study of steel and concrete construction technology. Project-based class that simulates the process of a project's development in an architectural office. Includes analysis and applications of codes, regulations and standards, material review and selection, construction detailing and documentation, and office standards and procedures for computer-aided drafting and design (CADD) application. **Prerequisite:** Architecture 2102 with a grade of "D" or better or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

## ARCHITECTURE 2142

**Construction Methods II**

2 credit hours

Survey of basic construction techniques and procedures through project applications. Topics include insulation, roofing, siding, installation of doors and windows, drywall, flooring and mechanical and electrical systems. Includes tool selection and use. Course is not designed to give students trade skills in these areas. (1 lecture hour, 2 lab hours)

**ARCHITECTURE 2150****Basic Surveying**

2 credit hours

Basic procedures, calculations and field data recording techniques used in surveying. Correct procedures for the use of surveyor's tape, engineer's level, and transit and rod to establish locations and elevations. This is not an appropriate course for someone seeking to become a licensed surveyor. (1 lecture hour, 2 lab hours)

**ARCHITECTURE 2201****Architectural Design I**

5 credit hours

Exploration of form and space of the built environment. Includes process of problem analysis and evaluation to generate concepts and develop solutions. **Prerequisite:** Architecture 1131 with grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (2 lecture hours, 6 lab hours)

**ARCHITECTURE 2202****Architectural Design II**

5 credit hours

Continuation of Architectural Design I. Problems involve larger scale, broader scope and increased complexity. Advanced and digital presentation techniques will be used for presentations. **Prerequisite:** Architecture 2201 with a grade of "C" or better or equivalent or consent of instructor (2 lecture, 6 lab hours)

**ARCHITECTURE 2203****Introduction to Architectural Theory**

3 credit hours

Traces the history of architectural thought through built projects, theoretical designs and original writings of architects and others. Relates architectural theory to associated philosophical and intellectual movements. **Prerequisite:** Architecture 1100 with a grade of "D" or better or equivalent and English Composition 1101 or 1105 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

**ARCHITECTURE 2210****Mechanical, Electrical and Plumbing Systems**

3 credit hours

An overview of mechanical, electrical and plumbing systems for buildings as used by architects and construction managers. Introduction to systems, equipment, design calculations and drawings, standards and conventions. **Prerequisite:** Architecture 1111 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**ARCHITECTURE 2220****Architectural Computer Modeling**

2 credit hours

Computer graphics course using Computer-Aided Drafting (CAD) and other software to create computer architectural models and presentations. **Prerequisite:** Architecture 1211 with a grade of "C" or better or equivalent or consent of instructor (1 lecture hour, 3 lab hours)

**ARCHITECTURE 2230****Structural Systems**

3 credit hours

An overview of components and concepts of structural systems in steel, concrete and wood as used by architects. Includes conceptual design and detailing. **Prerequisite:** Architecture 1211 or with a grade of "D" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**ARCHITECTURE 2240****Codes, Specifications and Contracts**

3 credit hours

Introduction to the legal framework of construction. The scope and implications of codes, includes model codes and review of structure and organization of the International Building Code (IBC), the organization, structure and role of specifications within construction documents, standard forms of contracts and contractual relationships. **Prerequisite:** Architecture 1111 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

**ARCHITECTURE 2250****Architectural Presentation and Portfolio**

3 credit hours

Advanced architectural presentation techniques. Covers both hardcopy and digital product formats. Uses various 3-D modeling software as well as image enhancement and animation software. **Prerequisite:** Architecture 1121 or Architecture 1211, with a grade of "C" or better or equivalent or consent of instructor (1 lecture hour, 4 lab hours)

**ARCHITECTURE 2260****Construction Estimating**

3 credit hours

Basic procedures, calculations and techniques used in construction cost estimating. Includes bidding procedures, different types of construction estimates and the appropriate procedures for each, and the process of quantity take-offs and cost calculations including equipment, overhead and profit components. Computer applications to produce estimates and review of existing software titles. **Prerequisite:** Architecture 1111 or equivalent or consent of instructor (3 lecture hours)

**ARCHITECTURE 2270****Construction Scheduling**

3 credit hours

Construction scheduling as a tool for project delivery and documentation, from project conception to building occupancy. Emphasizing the interrelationship of the trades and sequencing of the work during the construction process. Includes schedule composition and schedule implementation for project success. **Prerequisite:** Architecture 1130 and 1301 with a grade of "C" or better or equivalent or consent of instructor (3 lecture hours)

**ARCHITECTURE 2820****Advanced Selected Topics in Architecture I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

**ARCHITECTURE 2823****Advanced Selected Topics in Architecture IV**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (6 lab hours)

**ARCHITECTURE 2840****Architectural Experimental/Pilot Class**

1 to 6 credit hours

Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are

selected. **Prerequisite:** Consent of instructor (6 lecture hours, 12 lab hours)

#### ARCHITECTURE 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### ARCHITECTURE 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### ARCHITECTURE 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### ARCHITECTURE 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## ART

#### ART 1100 (IAI F2 900)

##### **Introduction to the Visual Arts**

3 credit hours

Overview of the visual arts as transmitters of cultural, humanistic and aesthetic values. Global selections from the remote past to the

present examined in thematic studies, including visual elements and design principles, motivations for art making within cultural and historical contexts, material processes and issues in world art. Designed to encourage visual literacy and develop analytical skills of the non-art major. Field trip may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### ART 1101

##### **Drawing I**

3 credit hours

Introductory studio course with emphasis on accurate observation and representation, informed use of drawing materials, and awareness of two-dimensional art elements. Course includes vocabulary development and reference to historic models of drawing. (6 lab hours)

#### ART 1102

##### **Drawing II**

3 credit hours

Continued exploration of the nature, scope and principles of drawing. Further development of critical thinking and visual problem-solving abilities. Exploration of additional concepts, materials and processes of visual art. Completion of Art 1151 is recommended prior to enrollment. **Prerequisite:** Art 1101 with grade of "C" or better or equivalent (6 lab hours)

#### ART 1105

##### **Introduction to Studio Art**

3 credit hours

Introduction to art methods and materials. Includes two-dimensional and three-dimensional design concepts introduced through a variety of media. May include painting, drawing, ceramics, sculpture, computer art, jewelry and printmaking. Field trip may be required. Course is intended for non-art majors. No previous art background is required. (6 lab hours)

#### ART 1140

##### **Introduction to Ceramics**

3 credit hours

Introduction to the materials, techniques and concepts in ceramics. Includes handbuilding, throwing, surface treatment and kiln loading. Course is intended for the general interest student. (6 lab hours)

#### ART 1151

##### **Two-Dimensional Foundations Studio**

3 credit hours

Studio course exploring the principles and elements of 2-D art and design. Development of visual awareness, critical thinking and problem-solving abilities. Emphasis will be placed on concepts, materials and processes associated with the principles of visual perception. (6 lab hours)

#### ART 1152

##### **Three-Dimensional Foundations Studio**

3 credit hours

An introduction to the design and construction of three-dimensional objects and environments, including an exploration of the principles and elements of three-dimensional art and design. Use of tools in projects designed to explore the relationship of form to function, building processes to materials, and transformations of architectural space. **Prerequisite:** Art 1101 with a grade of "C" or better or equivalent or concurrent enrollment Art 1101 or consent of instructor (6 lab hours)

#### ART 1185

##### **Book Arts**

2 credit hours

Introduction to the theory, history and processes in book making. Traditional and non-traditional formats will be explored with



emphasis on the relationship between form and content.  
(4 lab hours)

ART 1250  
**Introduction to Jewelry**

3 credit hours  
Introduction to the materials, techniques and concepts in jewelry and metalsmithing. Includes forming, casting, surface treatment and soldering. Course is intended for the general interest student.  
(6 lab hours)

ART 1823  
**Selected Topics in Art**

3 credit hours  
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Will vary with topic (6 lab hours)

ART 1840  
**Independent Study – Individualized**

1 to 4 credit hours  
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

ART 2201  
**Life Drawing I**

3 credit hours  
Introduction to drawing the figure from observation. Emphasizes accurate portrayal of the undraped figure. Various drawing materials will be used to investigate anatomical study and pictorial composition. **Prerequisite:** Art 1101 with a grade of “C” or better, or equivalent or consent of instructor (6 lab hours)

ART 2202  
**Life Drawing II**

3 credit hours  
Continued exploration of life drawing concepts, materials and processes concentrating on the undraped figure. Emphasis will be placed upon accurate anatomical proportions and portrayal of sculptural solidity. Individual expression and use of visual metaphors will be developed. **Prerequisite:** Art 2201 or consent of instructor (6 lab hours)

ART 2211 (IAI F2 901)  
**Art History I: To 1300**

3 credit hours  
Chronological survey of Western visual culture from the remote past through the High Gothic. Examines major examples of painting, sculpture, architecture and the decorative arts within their historical, social, political, cosmological and aesthetic contexts. Field trip may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ART 2212 (IAI F2 902)  
**Art History II: 1300-1750**

3 credit hours  
Chronological survey of Western visual culture from the Proto-Renaissance through the Late Baroque. Examines major artists and regional styles within their historical, social, political, cosmological and aesthetic contexts. Field trip may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ART 2213 (IAI F2 902)  
**Art History III: 1750 to Present**

3 credit hours  
Chronological survey of Western visual culture from the Rococo period through the transnational Postmodern era. Examines major artists, art styles and aesthetic theories within their historical, social, political and aesthetic contexts. Field trip may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ART 2214 (IAI F2 903N)  
**Introduction to Non-western Art**

3 credit hours  
Overview of the contexts and aesthetics of the indigenous visual cultures of Africa, Asia, Australia, Oceania and the Americas. Selections include painting, sculpture, architecture, ceramics and fiber arts from the remote past to the present. Field trip may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ART 2215  
**History of Adornment**

3 credit hours  
A survey of the history of jewelry and metals in a social and cultural context. This course introduces students to representative examples of historical world jewelry and metals. Using a combination of lectures, slides, videos, readings and group discussions, the course explores the roles of personal adornment, jewelry and metals in terms of major historical periods, worldwide cultures, important events and famous personages. Attention will be paid to contemporary work and international art jewelry, including design and fabrication issues. Class discussions will focus on the function of jewelry and its presentation and display on the body. (3 lecture hours)

ART 2216  
**Introduction to Philosophy of Art**

3 credit hours  
Philosophical theories of the creative process in art. Emphasis on form, significance, emotion, reality, association, and chance in the realm of aesthetic judgment and criticism. Credit cannot be given for both Art 2216 and Philosophy 2250. (3 lecture hours)

ART 2221  
**Painting I**

3 credit hours  
Introduction to painting methods using various materials such as acrylic, watercolor and oil paint. Emphasis in paintings will be on technical skill sets, originality of content, and an understanding of art history as contextual and referential. **Prerequisite:** Art 1101 with a grade of “C” or better or college equivalent or concurrent enrollment in Art 1101 (6 lab hours)

ART 2222  
**Painting II**

3 credit hours  
Further exploration of painting skills with continued development of individual expression. Formal and conceptual rigor is emphasized. **Prerequisite:** Art 2221 with a grade of “C” or better or college equivalent (6 lab hours)

ART 2231  
**Sculpture I**

3 credit hours  
Introduction to basic sculptural materials, tools, equipment, processes and concepts associated with wood and plaster sculpture. Basic three-dimensional design principles will be addressed throughout the course. An informed context will be provided by the study of the work of current and historic sculptors.

Studio safety will be considered at all times. **Prerequisite:** Art 1101 with a grade of “C” or better or equivalent or concurrent enrollment in Art 1101 (6 lab hours)

ART 2232

**Sculpture II**

3 credit hours

Introduction to basic sculptural materials, tools, equipment, processes and concepts associated with steel sculpture. Large-scale installation or site-specific sculpture will be investigated in group activities. An informed context will be provided by the study of the work of current and historic sculptors. Studio safety will be considered at all times. **Prerequisite:** Art 1101 and Art 2231 with a grade of “C” or better or equivalent (6 lab hours)

ART 2241

**Ceramics I**

3 credit hours

An introductory studio consisting of conceptual and technical processes in ceramics. Exploration of functional design and sculpture utilizing basic clay construction methods, surface treatment and kiln loading. **Prerequisite:** Art 1101 with a grade of “C” or better or concurrent enrollment in Art 1101 (6 lab hours)

ART 2242

**Ceramics II**

3 credit hours

Continued exploration of sculptural and functional ceramics. Investigation of the entire process, from idea development through presentation of finished form, including clay forming, surface treatment and kiln firing. **Prerequisite:** Art 1101 and Art 2241 with a grade of “C” or better or equivalent (6 lab hours)

ART 2243

**Student Art Gallery**

2 credit hours

Examination of the process by which galleries and museums create exhibitions, from planning and research through exhibition design, selection process, installation, communication with the audience, accessibility and evaluation. Includes management of student art gallery on campus. **Prerequisite:** Art 1100 with a grade of “C” or better or equivalent or consent of instructor (4 lab hours)

ART 2251

**Jewelry/Metalsmithing I**

3 credit hours

A studio introduction to basic jewelry and metalsmithing processes, materials, tools and equipment. Basic techniques such as sawing, soldering and cold connecting sheet metal (silver, copper, brass) are introduced. Craftsmanship, health work habits and studio safety are emphasized. Historical and contemporary aesthetics and concepts in art metals and jewelry design are examined. **Prerequisite:** Art 1101 or concurrent enrollment (6 lab hours)

ART 2252

**Jewelry/Metalsmithing II**

3 credit hours

Continued exploration of jewelry/metalsmithing processes, materials, tools and equipment. Techniques introduced include stone setting, lost wax casting, enameling and etching. Focus on proficiency in the selection, use and manipulation of materials as well as a mastery of the processes involved. Contemporary trends in jewelry/metalsmithing are examined. Craftsmanship, healthy work habits and studio safety will be emphasized. **Prerequisite:** Art 2251 and Art 1101 (6 lab hours)

ART 2266

**Computer Art I**

3 credit hours

An introduction to the use of computer hardware and two-dimensional software in the creation of fine art. Topics will include the creation and manipulation of direct-drawn, formula-generated and photographic images. Techniques will include the use of a stylus, a scanner and a printer for use with bitmap-and vector-based software. Note: This is not a graphic design computer course. **Prerequisite:** Art 1101 with a grade of “C” or better or college equivalent or concurrent enrollment in Art 1101 (6 lab hours)

ART 2267

**Computer Art II**

3 credit hours

An introduction to the use of three-dimensional software using one or more modeling, animation and editing software packages. Topics will include organic and geometric modeling, surface rendering, animation, CNC and video production in the creation of film, installation and sculptural art forms. **Prerequisite:** Art 1101 with a grade of “C” or better or college equivalent and Art 2266 with a grade of “C” or better or college equivalent (6 lab hours)

ART 2275

**Intaglio Printmaking**

3 credit hours

An introduction to the intaglio printmaking processes. Topics include etching, engraving, drypoint, aquatinting and photo-etching in creating editions of fine art prints. Emphasis is placed upon mastery and the creative use of these printmaking techniques. **Prerequisite:** Art 1101 with a grade of “C” or better or college equivalent (6 lab hours)

ART 2276

**Lithography**

3 credit hours

An introduction to the lithographic printmaking process. Topics include the use of crayon, tusche, photocopy and drawing transfers, and multiple plate printing in creating editions of lithographic prints from both metal plate and stone. Emphasis is placed upon mastery and the creative use of these printmaking techniques. **Prerequisite:** Art 1101 with a grade of “C” or better or college equivalent (6 lab hours)

ART 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

ART 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study.

ART 2870

**Cooperative Education /Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study.

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or www.cod.edu/larts

## AUTOMOTIVE SERVICE TECHNOLOGY

AUTOMOTIVE SERVICE TECHNOLOGY 1040

**Automotive for Non-Majors**

3 credit hours

Overview of personal auto maintenance principles. Topics include proper maintenance for longevity, resale value, and safety; how vehicle systems work; and how to complete some light vehicle repairs. (2 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1110

**Engine Design and Operation**

3 credit hours

Design, operation and troubleshooting procedures of the gasoline engine. Includes disassembly, identification and inspection of parts, use of service manuals, safety, and shop procedures.

**Prerequisite:** Course requires Reading Placement Test Score-Category One or consent of instructor (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1120

**Manual Drive Train and Axles**

4 credit hours

Inspection, construction, nomenclature, diagnosis, disassembly and assembly of manual drive train components, including clutch, manual transmission, driveshaft, universal joint, constant velocity joint, final drive, manual transaxle, transfer case and locking hub assemblies. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1131

**Automotive Basic Electricity**

4 credit hours

Automotive circuit construction emphasizing meter usage. Analog and digital meters and oscilloscopes are stressed. Practical approach to reading wiring diagrams, service manuals and manufacturers' repair procedures, including diagnosis of selected vehicle accessory circuits. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1140

**Suspension, Steering and Alignment**

3 credit hours

Front and rear suspension systems for front-wheel drive and rear-wheel drive vehicles. Steering systems, including rack and pinion, are diagnosed and repaired. Wheels and tires and their effect on handling and ride. Wheel alignment angles are measured and adjusted. **Prerequisite:** Course requires Reading Placement Test Score-Category One or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1232

**Automotive Engine Electricity**

4 credit hours

Starting and charging systems, including starting and charging components. System testing for both no-start and preventive maintenance conditions and charging system construction and on-car testing. Construction, operation, function and testing of ignition systems of current vehicles, including electronic ignition, distributorless ignition and oscilloscope testing. **Prerequisite:** Automotive Service Technology 1131 with a grade of "C" or better or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1240

**Braking Systems**

4 credit hours

Automotive braking systems, including rotor and drum machining, caliper and wheel cylinder rebuilding, wheel-bearing service, brake pad and shoe replacement, and diagnosis and service of anti-lock systems. **Prerequisite:** Automotive Service Technology 1131 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1250

**Automotive Air Conditioning and Heating**

4 credit hours

The servicing of automotive air conditioning and heating systems, including refrigerant recovery and recycling, compressor clutch and seal repair, performance testing, and system diagnosis and repair. **Prerequisite:** Automotive Service Technology 1131 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1261

**Engine Controls and Emissions I**

4 credit hours

General Motors engine computer controls, including inspection, testing and diagnosis of sensors, fuel injectors, emission controls and fuel delivery by using scan tools, electrical meters and exhaust gas infrared analyzers. **Prerequisite:** Automotive Service Technology 1131 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

AUTOMOTIVE SERVICE TECHNOLOGY 2120

**Automatic Transmission**

3 credit hours

Inspection, construction, nomenclature, diagnosis, disassembly, and assembly of automatic transmissions and automatic transaxles, including fundamental operation and construction, inspection and rebuilding of apply devices, planetary gear sets, oil pumps, valve bodies, and one-way clutches. **Prerequisite:** Course requires Reading Placement Test Score-Category One or consent of instructor. (1 lecture hour, 4 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2133

**Automotive Body Electricity**

3 credit hours

Selected automotive electrical accessories will be emphasized. Diagnose and repair causes of poor, intermittent, and/or no operation of accessories, such as windshield wipers and washers, power windows, power seats, power mirrors, power antennas, cruise controls, window de-icers, automatic headlights and power door locks. **Prerequisite:** Automotive Service Technology 1131, 1232 and 1261 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2162

**Engine Controls and Emissions II**

4 credit hours

Computerized engine control systems common to Ford and Daimler Chrysler vehicles. Testing of sensors, components, systems, circuits, on-board diagnosing, scan-tool use and fuel injectors. **Prerequisite:** Automotive Service Technology 1131, 1232 and 1261 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2220

**Advanced Automotive Drivetrains**

3 credit hours

Inspection, construction, operation, and diagnosis of automatic and manual transmission, transaxle, transfer case, and driveline electrical components and controls. Includes fundamental theory, operation, construction, inspection, and diagnosis of switches, sensors, solenoids, motors, and control devices. **Prerequisite:** Automotive Service Technology 1131, 1120 and 2120 with a grade of "C" or better or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2280

**Automotive Service**

6 credit hours

Trade experience for the advanced automotive student. **Prerequisite:** Automotive Service Technology 1110, 1120, 1140, 1232, 1240, 1250, 1261 and 2120 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 10 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2345

**Automotive Hybrid Technology**

2 credit hours

An overview of hybrid vehicles. Terminology, safety requirements, theory of operation and modification to other automotive systems are reviewed. Inspection and diagnosis of hybrid systems using specialized tools. Also examined is the impact of hybrid technology on the automotive industry. Course requires Reading Placement Test Score-Category One (1 lecture hour, 2 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2365

**Introduction to Diesel Fuel Systems & Emissions**

2 credit hours

A generic course designed to increase the knowledge of diesel engine design, fuel control systems, and emission controls. Topics of discussion include direct and indirect injection, mechanical fuel systems, unit injection systems, electronic diesel control, hydraulically actuated electronic unit injectors (HEUI), common-rail fuel systems and related emission control devices. **Prerequisite:** Automotive Service Technology 1110 and 1261 with a grade of "C" or better or equivalent or consent of instructor (1 lecture hour, 2 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2370

**A.S.E. Certification Analysis and Technology Update**

2 credit hours

An integrative course teaching a higher level of skills to combine previous courses and introduce updates in technology to prepare for the National Institute for Automotive Service Excellence (ASE) certification exams. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2840

**Experimental/Pilot Class**

1 to 6 credit hours

Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lecture hours, 12 lab hours)

## AUTOMOTIVE SERVICE TECHNOLOGY 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education /Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

## AUTOMOTIVE SERVICE TECHNOLOGY 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## AUTOMOTIVE SERVICE TECHNOLOGY 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## AUTOMOTIVE SERVICE TECHNOLOGY 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty



adviser, successful completion of Cooperative Education/Internship I (Transfer)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## BIOLOGY

Also see courses under Anatomy and Physiology, Botany, Microbiology and Zoology.

### BIOLOGY 0470

#### **Biology Study Skills**

1 credit hour

Designed for students who need basic knowledge, improvement or practice in study skills for biology. This course includes basic study techniques, techniques specific for biology terminology, text and lecture notes, problem solving, laboratory skills, test-taking techniques and biology resources. This course is especially appropriate for students in Biology 1100 and 1151, or those who have little or no experience in biology. This course can only be taken on a pass/fail basis. **Prerequisite:** Course requires Reading Placement Test Score-Category One (1 lecture hour)

### BIOLOGY 1100 (IAI L1 900L)

#### **Survey of Biology**

4 credit hours

This biology course promotes scientific literacy for non-science majors and interested students. Organisms are studied from their behavioral, ecological, hereditary and evolutionary perspectives. An inquiry-based approach to understanding biological processes is emphasized. Students explore the relevance of biology to contemporary issues in human society. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better, or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

### BIOLOGY 1110 (IAI L1 905L)

#### **Environmental Biology**

4 credit hours

An interdisciplinary study of the environment investigating how nature works and how things are interconnected. Based on an understanding of ecological concepts and principles, students examine lifestyle issues and critically analyze the relationships among population, natural resources, land use, agriculture, biodiversity, industrialization and pollution. Environmental problems are examined from scientific, ethical, economic and sociological perspectives to enable students to understand the relevance of biology to contemporary issues in human society. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

### BIOLOGY 1120 (IAI L1 906)

#### **Introduction to Genetics**

2 credit hours

This course provides an introduction to the principles of genetics emphasizing the significance of genetics to human culture, including classical transmission genetics, molecular genetics and biotechnology, and the genetics of populations. **Prerequisite:** Mathematics 0481 with a grade of "C" or better or a qualifying score on the Math Placement Exam. (3 lecture hours)

### BIOLOGY 1130 (IAI L1 906 L)

#### **Fundamentals of Biotechnology**

4 credit hours

Application of living organisms and their products in industry, medicine, agriculture, forensics and environmental science. This

multidisciplinary course introduces fundamental principles of biology and chemistry that are used to develop biotechnology and surveys various fields of biotechnology. Topics include biochemistry, recombinant DNA, bioinformatics, medical biotechnology and bioremediation. Laboratory includes techniques that are routinely used in biotechnology such as chromatography, electrophoresis and genetic transformation of cells. This course is intended for both science majors and non-science majors.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

### BIOLOGY 1140

#### **Introduction to Biology of Aging**

3 credit hours

Study of aging in humans and other species. Topics include theories of aging, aging research, age-related changes at the molecular, cellular, systemic and organismal levels, and normal aging and its relationship to human disease. **Prerequisite:** Course requires Reading Placement Test Score-Category One. (3 lecture hours)

### BIOLOGY 1151 (IAI L1 900L)

#### **Principles of Biological Science**

5 credit hours

An introduction to biology for biological science majors and interested students. Major topics include the philosophy of science, scientific method, chemical organization of life, cell biology, energy dynamics, genetics, molecular genetics, molecular, evolution and biodiversity. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or qualifying score on mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One (4 lecture hours, 3 lab hours)

### BIOLOGY 1152

#### **Principles of Biological Science**

5 credit hours

Continuation of Biology 1151. An introduction to higher levels of biological organization from the organism to the ecosystem. Topics include organismal structure and physiology, behavior, population ecology, community ecology, ecosystem ecology and environmental biology. **Prerequisite:** Biology 1151 with a grade of "C" or better. Course requires Reading Placement Test Score-Category One (4 lecture hours, 3 lab hours)

### BIOLOGY 1800

#### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses in biology cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the biology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific biology topic and/or the critical analysis of contemporary issues in biology. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of biology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) May be taken up to three times for credit as long as a different topic is selected each time. **Prerequisite:** Course requires Reading Placement Test Score-Category One

## BIOLOGY 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics in biology with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## BIOLOGY 1821

**Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics in biology with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

## BIOLOGY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within biology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

## BIOLOGY 2150

**Ecology**

4 credit hours

Introduction to the field of ecology. Ecological principles and concepts pertaining to ecosystems, communities and populations are examined. Emphasis is given to experimentation in the field. **Prerequisite:** Biology 1151 and 1152. Course requires Reading Placement Test Score-Category One (2 lecture hours, 4 lab hours)

## BIOLOGY 2151

**Cell Biology**

4 credit hours

Advanced examination of the morphology and physiology of eukaryotic and prokaryotic cells. Coverage includes organelle structure and function, cell membranes, the cytoskeleton, extracellular matrices, enzymes, bioenergetics, cell division, gene expression, cell movement and cell communication. Course is intended for the biological science major and has a lab component. **Prerequisite:** Biology 1152 and Chemistry 1552 with a grade of “C” or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

## BIOLOGY 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses in biology cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the biology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific biology topic and/or the critical analysis of contemporary issues in biology. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of biology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field

preparation, logistics, etc.) **Prerequisite:** At least one course in biology or consent of instructor. Course requires Reading Placement Test Score-Category One

## BIOLOGY 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

## BIOLOGY 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## BIOLOGY 2870

**2870 Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## BIOLOGY 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [www.cod.edu/academics/healthandsciences](http://www.cod.edu/academics/healthandsciences)

## BOTANY

BOTANY 1310 (IAI L1 901L)

### **Ethnobotany**

4 credit hours

This course is designed to introduce students to the origins of many of the plants and plant products that are an important part of everyday life, and the ways that the development of different cultures have been influenced by plants throughout history. Topics covered include basic plant morphology, plant reproduction, origins of major agricultural crops, economically important plant products, and medicinal and poisonous plants. Designed for non-science majors and interested students. (3 lecture hours, 2 lab hours)

BOTANY 1320

### **Prairie Ecology**

4 credit hours

The organisms, environments and ecological processes of the tallgrass prairie ecosystem are examined through lecture, discussion and field studies. Identification of prairie plants, with an emphasis on species in northern Illinois, is included. Students participate in College of DuPage's prairie reconstructions. Field trips and activities are required. Biology 1100 or Biology 1151 is recommended. (2 lecture hours, 4 lab hours)

BOTANY 1800

### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses in botany cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the botany discipline. These courses require direct experience and focused reflection in an in-depth study of a specific botany topic and/or the critical analysis of contemporary issues in botany. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of botany concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) May be taken three times for credit as long as different titles are selected.

(1 to 3 lecture hours, 1 to 3 lab hours)

BOTANY 1820

### **Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics in botany with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

BOTANY 1821

### **Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

BOTANY 1840

### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within botany to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

BOTANY 2350

### **Introduction to Botany**

4 credit hours

Introduction to botany, including classification, morphology, anatomy, physiology and diversity. Includes lab and field experiences. **Prerequisite:** Biology 1151 (2 lecture hours, 6 lab hours)

BOTANY 2360

### **Local Flora**

3 credit hours

Explores the ecology and distribution of vascular plants from selected study areas. Includes the basic principles and methods of plant taxonomy: identification, classification, herbarium techniques. Study areas in addition to the College of DuPage campus will be indicated in the current *Class Schedule*. Costs vary. **Prerequisite:** Biology 1152 or Botany 2350 or equivalent (1 lecture hour, 4 lab hours)

BOTANY 2800

### **Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses in botany cover topics not otherwise covered by general education course and other courses in the *Catalog* for the botany discipline, while building upon academic knowledge and skills acquired in introductory-level botany classes. These courses require direct experience and focused reflection in an in-depth study of a specific botany topic and/or the critical analysis of contemporary issues in botany. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of more complex botany concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in Botany or consent of instructor (1 to 3 lecture hours, 1 to 3 lab hours)

BOTANY 2860

### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

BOTANY 2865

### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## BOTANY 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## BOTANY 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [www.cod.edu/academics/healthandsciences](http://www.cod.edu/academics/healthandsciences)

**BUSINESS**

Also see courses listed under Accounting, Management and Marketing.

## BUSINESS 1100

**Introduction to Business**

3 credit hours

Introduction to the environment and functions of business. Organization and operation of business, the relationships of business to society, and the dominant field and types of business are surveyed. Functions studied include marketing, finance, production, management, retailing, wholesaling, advertising, risk, pricing, personnel and business environment. (3 lecture hours)

## BUSINESS 1111

**Customer Service**

3 credit hours

Interacting with customers and responding to customer concerns in-person, on the telephone and electronically. Customer service throughout the organization and as a system for meeting customer expectations. Verbal and nonverbal communications as they relate to customer service. Methods for responding to different types of customers. (3 lecture hours)

## BUSINESS 1120

**Fundamentals of Personal Investing**

3 credit hours

Explores various investment vehicles utilized by the personal investor, including stocks, bonds, real estate, mutual funds and insurance. Investment vehicle descriptions, values and economic implications are surveyed. Application of investment theory and risk analysis associated with investment decisions as they relate to building a hypothetical personal investment portfolio. (3 lecture hours)

## BUSINESS 1161

**Entrepreneurship**

3 credit hours

Exploration of the start-up of small businesses and franchises. Essential business ownership primarily focusing on the marketing and management aspects of entrepreneurship. Product ideas, product development, patents, copyright and trademarks. Introduction to start-up financing and business planning. (3 lecture hours)

## BUSINESS 1170

**Electronic Business/Commerce**

3 credit hours

Overview of resources, knowledge, skills, practices and techniques necessary to conduct business online. Explores nature and impact of e-commerce on business and business operation, resources required versus available resources, e-management, Customer Relationship Management (CRM), ordering systems, end-to-end marketing, and performance and control systems. (3 lecture hours)

## BUSINESS 1840

**Independent Study – Individualized**

1 to 3 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

## BUSINESS 2200

**Business Budgeting**

3 credit hours

A hands-on study in the preparation and analysis of reports in the budgeting system. Includes detailed budgets for various departments; budgeted income statements and balance sheets with supporting schedules will be prepared. Special emphasis on the financial manager's role in budgeting as well as the relationship of the budgeting process with the long-term corporate goals and objectives. Completion of Business 1100 recommended prior to enrollment. **Prerequisite:** Accounting 1110 or 1140 or equivalent or consent of instructor (3 lecture hours)

## BUSINESS 2210

**Principles of Finance**

3 credit hours

The theoretical and conceptual framework used by financial managers to reach decisions in a dynamic economy, including problems related to sources of capital and financial analysis. Emphasis is placed on financial statement analysis, time value of money, cash flow management, risk and return, and sources financing. Completion of Business 1100 recommended prior to enrollment. **Prerequisite:** Accounting 1110 or 1140 or equivalent or consent of instructor (3 lecture hours)

## BUSINESS 2220

**Financial Analysis and Valuation**

3 credit hours

A comprehensive review of business strategy, financial strategy and the industry environment; includes an analytical review of corporate financial reports. Results provide information for management and investment decisions. **Prerequisite:** Business 1100, Accounting 1140 and Accounting 1150 or consent of instructor (3 lecture hours)



**BUSINESS 2255*****International Business***

3 credit hours

Theoretical and descriptive exploration of the interdependent world of international business. Explores globalization trends, international trade theories, regulations affecting trade, regional economic integration, and the impact these factors have on developing nations. Examines how company functions such as marketing, finance and management operate in the international setting. Special emphasis is placed on strategy development and the role of culture. Completion of Business 1100 or equivalent is recommended prior to enrollment. (3 lecture hours)

**BUSINESS 2860*****Cooperative Education/Internship (Occupational)***

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

**BUSINESS 2865*****Cooperative Education/Internship Advanced (Occupational)***

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits.

**Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

**BUSINESS 2870*****Cooperative Education/Internship (Transfer)***

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of Instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

**BUSINESS 2871*****Cooperative Education/Internship Advanced (Transfer)***

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and

Technology Division Office at (630) 942-2592 or  
www.cod.edu/Academic/Bus\_Tech

**BUSINESS LAW****BUSINESS LAW 1840*****Independent Study – Individualized***

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

**BUSINESS LAW 2205*****Legal Environment of Business***

3 credit hours

Traces the history and development of the judicial system and the social and legal environment of business. Principles of business legal ethics and corporate social responsibilities, government regulation of business, securities law, consumer protection law, labor law, employment law and environmental law are discussed and analyzed through use of cases and problems. Emphasis will be placed upon the legal dimension of ethical issues in the world of business. (3 lecture hours)

**BUSINESS LAW 2211*****Business Law I***

3 credit hours

Introduction to our Anglo-American system of law, tracing its sources and history. Introduction to the legal system as it affects business activity. Principles of the law of contracts, agency relationships, commercial paper and sales are discussed and analyzed through the use of the Uniform Commercial Code, cases and problems. Emphasis is upon the law and business relationships. (3 lecture hours)

**BUSINESS LAW 2212*****Business Law II***

3 credit hours

Principles of the law of agency, partnerships, corporations, wills, trusts, accounting law and liability bankruptcy and real property are discussed and analyzed through the use of the Model Corporation Act, the Illinois Business Corporation Act, cases and problems. Emphasis is placed on the Uniform Commercial Code, including negotiable instruments, holder in due course, credit and secured transactions. **Prerequisite:** Business Law 2211 (3 lecture hours)

**BUSINESS LAW 2860*****Cooperative Education/Internship (Occupational)***

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

**BUSINESS LAW 2865*****Cooperative Education/Internship Advanced (Occupational)***

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning

experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### BUSINESS LAW 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### BUSINESS LAW 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## CHEMISTRY

#### CHEMISTRY 0485

##### **Basic Laboratory and Computation Chemistry**

2 credit hours

A study of the metric system, dimensional analysis, density, physical and chemical properties of matter, formulae, gas laws, stoichiometry, and acids and bases. Examination of the rules for presentation of graphical and calculated formats of laboratory measurements. (1 lecture hour, 2 lab hours)

#### CHEMISTRY 1105 (IAI P1 903L)

##### **Contemporary Chemistry**

4 credit hours

Introduction to chemical concepts using practical issues and applications to illustrate the principles of chemistry. The language of chemistry, scientific method and measurement, experimentation with data collection, and current issues with application to chemical principles. This course is not a prerequisite for Chemistry 1212. One year of high school is recommended. (3 lecture hours, 3 lab hours)

#### CHEMISTRY 1137

##### **Concepts and Applications in Nanoscience**

4 credit hours

Inter-disciplinary course combining elements of chemistry, physics and electronics, takes a non-mathematical approach to examine the fundamental scientific principles behind the new field of nanotechnology. The course is intended for non-science majors. The important future role of nanotechnology in society is discussed, using applications in the consumer world and industry involving

materials and electronics. The course provides experience from theoretical, laboratory and laboratory simulation perspectives. (3 lecture hours, 3 lab hours)

#### CHEMISTRY 1211 (IAI P1 902L)

##### **General Chemistry**

5 credit hours

Fundamental concepts of general inorganic chemistry, including formula naming, atomic structure, stoichiometry, gas laws, solutions, equilibria, redox, acid-base theory and nuclear chemistry. Intended for health science majors. Not intended for science or engineering majors. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better, or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score (4 lecture hours, 3 lab hours)

#### CHEMISTRY 1212

##### **Survey of Organic Chemistry**

5 credit hours

Introduction to organic chemistry. Nomenclature, structure, physical properties, reactions and synthesis of major organic functional groups. Intended for health science majors. **Prerequisite:** Chemistry 1211 or 1551 (4 lecture hours, 3 lab hours)

#### CHEMISTRY 1551 (IAI P1 902L)

##### **Principles of Chemistry I**

5 credit hours

Measurement, the mole concept, composition and reaction stoichiometry, types of reactions, thermochemistry, atomic theories, chemical periodicity, bonding, molecular geometry, and properties and theories of the gaseous, liquid and solid states. Intended for science and engineering students. **Prerequisite:** Mathematics 1428 (or college equivalent) or Mathematics 1431 (or college equivalent) with a grade of "C" or better, or qualifying score on the mathematics placement test or qualifying A.C.T. math sub-score and one year high school chemistry with a satisfactory grade, or Chemistry 0485 (or college equivalent) with a grade of "C" or better (4 lecture hours, 3 lab hours)

#### CHEMISTRY 1552

##### **Principles of Chemistry II**

5 credit hours

Properties of solutions, chemical kinetics, equilibrium, acid-base theory and equilibria, solubility equilibria, electrochemistry, thermodynamics, coordination chemistry and nuclear chemistry. Laboratory includes both qualitative and quantitative analysis. **Prerequisite:** Chemistry 1551 with a grade of "C" or better (4 lecture hours, 3 lab hours)

#### CHEMISTRY 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses in chemistry cover topics not otherwise covered by general education courses and other courses in the catalog for the chemistry discipline while building upon academic knowledge and skills acquired in introductory-level chemistry classes. These courses require direct experience and focused reflection in an in-depth study of a specific chemistry topic and/or the critical analysis of contemporary issues in chemistry. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of chemistry concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) (1 to 3 lecture hours)

**CHEMISTRY 1820****Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

**CHEMISTRY 1821****Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

**CHEMISTRY 1840****Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

**CHEMISTRY 2213****Introduction to Biochemistry**

4 credit hours

Introduction of biochemical topics of carbohydrates, lipids, proteins, nucleic acids and their subsequent metabolism. **Prerequisite:** Chemistry 1212 or 2551 (3 lecture hours, 3 lab hours)

**CHEMISTRY 2551****Organic Chemistry I**

5 credit hours

Bonding principles, functional groups, isomerism, stereochemistry, nomenclature, synthesis and reactions of alkanes, cycloalkanes, alkenes, alkynes, alcohols and alkyl halides. Addition, elimination, rearrangement and substitution mechanisms. Laboratory stresses microscale techniques, basic separations, purifications, syntheses, and infrared and nuclear magnetic resonance spectroscopy. For chemistry majors, pre-professional students and biology majors. **Prerequisite:** Chemistry 1552 with a grade of "C" or better or equivalent (3 lecture hours, 6 lab hours)

**CHEMISTRY 2552****Organic Chemistry II**

5 credit hours

Continuation of Chemistry 2551. Nomenclature, properties, reactions and synthesis of conjugated dienes, aromatics, organometallics, alcohols, phenols, ethers, aldehydes and ketones, carboxylic acids and derivatives, and amines. Mechanisms include electrophilic aromatic substitution and nucleophilic addition. Carbohydrates, amino acids, proteins and nucleic acids. Laboratory stresses single and multi-step syntheses along with mass spectrometry, ultraviolet, and carbon-13 nuclear magnetic resonance spectroscopy and integrated spectral analysis. For chemistry majors, pre-professional students and biology majors. **Prerequisite:** Chemistry 2551 with a grade of "C" or better or equivalent (3 lecture hours, 6 lab hours)

**CHEMISTRY 2800****Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced course in chemistry covers topics not otherwise covered by general education courses and other courses in the *Catalog* for the chemistry discipline. These courses require direct experience and focused reflection in an in-depth study of a specific chemistry

topic and/or the critical analysis of contemporary issues in chemistry. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experimental component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of chemistry concepts, theories, principle and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, filed preparation, logistics, etc.) **Prerequisite:** At least one course in chemistry or consent of the instructor. (1 to 3 lecture hours, 1 to 3 lab hours)

**CHEMISTRY 2820****Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** One other course in the discipline and consent of instructor (1 to 3 lecture hours)

**CHEMISTRY 2860****Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

**CHEMISTRY 2865****Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study.

**CHEMISTRY 2870****Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

**CHEMISTRY 2871****Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty

adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [www.cod.edu/academics/healthandsciences](http://www.cod.edu/academics/healthandsciences)

## CHINESE

CHINESE 1100

### **Civilization and Culture of China**

3 credit hours

This course is a brief introduction to the culture, history, political institutions, social, philosophical and economic development of China from ancient times to the present. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

CHINESE 1101

### **Elementary Chinese I**

4 credit hours

Introduction to standard, modern Mandarin Chinese: pronunciation, idiomatic expressions, speech patterns and characters for beginning students. (4 lecture hours)

CHINESE 1102

### **Elementary Chinese II**

4 credit hours

A continuation of Chinese 1101 with emphasis on listening, speaking, and reading and writing complex sentences. For students who have successfully completed Chinese 1101 or equivalent or three years of high school Chinese. (4 lecture hours)

CHINESE 1840

### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

CHINESE 2201

### **Intermediate I**

4 credit hours

This course is a continuation of Chinese 1102 with emphasis on further accuracy and comprehension in listening, reading, speaking and writing. More Chinese characters are introduced. For students who have successfully completed Chinese 1102 or equivalent, or four years of high school Chinese. (4 lecture hours)

CHINESE 2202 (IAI H1 900)

### **Intermediate Chinese II**

4 credit hours

Continuation of Chinese 2201. More Chinese characters are introduced. For students who have successfully completed Chinese 2201 or equivalent, or five years of high school Chinese. (4 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## COMMUNICATIONS

COMMUNICATIONS 0414

### **Spelling I: Regular Patterns**

1 credit hour

Basic course that begins with a diagnosis of spelling ability. Students practice using regular spelling patterns, including common spelling rules, compound word formation, prefixes and suffixes, plurals and possessives, contractions and spellings for the schwa sound. Students examine spelling errors caused by mispronunciation and troublesome words that sound alike. Using a multi-sensory approach, students apply learned spelling patterns by proofreading and editing in exercises and in their own writing. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

COMMUNICATIONS 0415

### **Spelling II: Irregular Patterns and Words Often Confused**

1 credit hour

Basic course that covers irregular patterns for spelling words. Students practice spelling words that change their basic form, contain silent letters or add letters and learn commonly misunderstood words and homonyms. Using a multi-sensory approach, students apply spelling patterns by proofreading and editing in exercises and in their own writing. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

COMMUNICATIONS 0421

### **Grammar and Punctuation for Writing Sentences**

3 credit hours

Basic course designed to help students recognize sentence parts and differentiate clauses and phrases, as well as improve in grammar, punctuation and sentence structure. Emphasis is placed on identifying and avoiding pitfalls in sentence construction, such as run-on sentences, sentence fragments, subject-verb agreement, tense consistency and pronoun reference. This course will also teach students the skills of sentence combining in order to achieve sentence variety. This course may require visits to the Writing Assistance Area for additional individualized instruction. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (3 lecture hours)

COMMUNICATIONS 0423

### **Mechanics and Usage Review**

1 credit hour

Basic course that provides practice in editing sentences for correctness in mechanics and usage: punctuation, particularly to convey sentence meaning; verb forms and tenses, including subject-verb agreement; clear pronoun reference and agreement; forms of adjectives and adverbs; and capitalization of proper nouns and titles. Students practice skills in the context of writing exercises and student's own writing. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

COMMUNICATIONS 0431

### **Writing Effective Sentences**

1 credit hour

Basic course in which students learn to write complete and varied sentences that suit a variety of purposes. Students learn parts of speech; understand sentence grammar by recognizing subjects, verbs, clauses and phrases; and learn how to avoid common sentence errors. Emphasis is on writing clear, correct and varied sentences and on how grammar principles relate to effective communication. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)



## COMMUNICATIONS 0433

### **Diction**

1 credit hour

Basic course in style, tone and clarity of expression. Students improve writing by choosing words to avoid clichés, wordiness, informality and confusion. Emphasis is on learning to write clearly, consistently and directly for a variety of writing tasks, especially for academic writing. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

## COMMUNICATIONS 0441

### **Paragraph Development**

1 credit hour

Basic course with practice in composing well-constructed paragraphs. Students write paragraphs in basic rhetorical forms using skills of effective organization, unity, detail and transition. Emphasis is on understanding paragraph components to write well-developed and coherent paragraphs. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

## COMMUNICATIONS 0443

### **Essay Organization**

1 credit hour

Basic course in elements of essay organization and development. Students write essays utilizing writing process: invention, collection of supporting information, development of thesis statement, organization of ideas, multiple drafts/revisions and editing. Emphasis is on learning to write and organize essays with specific rhetorical devices, such as description, example and comparison/contrast. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

## COMMUNICATIONS 0449

### **Term Paper Supplement**

1 credit hour

Basic course reviewing essential skills in writing term papers. Students review skills through reading and practical exercises. Emphasis is on writing term papers using sound research and documentation methods. May be taken in conjunction with a course that requires a research paper. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## COMPUTER AND INTERNETWORKING TECHNOLOGIES

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1100

#### **PC Maintenance and Upgrading**

2 credit hours

Introduction to maintaining and upgrading personal computers (PCs). System component identification, configuration, assembly and disassembly, upgrading procedures, basic troubleshooting techniques and preventative maintenance are included. (1 lecture hour, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1111

#### **Computer and Hardware Maintenance**

3 credit hours

Covers aspects of hardware support relating to personal computers (PCs), including system troubleshooting, system board, drive subsystems, memory, input/output devices and multimedia. Prepares the student for the CompTIA A+ exam. **Prerequisite:** Computer and Internetworking Technologies 1100 with a grade of "C" or better or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1112

#### **Advanced System Maintenance**

3 credit hours

Maintaining and servicing modern personal computer systems, with emphasis on advanced hardware, operating systems, troubleshooting, networks, printers and other peripheral devices. Prepares the student for the CompTIA A+ exam. **Prerequisite:** Computer and Internetworking Technologies 1100 with a grade of "C" or better or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1113

#### **Advanced Computer Maintenance Tools**

2 credit hours

Covers advanced system maintenance with emphasis on maintaining and repairing laptop computers, data recovery, system restoral, virus detection and removal. Students will use the latest freeware tools with emphasis on using Knoppix as a troubleshooting tool.

**Prerequisite:** Computer and Internetworking Technologies 1111 and 1112 with a grade of "C" or better or equivalent or CompTIA A+ Certification or consent of instructor (1 lecture hour, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1120

#### **Binary Numbers and Subnetting**

2 credit hours

Introduction to numbering systems used in computers and networking systems. Binary, Hexadecimal numbering systems as well as subnetting, Variable Length Subnet Masks (VLSM), Classless Inter-Domain Routing (CIDR), Supernetting, Internet Protocol version 4 (IPv4) and an overview of IPv6. (2 lecture hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1121

#### **Networking Fundamentals**

3 credit hours

Current and emerging internetworking technologies, including Open Systems Interconnect (OSI) reference model, binary numbers, hexadecimal numbers, address classes, Internet Protocol (IP) addressing and subnetting, protocols, standards and cabling techniques. (2 lecture hours, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1122

#### **Routing Protocols and Concepts**

3 credit hours

Practical skills required to verify and troubleshoot basic router and routing protocol configurations. Topics covered include: Variable Length Subnet Mask (VLSM), Classless Inter-Domain Routing (CIDR), static routing, dynamic routing, default routing, Routing Information Protocol (RIP), Enhanced Interior Gateway Routing Protocol (EIGRP), and Open Shortest Path First (OSPF).

**Prerequisite:** Computer and Internetworking Technologies 1121 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1123

#### **LAN Switching and Wireless**

3 credit hours

Practical skills required to configure and verify basic switch and wireless router configuration. Topics include: Local Area Network (LAN) architecture, basic switch concepts and configuration, Virtual Local Area Network (VLAN) design and configuration, Spanning Tree Protocol (STP), VLAN Trunking Protocol (VTP), inter-VLAN routing, basic wireless concepts and configuration. **Prerequisite:** Computer and Internetworking Technologies 1122 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1124

#### **Accessing the WAN**

3 credit hours

Practical skills required to verify and troubleshoot router and Wide Area Network (WAN). Topics include: WAN design, Point-to-Point

Protocol (PPP), Frame Relay, network management, network security, Access Control List (ACL), Virtual Private Network (VPN), Dynamic Host Configuration Protocol (DHCP), Network Address Translation (NAT), and Internet Protocol version 6 (IPv6).

**Prerequisite:** Computer and Internetworking Technologies 1123 (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1125

##### **Cisco Certified Design Associate (CCDA)**

3 credit hours

Design of routed and switched network infrastructures and services involving Local Area Network (LAN), Wide Area Network (WAN), and broadband access for businesses and organizations. After completion of this course students should be prepared to participate in the Cisco Certified Design Associate (CCDA) examination. **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or consent of instructor (3 lecture hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1151

##### **Wireless Network Administration**

3 credit hours

Introduction to the design, implementation and maintenance of wireless networks. Topics include: 802.11 standards, wireless radio technology, wireless topologies, access points, bridges, wireless security, site surveys, troubleshooting and antenna systems.

**Prerequisite:** Computer and Internetworking Technologies 1121 with a grade of "C" or better or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1170

##### **Fundamentals of Telecommunications**

2 credit hours

Introductory course covering voice and data communications technology. A history of the industry as well as future trends, including new and emerging technologies such as cellular and Voice Over Internet Protocol (VOIP). (2 lecture hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1612

##### **Configuring Windows PC Desktop Operating System**

3 credit hours

Introduction to Microsoft Windows operating system support. Topics include install, upgrade and migrate of Microsoft PC windows operating system and configuration of hardware and software applications. Prepares students for Microsoft Certified IT professional (MCITP) and Enterprise Desktop Enterprise Desktop Support Technician certifications. **Prerequisite:** Computer and Internetworking Technologies 1121 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1613

##### **Enterprise Desktop PC Support Technician**

3 credit hours

Further introduction to Microsoft Windows operating system support. Topics include troubleshooting and resolving issues related to Microsoft PC windows operating system. Prepares students for Microsoft Certified IT professional (MCITP) and Enterprise Desktop Administrator certifications. **Prerequisite:** Computer and Internetworking Technologies 1612 with a grade of "C" or better, or equivalent (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1635

##### **Data Communications and Networks**

3 credit hours

Principles of microcomputer data communications and network systems. Serial and parallel data communications, basic telephony, Electronic Industry Association (EIA) standards, Local Area Networks (LANs), and Wide Area Networks (WANs) are included. Prepares the student for the CompTIA Network+ exam.

**Prerequisite:** Computer and Internetworking Technologies 1121 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1640

##### **Security Plus**

3 credit hours

Information security principles providing participants the tools for implementing and managing security in the enterprise. Covers a broad review of information security, including the terminology and overview of information security management. After completion of this course students should be prepared to participate in the CompTIA Security+ examination. **Prerequisite:** Computer and Internetworking Technologies 1121 or 1635 with a grade of "C" or better or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1645

##### **Internet Telephony**

3 credit hours

Covers aspects of converging voice, data, messaging and video as well as emerging Voice Over Internet Protocol (VOIP) Technologies. Circuit switched and packet switched networks will be covered as well as related protocols. Prepares the student for the CompTIA Convergence+ certification exam. Recommended: CIT 1640 with a grade of C or better or equivalent. **Prerequisite:** Computer and Internetworking Technologies 1121 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1650

##### **IT Project Plus**

3 credit hours

Introduction to IT project management tools and methodology as needed for the CompTIA Project+ certification. Topics include project initiation, project planning, estimating and scheduling, team building, controlling cost, budgeting and resource allocation, project quality and closure. **Prerequisite:** Computer and Internetworking Technologies 1635 with a grade of "C" or better or equivalent, or consent of instructor (3 lecture hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1825

##### **Selected Topics**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### COMPUTER AND INTERNETWORKING TECHNOLOGIES 2170

##### **Network Virtualization 1: VMware Workstation**

2 credit hours

Practical skills required to install and configure VMware virtual workstation. Topics include VMware workstation installation, guest operating system installation, snapshot creation, virtual machine cloning, team management and virtual machine networking.

**Prerequisite:** Computer and Internetworking Technologies 1635 with a grade of "C" or better or equivalent, or consent of instructor (1 lecture hour, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2241****Cisco Certified Network Professional I**

3 credit hours

Basic routing principles, including Variable-Length Subnet Masks (VLSM), Classless InterDomain Routing (CIDR), route summarization, route redistribution, route optimization, multicasting and Internet Protocol version 6 (IPv6). Routing protocols covered include Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Intermediate System to Intermediate system (IS-IS), and Border Gateway Protocol (BGP).

**Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2242****Cisco Certified Network Professional II**

3 credit hours

Media, devices and protocols to build, configure and troubleshoot a remote access network to interconnect central sites to branch offices and home offices. Includes configuring Digital Subscribe Line (DSL), MultiProtocol Label Switching (MPLS), Virtual Private Network (VPN), Site-to-Site VPN, Cisco device hardening, and Cisco Intrusion Detection System (IDS) and Intrusion Prevention System (IPS) systems. **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2243****Cisco Certified Network Professional III**

3 credit hours

Basic and multi-layer switching configuration. Includes Spanning Tree Protocol (STP), Virtual Local Area Networks (VLAN), VLAN Trunking Protocol (VTP), redundant links, inter-VLAN routing, Hot-Standby Routing Protocol (HSRP), Virtual Router Redundancy Protocol (VRRP), wireless LANs, voice over Internet protocol (VOIP), and security. **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2244****Cisco Certified Network Professional IV**

3 credit hours

Explain the Cisco hierarchical network model as it pertains to an end-to-end enterprise network, describe specific requirements for implementing a Voice Over Internet Protocol (VOIP) network, describe the need to implement Quality of Service (QOS) and the methods for implementing QOS on a converged network, describe and configure wireless security and basic wireless management.

**Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2251****CCNA Security**

3 credit hours

Provides the knowledge and hands-on skills required to install, troubleshoot and monitor Cisco security network devices. Students who complete this course will be prepared to sit for the Cisco Certified Networking Associate (CCNA) Security Certification exam, which is a stepping stone for job roles such as network security specialist and network security administrator. CCNA Security certification is a prerequisite for becoming a Cisco Certified Security Professional (CCSP). **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or CCNA Certification, or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2252****Securing Networks with PIX and Application Security Appliance (SNPA)**

3 credit hours

Overall security processes with particular emphasis on hands-on skills for Cisco Private Internet Exchange (PIX) firewall appliance. Includes Cisco security technologies; PIX firewall installation, configuration and maintenance; Authentication, Authorization, Accounting (AAA) implementation; Intrusion Prevention Systems (IPS); Virtual Private Network (VPN) configuration and implementation; and advanced protocol and attack guards.

**Prerequisite:** Computer and Internetworking Technologies 2251 or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2253****Intrusion Prevention Systems (IPS)**

3 credit hours

Overall intrusion detection and prevention processes with particular emphasis on hands-on skills for installing and configuring the Cisco IPS 4215 sensor appliance using Command-Line Interface (CLI) and the IPS Device Manager (IDM). **Prerequisite:** Computer and Internetworking Technologies 2251 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2410****CCNA Voice**

3 credit hours

Basic operation and components involved in Voice Over Internet Protocol (VOIP). Configuration of IP phone, Cisco Call Manager Express (CME) and Cisco Unity Express (CUE) solutions are covered. **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2411****Cisco Voice Over IP**

3 credit hours

Basic operation and components involved in Voice Over Internet Protocol (VOIP); integrate basic IP telephony network into existing telephony network; configure router to perform basic VOIP call; implementation of dial plan; configuration of gateway and gatekeeper. **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2412****Quality of Service**

3 credit hours

Prepares students for the Cisco Certified Voice Professional qualifying exam. Topics covered include: Quality of Service (QOS), classification and marking, queuing, traffic shaping and policing, congestion avoidance, link efficiency, modular QOS command line interface, and QOS best practices. **Prerequisite:** Computer and Internetworking Technologies 1124 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

**COMPUTER AND INTERNETWORKING TECHNOLOGIES 2450****UNIX System Administration**

3 credit hours

Advanced course in the administration and maintenance of the UNIX operating system. Emphasizes UNIX system installation, management and maintenance, users' account control, file system and services, system performances and security. **Prerequisite:** Computer Information Systems 1450 and 1600 or consent of instructor (2 lecture hours, 2 lab hours)



## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2455

**LINUX System Administration**

3 credit hours

Advanced course in the administration and maintenance of the LINUX operating system. Emphasizes LINUX system installation, management and maintenance, users' account control, file system and services, system performances and security. **Prerequisite:** Computer Information Systems 1450 and 1600 or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2640

**Ethical Hacking**

3 credit hours

Introduces network security specialists to various methodologies used to attack a network and the countermeasures employed to prevent attacks. Exposes students to the various phases involved in hacking, attacks, countermeasures and exploit categories. Concepts, principles and techniques are supplemented by hands-on exercises for attacking and disabling a network. The topics are presented in the context of properly securing the network. **Prerequisite:** Computer and Internetworking Technologies 2610 with a grade of "C" or better or equivalent (3 lecture hours)

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2651

**Computer Forensics I**

3 credit hours

Focuses on the preservation, identification, extraction, documentation and interpretation of computer data. Topics covered include evidence handling, chain of custody, collection, preservation, identification, and recovery of computer data using forensic recovery software and methods. **Prerequisite:** Computer and Internetworking Technologies 1111 and 1112 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2652

**Computer Forensics II**

3 credit hours

A continuation of Computer Forensics I. Extends the use of analysis software and forensics tools. Focuses on network and open source forensics tools. **Prerequisite:** Computer and Internetworking Technologies 2651 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2840

**Experimental/Pilot Class**

1 to 6 credit hours

Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (6 lecture hours, 12 lab hours)

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## COMPUTER AND INTERNETWORKING TECHNOLOGIES 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study.

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**COMPUTER INFORMATION SYSTEMS**

## COMPUTER INFORMATION SYSTEMS 0800

**Learning Computer Basics**

3 credit hours

Prepares students for computer related courses that do not require a prerequisite and develops computer skills for personal or professional growth. Theory and practice are integrated through a combination of instructor-led lessons and mandatory, guided, self-paced practice exercises. Topics include hardware, word processing, math utilized in spreadsheets, presentation software, basic Internet use and e-mail. (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1110

**Using Computers: An Introduction**

2 credit hours

Prepares students for the use of the computer as a productivity tool. Fundamentals of how a computer works by understanding hardware and the distinctions between system software and application software. Hands-on projects will use microcomputer applications to teach concepts related to word processing, spreadsheets, databases and presentation graphics. Topics include



creation and maintenance of folders and files, networks and information access using the Internet. (2 lecture hours, 1 lab hour)

#### COMPUTER INFORMATION SYSTEMS 1120

##### **The Internet**

2 credit hours

Introduces the fundamental skills and knowledge needed to master and use the Internet. Provides an understanding of the concepts behind the Internet as a tool as well as hands-on activities using the Internet. Intended for a broad audience. (2 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1130

##### **Windows Basics**

2 credit hours

Introduction to the Windows operating system and its Graphical User Interface (GUI). **Prerequisite:** Basic computer mouse skills (2 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1150

##### **Introduction to Computer Information Systems**

3 credit hours

An overview of the computing field and its typical applications. Covers key terminology and components of computer hardware, software and operating systems. Other topics include systems development methods, management information systems, programming languages, communications, networks, application software, the Internet and career opportunities. Microcomputer applications include word processing, spreadsheet, database and presentation software. (3 lecture hours, 1 lab hour)

#### COMPUTER INFORMATION SYSTEMS 1160

##### **Windows Command Line**

2 credit hours

Introduction to microcomputer operating systems. Provides an opportunity to work with the Microsoft Windows operating system command line. Includes the major components of an operating system, command syntax, disk format and management, internal/external commands, file manipulation, directory structure, files and disk maintenance, configuration and batch files, and network connectivity. (2 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1180

##### **Introduction to Networking**

3 credit hours

Survey course in network management that provides the critical foundation of the theory and design of Local Area Networks (LAN). Includes network topologies, standards and protocols, LANs as nodes in larger networks in micro-to-mainframe links, the Internet, wireless transmission, client-server, and an overview of security and Network Management and system administration. **Prerequisite:** Computer Information Systems 1150 or 1160 or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1199

##### **Introduction to Game Industry**

3 credit hours

An introduction to video game industry and development. This course explores the history of games, the game development cycle, game careers, and the social impact of games. (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1200

##### **Game Design**

3 credit hours

Survey of computer game and simulation design. Topics include design elements, user interface, game rules, genres and game media. (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1201

##### **Advanced Game Design**

3 credit hours

Advanced exploration of game design and the different game genres. Topics will include storyboarding story and game play, troubleshooting game design and logic flaws, and conceptualizing games for modding. This course is a continuation of CIS 1200. Recommended course: Computer Information Systems 1200 (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1205

##### **Office Suite Software and Integration**

3 credit hours

Introduction to the integrative aspects of business suite software. Concepts related to the creation and editing of word processing, spreadsheet, database and graphics files. Includes the principles of document integration as it relates to suite applications and the integration of suite software to build web pages. **Prerequisite:** Computer Information Systems 1110 or 1130 or 1150 or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1211

##### **Game Development I**

3 credit hours

Computer game development, including player controls, sound, music and animation. Two-dimensional games will be created using game editors and development tools. **Prerequisite:** Computer Information Systems 1200 and 1400 with a grade of "C" or better or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1221

##### **Introduction to Spreadsheets**

3 credit hours

Computerized spreadsheets for database (list) operations, statistical analysis and financial analysis: includes planning and creating spreadsheets. Use of customization and automation features of software. **Prerequisite:** Computer Information Systems 1110 or 1130 or 1150 or equivalent or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1222

##### **Advanced Spreadsheets**

2 credit hours

Advanced features and analytical concepts for an electronic spreadsheet program. Customization, automation features, advanced data analysis and summarization tools are explored. **Prerequisite:** Computer Information Systems 1221 or equivalent or consent of instructor (2 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1230

##### **Microcomputer Database Application**

3 credit hours

Relational database management course using a Windows platform, including database design, database creation, database maintenance, firm creation, report creation, query creation and macros creation. Instruction in application development and programming using a representative microcomputer database management package. **Prerequisite:** Computer Information Systems 1110 or 1130 or 1150 or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 1240

##### **Presentation Graphics – Windows Based**

2 credit hours

Introduction to the design and use of presentation graphics for microcomputers in a Windows-based environment. Includes basics of visual design, numeric charts, text charts, diagrams, organization charts, screenshow presentations and other advanced topics. **Prerequisite:** Computer Information Systems 1110 or 1130 or 1150 or consent of instructor (2 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1300

**Web Design Software**

3 credit hours

Creation of websites using web design software such as DreamWeaver or FrontPage. Topics include website design, styles, graphics, tables, frames, forms and layers. **Prerequisite:** Computer Information Systems 1150 or Computer Information Systems 1120 and 1130 or consent of instructor (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1310

**HTML and CSS**

3 credit hours

Creation of effective web pages using Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS). Includes web page and website design concepts and preparation of graphics for the web, with the primary focus on implementation of the design. **Prerequisite:** Computer Information Systems 1120 and either Computer Information Systems 1130 or 1150 or consent of instructor (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1315

**Web Development for Educators**

3 credit hours

Creation of an educational web site used within an academic environment using web design software, Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS). **Prerequisite:** Computer Information Systems 1110 or 1150 with a grade of "C" or better or consent of instructor (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1400

**Programming Logic and Technique**

4 credit hours

An introduction to computer-based problem-solving. Includes design tools such as structure charts, Input Processing Output charts (IPO), flowcharts, pseudocode and Object-Oriented Programming (OOP). Concepts such as documentation, structured design and modularity are emphasized. Actual programming experiences are assigned in a procedural level emphasizing structured design techniques. **Prerequisite:** Mathematics 0482 (or college equivalent) or Mathematics 1115 (or college equivalent) with a grade of "C" or better, or qualifying score on the mathematics placement test or qualifying A.C.T. math score or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1450

**Introduction to Linux/Unix Operating Systems**

3 credit hours

Introduction to Linux and Unix, two multi-user, interactive real-time operating systems. Includes the Linux graphical user interfaces, Linux applications, Linux/Unix utilities, file structures, text editors, regular expressions and the help system. Emphasis on building the foundation necessary to understand the capabilities of both the Linux and Unix operating systems and on developing the basic skills necessary to utilize these systems effectively. **Prerequisite:** Computer Information Systems 1150 or 1160 (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1510

**Graphical User Interface Programming**

4 credit hours

Introduction to event-driven programming in the Windows environment and design techniques used to create the Windows Graphical User Interface (GUI). Includes program design, program syntax and control structures, forms and controls. **Prerequisite:** Computer Information Systems 1400 and 1130 or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1600

**Fundamentals of Operating Systems**

3 credit hours

Fundamental principles of operating systems, process execution, scheduling, memory management, concurrent processes, distributed processing, deadlock, security, and related topics. Also examines current microcomputer, mid-range computer, and mainframe operating systems. The following courses are strongly recommended: Computer Information Systems 1130 and Computer Information Systems 1160. (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 1610

**Windows Client OS**

3 credit hours

Introduces theoretical and practical concepts of local area network on the Microsoft Windows desktop Operating System (OS). Includes installing and configuring the client OS, administering users, managing devices, organizing file system, establishing security, and installation and configuration of networking components. Covers network and performance monitoring tools provided by the OS and the establishment of baselines to troubleshoot problems. May be taken three times for credit as new versions are released. **Prerequisite:** Computer Information Systems 1180 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER INFORMATION SYSTEMS 1611

**Windows Vista Administration**

3 credit hours

Introduces the theoretical and practical concepts of local area network on the Microsoft Windows Vista Operating System (OS). Includes installing and configuring the OS, administering users, managing devices, organizing file system, establishing security, and installation and configuration of networking components. Covers network and performance monitoring tools and establishes baseline for troubleshooting problems. **Prerequisite:** Computer and Internetworking Technologies 1121 or 1180 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER INFORMATION SYSTEMS 1620

**Windows Server OS**

3 credit hours

Introduces administration of the Windows server Operating System (OS). Includes installing and configuring server operating system, planning security, installing applications, backing up file system, using utilities, managing users, setting network printers and troubleshooting. Also includes Terminal Services (TS) administration and Network Monitor installation and configuration as well as system recovery functions. May be taken three times for credit as new versions are released. **Prerequisite:** Computer Information Systems 1610 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER INFORMATION SYSTEMS 1630

**Windows Server Active Directory (AD)**

3 credit hours

Advanced administrative course for Windows server, Active Directory Services (ADS) on the Windows network operating system. Includes network administration tasks and tools, management of user and group accounts, organization of shared folders, management of ADS, policy, security, and installation and management of Trees and Forests. May be taken three times for credit as new versions are released. **Prerequisite:** Computer Information Systems 1620 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS 1660

**Managing a Microsoft Windows Server 2003 Network**

3 credit hours

Administration course for managing a Microsoft Windows Server 2003 network. Includes configuration, administration and troubleshooting elements ranging from user accounts to server security. Covers how to create and manage network resources such as file, print and web resources as well as Active Directory (AD) objects. **Prerequisite:** Computer Information Systems 1620 or equivalent (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS 1670

**Planning a Microsoft Windows Server Network**

3 credit hours

Administration course for planning a Microsoft Windows Server network. Includes overview of network services. Plan for a network infrastructure, network data flow, configuration of routing and switching, Dynamic Host Configuration Protocol (DHCP), and Domain Name Services (DNS). Covers security, network access, server availability, certificates, and problem recovery. **Prerequisite:** Computer Information Systems 1620 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS 1820

**Selected Topics II**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken up to three times for credit as long as a different topic is selected each time. Prerequisites will vary depending upon the course contents. Skills attained in prerequisites are necessary for successful completion of the course. (1 to 3 lecture hours)

COMPUTER INFORMATION SYSTEMS 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

COMPUTER INFORMATION SYSTEMS 2212

**Game Development II**

3 credit hours

Computer game development in three dimensions. Topics include player control, sound, music and animation. Computer games will be created using three-dimensional editors and development tools. **Prerequisite:** Computer Information Systems 1211 with a grade of “C” or better or consent of instructor (3 lecture hours)

COMPUTER INFORMATION SYSTEMS 2220

**Game Programming Using C++**

4 credit hours

Game programming using C++ libraries to create Windows-based games and simulators. Topics include player controls, sound, music, and animation. Recommended: C++ programming experience and knowledge of object orientation. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS 2230

**Simulation and Serious Game Design**

3 credit hours

Introduction to simulation and serious game design, which may include military, academic, medical and training applications. Recommended: Computer Information Systems 1200 (3 lecture hours)

COMPUTER INFORMATION SYSTEMS 2240

**Cross-Platform Game Development**

3 credit hours

Development factors considered when creating a computer game across multiple platforms and devices. Topics include memory, storage, system configuration and development tool considerations. Current game platforms are analyzed. **Prerequisite:** Computer Information Systems 2212 with a grade of “C” or better or consent of instructor (3 lecture hours)

COMPUTER INFORMATION SYSTEMS 2250

**XNA Game Programming**

4 credit hours

Game programming using XNA libraries to create Xbox and Windows-based games and simulators. Topics include player controls, sound, music, and animation. Recommended courses: Computer Information Systems 2541 or 2561 (4 lecture hours)

COMPUTER INFORMATION SYSTEMS 2260

**Game Programming Cross-Platform**

3 credit hours

Development factors considered when programming a computer game across multiple platforms and devices. Topics include memory, storage, system configuration, and development tools. Current game platforms will be analyzed. Recommended: C++ Programming experience (3 lecture hours)

COMPUTER INFORMATION SYSTEMS 2320

**JavaScript and Advanced HTML**

3 credit hours

Creation of web pages using a combination of HTML, DHTML and JavaScript. Includes functions, event handling, control structure, Windows, form validation, animation, cookies and debugging. **Prerequisite:** Computer Information Systems 1310 and 1400 or consent of instructor (3 lecture hours)

COMPUTER INFORMATION SYSTEMS 2330

**Introduction to XML**

3 credit hours

An exploration of eXtensible Markup Language (XML) web technology, highlighting the power of XML to structure data without regard to how the data will be presented. **Prerequisite:** Computer Information Systems 1310 or consent of instructor (3 lecture hours)

COMPUTER INFORMATION SYSTEMS 2340

**Common Gateway Interface (CGI)/Perl**

4 credit hours

Introduction of CGI/Perl, a portable cross-platform, object-based scripting language using the Unix/Linux platform to write Perl scripts and use modules from the Perl module library. Includes simple data types, standard and file input/output, flow control, lists and arrays, regular expressions, subroutines and functions, objects and modules, Perl Database Interface (DBI), process management, security, and introduction to the Common Gateway Interface (CGI) and client-server applications. **Prerequisite:** Computer Sciences 1450 and any Computer Information Systems 2000-level programming language or consent of instructor (4 lecture hours)

COMPUTER INFORMATION SYSTEMS 2350

**Introduction to ASP.NET**

4 credit hours

Introduction to web server programming. Includes server programming models, processing forms, creating dynamic web applications, working within the server application environment, debugging web applications, integrating with the file system and other components, interacting with data sources and other web services, using server programming tools, and developing web server applications. **Prerequisite:** Computer Information Systems 1310 and 1400 or consent of instructor (4 lecture hours)



## COMPUTER INFORMATION SYSTEMS 2411

**Introduction to COBOL Programming**

4 credit hours

Introduction to business programming on medium-to-large scale computers using COBOL. Emphasizes program structure, language syntax, sequential file processing, table handling, sorting procedures and report logic with control breaks. **Prerequisite:** Computer Information Systems 1400 or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2420

**Microprocessor Assembly Language**

4 credit hours

Introduction to the Assembly language of the Intel microprocessor-based microcomputer. Includes the architecture of the microprocessor, the instruction set, memory organization, data representation, and data manipulation. Recommended: Any computer programming experience. (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2430

**Mainframe Assembly Language**

4 credit hours

Introduction to mainframe assembly language for IBM and IBM-compatible mainframe computer systems. Includes the architecture of the mainframe microprocessor, the instruction set, memory organization, data representation and data manipulation. **Prerequisite:** Computer Information Systems 1400 and any Computer Information Systems 2000-level programming language course or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2440

**Shell Programming for UNIX/LINUX**

3 credit hours

Introduction to shell programming. Covers a variety of popular shells used in both UNIX and LINUX operating systems. Includes file security and permissions, filename substitution, shell standard input and output, redirection, file input and output, regular expressions, utilities such as grep, awk, sed and the login environment. Emphasis on shell programming, user defined and shell variables, flow control structures, shell functions, shell built-in commands, and the writing and executing of shell scripts. **Prerequisite:** Computer Information Systems 1450 and any Computer Information Systems 2000 level-programming language course (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2450

**UNIX System Administration**

3 credit hours

Advanced course in the administration and maintenance of the UNIX operating system. Emphasizes UNIX system installation, management and maintenance, users' account control, file system and services, system performances and security. **Prerequisite:** Computer Information Systems 1450 or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER INFORMATION SYSTEMS 2455

**LINUX System Administration**

3 credit hours

Advanced course in the administration and maintenance of the LINUX operating system. Emphasizes LINUX system installation, management and maintenance, users' account control, file system and services, system performances and security. **Prerequisite:** Computer Information Systems 1450 or consent of instructor (2 lecture hours, 2 lab hours)

## COMPUTER INFORMATION SYSTEMS 2480

**FORTRAN for Scientific Programming Applications**

3 credit hours

Comprehensive coverage of the FORTRAN programming language. Emphasis on design, programming and documentation of scientific

applications, including statistical analysis, curve fitting, optimization and engineering, and scientific modeling applications. **Prerequisite:** Mathematics 2231 or college equivalent (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2485

**C++ for Science and Engineering**

3 credit hours

Development and application of the C++ language. Emphasis on object-oriented design, programming and documentation of scientific applications. Includes statistical analysis, curve fitting, optimization and engineering, and scientific modeling applications. Topics include language format and syntax, functions, data-storage classes, arrays, structures, introduction to user-defined classes, inheritance and polymorphism. **Prerequisite:** Mathematics 2231 or college equivalent (3 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2510

**Advanced Graphical User Interface Programming**

4 credit hours

Advanced topics in event-driven programming in the Windows environment. **Prerequisite:** Computer Information Systems 1510 with a grade of "C" or better or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2521

**Visual Basic.NET I**

4 credit hours

Visual Basic.NET (VB.NET), a graphical user interface programming language, .NET Framework, Visual Studio .NET (VS.NET), object-oriented/event-driven programming, object-oriented programming (OOP) terminology, ActiveX Data Object (ADO).NET, and Active Server Page (ASP).NET. Emphasis on using .NET managed code. **Prerequisite:** Computer Information Systems 1510 with a grade of "C" or better or equivalent or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2541

**C++ Language Programming**

4 credit hours

Introduces C++ Language Programming, an object-oriented programming language. Includes C++ data types, operators, expressions, control structures, functions, arrays, pointers, strings, Abstract Data Types (ADTs), classes, inheritance, polymorphism, virtual functions and file input/output. Emphasis on building the foundation to understand the capabilities of the C++ programming language and the skills to develop practical procedural and object-oriented applications. **Prerequisite:** Computer Information Systems 1400 or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2542

**Advanced C++ with Data Structure Applications**

4 credit hours

Covers advanced C++ Programming Language features with data structure applications. Includes object-oriented applications using classes, inheritance, encapsulation, polymorphism and other advanced C++ language features. Emphasis on the use of vectors, pointers, dynamic memory, lists, iterators, stacks, queues, linked lists, binary trees, associative containers, hashing, sequential file access, direct file access, recursive algorithms, sorting and searching techniques. **Prerequisite:** Computer Information Systems 2541 or consent of instructor (4 lecture hours)

## COMPUTER INFORMATION SYSTEMS 2551

**Introduction to MS Visual C++ .NET Programming**

4 credit hours

Introduction to Visual C++ Graphical User Interface (GUI) programming, the Microsoft .NET Visual Studio, .NET Framework Library, and the Common Language Runtime (CLR). Includes Visual C++ Managed Extensions, control structures, methods, arrays, classes, Active Server Pages (ASP) .NET Web Services,



database access, GUI windows forms, windows control, event handling/delegates, files and streams, multi-threading, namespaces and assemblies. Emphasis is on building the foundation necessary to thoroughly understand the capabilities of .NET and object-oriented, event-driven client/server GUI software development. Prerequisite: Computer Information Systems 2542 (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2552

##### **Object-oriented Program Development with VC++ .NET**

4 credit hours

Introduction to application development using Visual C++ .NET. Includes client/server model, the common object model, Active Template Library (ATL) components, Active Template Library servers, Active Data Object (ADO) and Object Data Base Connectivity (ODBC) technologies, Internet programming, Visual Basic integration, C# integration, managed and unmanaged C++, and Extensible Markup Language (XML) services. The Unified Modeling Language (UML) is introduced as a design tool.

**Prerequisite:** Computer Information Systems 2551 or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2561

##### **Introduction to C# .NET**

4 credit hours

Introduction to C# .NET (pronounced C-sharp dot NET), an object-oriented, Graphical User Interface .NET programming language. Designed to introduce the .NET platform, the .NET Framework Library, C# control structures, methods, arrays, object-oriented programming, graphical user interface, strings, regular expressions, graphics, files, streams and database access. Emphasis is on building the foundation necessary to understand the capabilities of the C# programming language and the skills to develop Internet and web based client/server applications.

**Prerequisite:** Computer Information Systems 1510 or 2541 or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2562

##### **Advanced C# Programming**

4 credit hours

Covers advanced C# programming language features with data structure applications. Includes object oriented applications using classes, inheritance, encapsulation, polymorphism, and other advanced features. Emphasis on the use of Windows Communication Foundation (WCF) Web Services, rich Internet applications, multimedia, data structures, generics, collections, and ASP.NET. Prerequisite: Computer Information Systems 2562 with a grade of "C" or better, or equivalent, or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2571

##### **Introduction to Java**

4 credit hours

Introduction to object-based problem solving in the Java language. Includes encapsulation, class design, objects, polymorphism, and Graphical User Interface (GUI) components. **Prerequisite:** Computer Information Systems 1400 with a grade of "C" or better, or equivalent or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2572

##### **Collections in Java**

4 credit hours

Development of applications using the Java language. Emphasis on applications involving exception handling, images, animation, files, streams, recursion, generics, collections, containers, menus, toolbars, borders, layout managers, graph applications and data structures. **Prerequisite:** Computer Information Systems -2571 with a grade of "D" or better or equivalent or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2573

##### **Advanced Java Technologies**

4 credit hours

Development of applications using advanced Java technologies, including observers, multi-document interfaces, model-view-controllers, multi-threading, networking, Remote Method Invocation (RMI), Java Beans, Java database connectivity, servlets, and Java Server Pages (JSP). **Prerequisite:** Computer Information Systems -2572 with a grade of "D" or better or equivalent or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2610

##### **Network Security**

3 credit hours

Advanced administration course for Network Security on the Windows network operating system. Includes basics of Firewall, Intrusion Detection (IDS), virus scanning, attack/prevention methodologies, advanced security scenarios, Virtual Private Network (VPN), remote access, wireless security, security policy and Microsoft security solutions. **Prerequisite:** Computer Information Systems 1630 with a grade of "C" or better or college equivalent or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2620

##### **Exchange Server**

3 credit hours

Advanced administration course for Exchange Server, the mail system on the Windows network operating system. Includes installation and configuration of basic Exchange Server features, various Outlook clients, and advanced Exchange Server features. Create, publish and manage public folders, monitor Exchange Server performance and status, integrate Exchange with Microsoft Mail, setup and configure Exchange/Internet security, and setup and maintain users and distribution lists. May be taken three times for credit as new versions are released. **Prerequisite:** Computer Information Systems 1620 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### COMPUTER INFORMATION SYSTEMS 2630

##### **MS SQL Server Administration**

3 credit hours

Administration course for Microsoft Standard Query Language (MS SQL) server, database system on Windows 2003 server network operating system. Includes installation and configuration of SQL server, configuration of SQL Extensible Markup Language (XML) support in Internet Information Server (IIS), enterprise manager, and creating databases. Covers SQL database structure, physical data storage, transaction architecture, query analyzer, import and export data, profiler, bulk copy program, data transformation services, and replication. May be taken three times for credit as new versions are released. **Prerequisite:** Computer Information Systems 1630 or equivalent (2 lecture hours, 2 lab hours)

#### COMPUTER INFORMATION SYSTEMS 2650

##### **MS Sharepoint Portal**

3 credit hours

Administrative course for a local intranet system based on Microsoft Sharepoint Portal. This course covers tasks in planning, installing, configuring, and maintaining an intranet site. May be taken three times for credit. **Prerequisite:** Computer Information Systems 1620 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### COMPUTER INFORMATION SYSTEMS 2710

##### **Database Management**

4 credit hours

Surveys micro, mini and mainframe database (DB) systems, including physical and logical structures, data languages, and database design and administration. Includes client/server, Internet

DB environments, data warehousing, Object-Oriented data modeling, On-line Analytic Processing (OLAP) and DB development. DB commercially available database systems are discussed and hands-on experience is given using a specific database system. **Prerequisite:** Any college-level programming class or consent of instructor (4 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2720

##### **Structured Query Language (SQL) I**

3 credit hours

Introduction to Structured Query Language (SQL) programming. Includes concepts of relational databases and SQL programming commands. Uses SQL statements to create and maintain database objects. One or more Data Base Management Systems (DBMS) are used. No prior SQL programming knowledge is required.

**Prerequisite:** Computer Information Systems 1230 and 2710 or equivalents or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2725

##### **Enterprise SQL Application**

3 credit hours

Application of Structured Query Language (SQL) command statements on a vendor-specific Enterprise Database Management System (DBMS). Creation, maintenance and deployment of a database in an enterprise network environment. Covers writing stored procedures, triggers, Windows applications web applications. Essential administrative information for developers is also introduced. **Prerequisite:** Computer Information Systems 2720 or equivalent or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2730

##### **Enterprise Database Development**

3 credit hours

Apply Structured Query Language (SQL) command statements on a vendor-specific Enterprise Database Management System (DBMS). Creation, maintenance and deployment of a database in an enterprise network environment. Essential administrative information for developers is also introduced. **Prerequisite:** Computer Information Systems 2720 or equivalent or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2770

##### **Introduction to System Analysis and Design**

3 credit hours

Concepts, tools and techniques required to analyze and design business information systems. Includes both Structured and Object approaches in covering the Systems Development Life Cycle (SDLC). Information systems in organizations, Structured and Object modeling, project plan development, financial models for cost/benefit analysis project failure analysis, and risk assessment models. **Prerequisite:** Any 2000-level programming course, advanced spreadsheet class, advanced database class, or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2790

##### **Systems Analyst Simulation**

3 credit hours

Case study and team-based simulation techniques using estimating tools and project management techniques to analyze client opportunities, develop payback scenarios, work plans and deliverables. **Prerequisite:** Computer Information Systems 2770 with a grade of "C" or better, or consent of instructor (3 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2840

##### **Experimental/Pilot Class**

1 to 6 credit hours

Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are

selected. **Prerequisite:** At least one course in the discipline (1 to 6 lecture hours)

#### COMPUTER INFORMATION SYSTEMS 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study (1 to 4 credit hours)

#### COMPUTER INFORMATION SYSTEMS 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### COMPUTER INFORMATION SYSTEMS 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### COMPUTER INFORMATION SYSTEMS 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## COOPERATIVE EDUCATION

### COOPERATIVE EDUCATION 1150

#### ***The Successful Job Search***

2 credit hours

Preparation for job search. Topics include resumes, interviews, computer and Internet research, and employment search. Awareness and understanding of the competitive job market are emphasized. (2 lecture hours)

## COSMETOLOGY

### COSMETOLOGY 1101

#### ***Salon Safety and Sanitation I***

2 credit hours

Introduction to procedures in identification of required safety and decontamination in a salon. Business etiquette in the cosmetology field. Prepares student for state certification for the Illinois Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Admission into Cosmetology program and concurrent enrollment: Cosmetology 1103, 1105 and 1107 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1103

#### ***Cosmetic Chemical Services I***

3 credit hours

Introduction to basic cosmetic chemical services, including shampoo, scalp treatment, chemical texture and hair color. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Admission into Cosmetology program and concurrent enrollment in Cosmetology 1101, 1105 and 1107 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1105

#### ***Introduction to Basic Hairstyling I***

3 credit hours

Principles of hair design applied to complementary hair-styling for clients. Introduction to hairstyling techniques that include basic fingerwaving, braiding and hair roller placement. An introduction to hair cutting equipment. Prepares student for state certification for the Illinois Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Admission into Cosmetology program and concurrent enrollment in Cosmetology 1101, 1103 and 1107 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1107

#### ***Introduction to Basic Thermal Styling I***

2 credit hours

Introduction to thermal hairstyling using the various thermal implements and techniques. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Admission into Cosmetology program and concurrent enrollment in Cosmetology 1101, 1103 and 1105 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1111

#### ***Introduction to Hair Styling II***

2 credit hours

Introduction to various haircutting techniques, including use of shears and razors. Basic principles of hair roller placement, set and comb out using various patterns and techniques. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1107 with a grade of "C" or better and concurrent enrollment in Cosmetology 1113, 1115 and 1117 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1113

#### ***Introduction to Chemical Services II***

3 credit hours

Application of chemical texturing, relaxing and permanent waving. Application of hair color and lightening. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1107 with a grade of "C" or better and concurrent enrollment in Cosmetology 1111, 1115 and 1117 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1115

#### ***Salon Operations I***

3 credit hours

Introduction to necessary skills to be successful in the beauty salon, including acting as a sanitation manager and demonstrating effective communication skills. Emphasis on job-seeking skills. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1107 with a grade of "C" or better and concurrent enrollment in Cosmetology 1111, 1113 and 1117 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1117

#### ***Introduction to Aesthetics and Nail Technology I***

2 credit hours

Introduction to massage movements, facial techniques, hair removal, eyebrow arching, manicuring and pedicuring. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1107 with a grade of "C" or better and concurrent enrollment in Cosmetology 1111, 1113 and 1115 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 1120

#### ***License Review I***

2 credit hours

Review all first-year curriculum to evaluate readiness for entry into the clinic portion of the cosmetology program. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1117 with a grade of "C" or better (1 lecture hour, 4 lab hours)

### COSMETOLOGY 2201

#### ***Hairstyling III***

3 credit hours

Principles of hair design, including fingerwaving, skip waving and pencil waves. Overview of hair composition, divisions, growth process and loss. Introduction to clipper cutting techniques. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1120 with a grade of "C" or better and concurrent enrollment in Cosmetology 2203, 2205 and 2223 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 2203

#### ***Chemical Services III***

3 credit hours

Application of basic hair coloring, lightening and chemical texture with clients. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1120 with a grade of "C" or better and concurrent enrollment in Cosmetology 2201, 2205 and 2223 (1 lecture hour, 4 lab hours)

### COSMETOLOGY 2205

#### ***Advanced Aesthetics and Nail Technology***

2 credit hours

Application of manicures, pedicures and facial massage in a salon with clients. Prepares student for state certification for the



Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1120 with a grade of "C" or better and concurrent enrollment in Cosmetology 2201, 2203 and 2223 (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2207

##### **Salon Safety and Sanitation II**

2 credit hours

Application of safety and decontamination procedures in a salon with clients. Work in a clinic dispensary and take inventory of salon supplies. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 1120 with a grade of "C" or better and concurrent enrollment in Cosmetology 2201, 2203 and 2205 or consent of instructor (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2221

##### **Advanced Hair Styling**

2 credit hours

Exploration of the various hairstyles, braiding techniques and uses and placement of artificial hair. Advanced techniques in haircutting and wet hair styling. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 2207 with a grade of "C" or better and concurrent enrollment in Cosmetology 2223, 2225 and 2227 (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2223

##### **Advanced Chemical Services I**

3 credit hours

Advanced procedures in chemical textures and hair removal. The role of chemistry, electricity and light therapy related to the field of cosmetology. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 2207 with a grade of "C" or better and concurrent enrollment in Cosmetology 2221, 2225 and 2227 (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2225

##### **Salon Operations II**

3 credit hours

Management of salon routines and operations. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 2207 with a grade of "C" or better and concurrent enrollment in Cosmetology 2221, 2223 and 2227 (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2227

##### **Advanced Thermal Styling**

2 credit hours

Application of advanced thermal styling in a salon with clients. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 2207 with a grade of "C" or better and concurrent enrollment in Cosmetology 2221, 2223 and 2225 (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2250

##### **License Review II**

2 credit hours

Comprehensive review of cosmetology curriculum and skills in preparation for the Illinois state board exam to complete the requirements for licensing. **Prerequisite:** Cosmetology 2227 with a grade of "C" or better and concurrent enrollment in Cosmetology 2253 (1 lecture hour, 4 lab hours)

#### COSMETOLOGY 2253

##### **Advanced Chemical Services II**

2 credit hours

Indepth study of the perming and hair color process. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. **Prerequisite:** Cosmetology 2227 with a grade of "C" or better and concurrent enrollment in Cosmetology 2250 (1 lecture hour, 4 lab hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or (630) 942-2918 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## CRIMINAL JUSTICE

#### CRIMINAL JUSTICE 1100

##### **Introduction to Criminal Justice**

3 credit hours

An overview of the criminal justice system, its history and philosophy. This includes an analysis of the major components of criminal justice and their inter-relationship in the administration of justice. (3 lecture hours)

#### CRIMINAL JUSTICE 1110

##### **Police Operations and Procedures**

3 credit hours

Survey of police patrol functions with emphasis on responsibilities of the uniformed officer, personnel distribution theories, community and problem-oriented policing strategies, police ethics and accountability, and the relationship between the officer and the community. (3 lecture hours)

#### CRIMINAL JUSTICE 1112

##### **Crime Prevention**

3 credit hours

An overview of crime prevention strategies from an individual and community perspective, including a discussion and analysis of neighborhood watch programs, home security strategies and personal security tactics. School-based and age-specific community crime prevention programs and the application of technology to crime prevention problems are discussed. (3 lecture hours)

#### CRIMINAL JUSTICE 1120

##### **Traffic Law and Investigation**

3 credit hours

Vehicle traffic law, regulation and enforcement, fundamentals of accident causation, prevention and investigation. (3 lecture hours)

#### CRIMINAL JUSTICE 1130

##### **Introduction to Corrections**

3 credit hours

An overview of the goals, structure and operations of correctional institutions; sentencing trends and alternatives to incarceration; probation and parole; inmate life, prisonization and institutionalization; jail administration and community correctional programs. (3 lecture hours)

#### CRIMINAL JUSTICE 1135

##### **Gangs and the Criminal Justice System**

3 credit hours

An overview of the nature of gang membership and structure; theories of gang involvement; legal strategies in gang prevention and intervention, with emphasis on gangs in suburban communities; legislative strategies and community gang prevention partnerships. (3 lecture hours)



CRIMINAL JUSTICE 1140

**Principles of Security Administration**

3 credit hours

An overview of security systems found in industrial, commercial, retail and governmental agencies; legal framework for security programs; internal business crime and its detection, apprehension and prevention. (3 lecture hours)

CRIMINAL JUSTICE 1145

**Introduction to Homeland Security**

3 credit hours

An overview of the evolution of the Department of Homeland Security (DHS) in the United States and survey of the major policies, practices, concepts and challenges confronting the field. An analysis of various organizations under the authority of DHS and an assessment of the current threats from international and domestic terrorism will be examined. Examination of government, private organizations and citizens involvement in protecting against and responding to terrorist threats. (3 lecture hours)

CRIMINAL JUSTICE 1146

**Introduction to Border, Transportation, and Physical Security**

3 credit hours

Forms of security, including law enforcement that coincide with securing the United States from the potential threat of a terrorist attack. In particular, the areas of border security, transportation security, and overall physical security of persons and places will be emphasized. (3 lecture hours)

CRIMINAL JUSTICE 1147

**Introduction to Domestic and International Terrorism**

3 credit hours

Examination of the threat of domestic and international terrorism and the complex origins, motivations, ideologies, goals and tactics of various domestic and international terrorist groups. Cultural, religious and economic influences on terrorism will be considered. Topical issues including state, political, and revolutionary terrorism, religious and apocalyptic violence, weapons of mass destruction, and terrorist tactics and targeting, as well as the practical strategies and approaches of counterterrorism. (3 lecture hours)

CRIMINAL JUSTICE 1148

**Emergency Management**

3 credit hours

Examines theories, principles, and practices of emergency management, including the related processes of mitigation, preparedness, response and recovery. Evolution of emergency management and its practical application within government and private sector will be addressed. (3 lecture hours)

CRIMINAL JUSTICE 1151

**Constitutional Law**

3 credit hours

Development and history of the federal Constitution and Bill of Rights; substantive content of the amendments and corresponding state provisions; and emphasis on recent court interpretations and trends. (3 lecture hours)

CRIMINAL JUSTICE 1152

**Criminal Law**

3 credit hours

An overview of the development of criminal law and the principles of accountability. This includes a review and analysis of substantive criminal law, the necessary elements of a variety of crimes, and related criminal defenses. (3 lecture hours)

CRIMINAL JUSTICE 1153

**Rules of Evidence**

3 credit hours

The types and forms of evidence. Emphasis on the rules governing the admissibility of evidence in federal and state criminal courts. (3 lecture hours)

CRIMINAL JUSTICE 1154

**Substance Abuse and the Law**

3 credit hours

Criminal law and procedure related to alcohol use and abuse and other controlled substances. This includes enforcement, adjudication, sentencing and treatment aspects as they relate to crimes involving substance abuse. (3 lecture hours)

CRIMINAL JUSTICE 1165

**Computers and Criminal Justice**

3 credit hours

A comprehensive overview of computer-related crimes, including related reactive and proactive investigative strategies; programs involving computer technologies developed and utilized by criminal justice investigators, analysts and other professionals. (3 lecture hours)

CRIMINAL JUSTICE 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

CRIMINAL JUSTICE 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

CRIMINAL JUSTICE 2110

**Continuity of Operations**

3 credit hours

Explores the process for developing, implementing, exercising, and evaluating continuity of operations for government entities in the event of a disaster. Emphasis is on being able to continue to supply services to constituents and customers while supporting staff and initiating recovery operations. **Prerequisite:** Criminal Justice 1145 or Criminal Justice 1148 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

CRIMINAL JUSTICE 2120

**Critical Incident Management**

3 credit hours

Exploration of the role of various public safety personnel in managing disaster response operations. The nature of disaster, complexities of disaster response operations, and the roles and responsibilities of various emergency management personnel will be examined through case studies. **Prerequisite:** Criminal Justice 1145 or Criminal Justice 1148 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

CRIMINAL JUSTICE 2130

**Disaster Management and Response**

3 credit hours

Introduction to concepts, theories, principles, programs and requirements of emergency preparedness, governmental planning,

practice, exercises, hazard and risk assessment, and team building. Students will also study the relationship of preparedness to response, emergency operations and incident command systems. **Prerequisite:** Criminal Justice 1145 or Criminal Justice 1148 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

#### CRIMINAL JUSTICE 2140

##### **Introduction to Intelligence for Homeland Security**

3 credit hours

Overview of the history of intelligence for United States law enforcement officials who are charged with providing security for America to help prevent and respond to terrorist threats. Provides a basic understanding of the concepts, processes and disciplines associated with intelligence functions and operations in regards to Homeland Security. **Prerequisite:** Criminal Justice 1145 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

#### CRIMINAL JUSTICE 2150

##### **Multiculturalism & Diversity in Criminal Justice**

3 credit hours

Provides the student with the opportunity to examine current issues and social problems relating to the administration of justice in a culturally diverse society. Emphasis on the changing demographics of communities and the development of new training, strategies, and approaches to more adequately meet the challenges presented by working with diverse populations. **Prerequisite:** Criminal Justice 1100 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

#### CRIMINAL JUSTICE 2160

##### **Introduction to Bio Security and Bio Terrorism**

3 credit hours

Major biological and chemical agents used in bio terrorism including their warning signs and symptoms, the legal aspects of bio security, threats to the food supply, and the government's assets available to respond to such events. **Prerequisite:** Criminal Justice 1145 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

#### CRIMINAL JUSTICE 2230

##### **Criminal Investigation**

3 credit hours

Fundamentals of investigation; search, collection, preservation and recording at the crime scene; sources of information; physical and chemical analysis and comparison techniques; and case preparation and courtroom testimony. (3 lecture hours)

#### CRIMINAL JUSTICE 2235

##### **Basic Evidence Photography**

3 credit hours

Basic police photographic techniques, including legal and technical aspects of evidence photography. Application of photographic equipment, film and techniques to crime scene and evidence gathering problems. Additional emphasis placed on digital format photography, computer software and hardware, and digital video surveillance techniques. (3 lecture hours)

#### CRIMINAL JUSTICE 2240

##### **Juvenile Delinquency**

3 credit hours

An overview of juvenile court jurisdiction, related procedures and their historical context; theoretical perspectives of delinquency causation and related prevention and intervention programs. (3 lecture hours)

#### CRIMINAL JUSTICE 2250

##### **Police Organization and Administration**

3 credit hours

Analysis of classical and current law enforcement organizational patterns, including an overview of the administrative processes within police agencies and management theories as applied to law enforcement administration. (3 lecture hours)

#### CRIMINAL JUSTICE 2260

##### **Issues in Criminal Justice**

3 credit hours

Contemporary critical issues related to crime and society; analysis and evaluation of recent studies and documents; methods of implementing research findings. **Prerequisite:** Criminal Justice 1100 or Sociology 1100 (3 lecture hours)

#### CRIMINAL JUSTICE 2820

##### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Criminal Justice 1100 or consent of instructor (3 lecture hours)

#### CRIMINAL JUSTICE 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/ Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### CRIMINAL JUSTICE 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### CRIMINAL JUSTICE 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### CRIMINAL JUSTICE 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under

supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## CULINARY ARTS

### CULINARY ARTS 1101

#### **Quantity Food Preparation I**

4 credit hours

Introduction to basic cooking methods, the identification and use of ingredients and handling of tools and equipment, also skills and techniques used in cookery. Activities include preparation of basic recipes, cold food items, stocks and soups, and the fundamentals of service. Vegetable and a variety of meat products will be included. **Prerequisite:** Culinary Arts 1120 or concurrent enrollment or consent of instructor (8 lab hours)

### CULINARY ARTS 1102

#### **Quantity Food Preparation II**

4 credit hours

Continuation of the fundamental concepts and techniques of food preparation. Students rotate through stations in a large commercial kitchen and dining room. Cooking skills are developed through participation in food preparation, production and dining room operations. Basic service skill, concepts, and techniques.

**Prerequisite:** Culinary Arts 1101 or equivalent (8 lab hours)

### CULINARY ARTS 1104

#### **Cake Decorating and Confectionery**

2 credit hours

Techniques utilized in the decoration of cakes, pastries and confectionery items produced in retail and hotel pastry shops. Emphasis on the development of skill in the production of quality borders, flowers, lettering and figures. Activities also include sugar molding, image transfers, color and airbrush technique. (4 lab hours)

### CULINARY ARTS 1107

#### **Advanced Decorative Techniques**

2 credit hours

Techniques utilized in the production of advanced patisserie. Candy chocolate work, pastillage, and pulled sugar will be emphasized. Modeling and sculpting of chocolate centerpieces.

**Prerequisite:** Culinary Arts 1172 or equivalent or consent of instructor (4 lab hours)

### CULINARY ARTS 1108

#### **Culinary Measurements and Conversions**

2 credit hours

Recipe costing and conversions for culinary applications. Yield tests and product assessments will also be covered. (2 lecture hours)

### CULINARY ARTS 1109

#### **Nutrition for the Foodservice Professional**

2 credit hours

Introduction of basic nutrition concepts and application of these concepts in menu planning. Emphasis is placed on the role of the foodservice professional in providing nutritious foods that meet the needs of today's diverse customer groups. (2 lecture hours)

### CULINARY ARTS 1110

#### **Basic Nutrition**

3 credit hours

Emphasis is placed on normal and clinical nutrition, including many aspects of diet therapy. Presents current information on the relationship of nutrition to health. **Prerequisite:** Anatomy & Physiology 1500, 1551, 1552, 1571 or 1572 or concurrent enrollment or consent of instructor (3 lecture hours)

### CULINARY ARTS 1115

#### **Foodservice Sanitation License**

1 credit hour

Training in the management of sanitary methods of food handling in all segments of the food service industry. Recommended for Foodservice Industry professionals seeking the State of Illinois license for sanitation. This class will NOT meet the requirements for any of the Culinary & Hospitality Management degrees or certificates. (1 lecture hour)

### CULINARY ARTS 1120

#### **Foodservice Sanitation**

2 credit hours

Training in the management of sanitary methods of food handling in all segments of the food service industry. Prepares students for state certification by the Illinois Department of Public Health Service Certification. This class will meet the requirements for Hospitality Administration degrees and certificates. (2 lecture hours)

### CULINARY ARTS 1151

#### **Food & Beverage Services & Sales**

2 credit hours

Principles and techniques necessary for the performance of proper food and beverage service reflecting the variety of operations in the hospitality industry. Laboratory activities will provide students an opportunity to develop skills in French, Russian, American, Gueridon, and banquet service, as well as the principles of dining room supervision and management. (4 lab hours)

### CULINARY ARTS 1155

#### **Restaurant Concept Development**

2 credit hours

An examination of the process that occurs from the conceptualization through the opening of a new restaurant operation, including financial considerations, legal responsibilities, marketing strategies, and risk reduction. (2 lecture hours)

### CULINARY ARTS 1171

#### **Pastry Arts – Baking and Patisserie I**

4 credit hours

Fundamentals of baking science, terminology, equipment, technology, ingredients, and weights and measures, formula conversions. Concentration on the production techniques for breads, hard and soft rolls, basic cakes, high ratio cakes, cookies, and puff pastry items. Concurrent enrollment in Culinary Arts 1120 or consent of instructor. (8 lab hours)

### CULINARY ARTS 1172

#### **Pastry Arts – Baking and Patisserie II**

4 credit hours

Further development of competencies in bakeshop operations. Students practice the techniques for production of high ratio cakes, sweet dough products and specialties, and their decoration. Includes sanitation, baking and pastry chemistry, purchasing, cost control, and production management. Classical patisserie, including calligraphy, petit fours, hot and cold desserts, candies, ice creams, specialty tortes and buffet pieces are produced using pastillage, nougat, marzipan, chocolate and pulled sugar. Includes various show piece production. **Prerequisite:** Culinary Arts 1171 or equivalent (8 lab hours)

## CULINARY ARTS 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70% (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) (2 to 6 lab hours)

## CULINARY ARTS 1822

**Selected Topics**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour, 4 lab hours)

## CULINARY ARTS 2111

**Specialty and Alternative Baking**

3 credit hours

Gluten free, low sugar, restricted diets and specialty baking. Students will examine and bake products specifically designed for individuals with dietary restrictions. (6 lab hours)

## CULINARY ARTS 2152

**Foods, Beverage and Equipment Purchasing**

3 credit hours

Standards of quality as applied to food, beverages, china, glassware, silver, linens, furnishings, equipment and supplies. Purchase specifications and the derivation of written standards are covered. (3 lecture hours)

## CULINARY ARTS 2153

**Culinary Arts – Garde Manger**

3 credit hours

Proper techniques and procedures utilized in pantry and basic garde manger production. Includes the preparation of a variety of salads and dressings, hot and cold sandwiches, and canapés. Charcuterie and other buffet items will be demonstrated and prepared. **Prerequisite:** Culinary Arts 1101 or equivalent or consent of instructor (6 lab hours)

## CULINARY ARTS 2205

**Culinary Arts: International Cuisine**

3 credit hours

Survey of selected cuisines from around the world. Research, plan and prepare menus representative of a variety of different cultures. Culture, history, and terminology of various international cuisines and their traditional and contemporary cooking techniques are covered. Includes demonstrations and actual production.

**Prerequisite:** Culinary Arts or equivalent or consent of instructor (1 lecture hour, 4 lab hours)

## CULINARY ARTS 2206

**Culinary Arts: Asian Cuisine**

3 credit hours

Research, planning, and preparation of menus based upon authentic Asian recipes and commercial styles of preparation. Emphasis on developing skills in the use of Asian hand tools and

cooking equipment. The cuisines of Canton, Peking, Szechwan, Hunan, and Japan will be studied and prepared. (1 lecture hour, 4 lab hours)

## CULINARY ARTS 2210

**Culinary Arts: Classical Cuisine**

4 credit hours

Advanced culinary preparation and service. Emphasizes the history, menu terminology, cooking techniques, and presentation of classical French cuisine. Includes planning, preparation, and service. **Prerequisite:** Culinary Arts 1102 and Culinary Arts 2153 or equivalent (8 lab hours)

## CULINARY ARTS 2273

**Pastry Arts – Baking and Patisserie III**

4 credit hours

Advanced study of baking science, terminology, equipment, technology, ingredients, weights and measures, and formula conversions. Concentration on the production techniques for advanced pastries, cakes, and tortes. Advanced decorating will also be stressed. **Prerequisite:** Culinary Arts 1172 or equivalent or concurrent enrollment in Culinary Arts 1172 or consent of instructor (8 lab hours)

## CULINARY ARTS 2863

**Cooperative Education/Internship (Occupational)**

3 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser.

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or (630) 942-3663 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**DENTAL HYGIENE**

## DENTAL HYGIENE 1101

**Principles in Dental Hygiene I**

3 credit hours

Principles of disease transmission. Infection control policies, patient procedures, patient assessment and fundamental instrumentation for the dental hygienist. Foundation of knowledge and strategies of preventive dental hygiene practice. Emphasis on mechanical and chemical plaque control, use of fluoride and health promotion. **Prerequisite:** Admission into the Dental Hygiene program or consent of instructor (3 lecture hours)

## DENTAL HYGIENE 1102

**Principles in Dental Hygiene II**

2 credit hours

Course will focus on procedures for collection of patient data relevant to patient treatment. Rationale for collection of assessment data and associated clinical procedures is also included in the course content. Students will continue to learn usage of various dental hygiene instruments, along with placement of caries preventive agents including dental sealants and topical fluorides. Course introduces development of the dental hygiene treatment plans directly relating to patient care. **Prerequisite:** Dental Hygiene 1101 with a grade of "C" or better or consent of instructor (2 lecture hours)



DENTAL HYGIENE 1105

**Dental Materials/Expanded Functions**

3 credit hours

Physical and chemical properties of dental materials, characteristics and manipulation of impression materials, gypsum products, investments, waxes, cements, resins, metallic and non-metallic restorative agents. **Prerequisite:** Successful completion of Dental Hygiene 1101, 1120, 1115, 1125 and 1135 with a grade of "C" or better or consent of instructor (2 lecture hours, 3 lab hours)

DENTAL HYGIENE 1112

**Dental Radiology I**

2 credit hours

Concepts of radiation history, radiation physics, radiation biology, radiation protection, dental X-ray equipment, film, image characteristics and film processing. Introduction to radiographic examination techniques. **Prerequisite:** Admission to Dental Hygiene program or consent of instructor (1 lecture hour, 3 lab hours)

DENTAL HYGIENE 1115

**Dental Tooth Anatomy and Morphology**

2 credit hours

Emphasis on clinical appearance of oral structures, dental terminology, morphology of the permanent and primary dentition, patterns, and the occlusion and malocclusion within and between the dental arches. Review of dental anomalies and other clinical appearances. **Prerequisite:** Admission to the Dental Hygiene program or consent of instructor (1 lecture hour, 3 lab hours)

DENTAL HYGIENE 1120

**Preclinical Dental Hygiene I**

1 credit hour

Integration of the scientific and clinical principles underlying the practice of dental hygiene. Clinical procedures and techniques for patient assessment, including prevention of disease transmission, health history, extra and intraoral examination, gingival evaluation and periodontal examination. Operation of the dental unit and basic instrumentation techniques for the removal of plaque and calculus are presented. **Prerequisite:** Admission to the Dental Hygiene program or consent of instructor

DENTAL HYGIENE 1121

**Clinical Dental Hygiene I**

1 credit hour

Comprehensive examination procedures, charting and patient treatment. Adjunctive procedures are presented, dental caries preventive agent application and stain removal procedures. Integration of scientific and clinical principles underlying the practice of dental hygiene. Assessing, planning, implementing and evaluating dental hygiene care on patients in the clinical setting. **Prerequisite:** Dental Hygiene 1120 with a grade of "C" or better or consent of instructor

DENTAL HYGIENE 1125

**Head and Neck Anatomy: Histology and Embryology**

2 credit hours

Organization, structure and function of the head and neck. Focus will be placed on histologic and embryologic development and structural microanatomy to gain an understanding of clinical and oral manifestations of the regions of the head and neck. **Prerequisite:** Admission to the Dental Hygiene program or consent of instructor (2 lecture hours)

DENTAL HYGIENE 1135

**Applied Nutrition and Biochemistry for the Dental Hygienist**

2 credit hours

Principles of nutrition and biochemistry applied to dental hygiene patient care. Skills in diet analysis and patient counseling.

**Prerequisite:** Admission to the Dental Hygiene program or consent of instructor (2 lecture hours)

DENTAL HYGIENE 1136

**General and Oral Pathology**

2 credit hours

Pathology of the head and neck and oral structures. Specific pathologic processes, repair, healing and regressive changes. Developmental conditions, diseases of bacterial and viral origin, and neoplasms of the oral cavity. **Prerequisite:** Dental Hygiene 1101, 1115, 1120, 1125 and 1135 with grade of "C" or better or consent of instructor (2 lecture hours)

DENTAL HYGIENE 1145

**Medical Emergencies in a Dental Office**

1 credit hour

Familiarity with critical steps in prevention, preparation, early recognition and appropriate management of common medical emergencies in the dental office. **Prerequisite:** Dental Hygiene 1101, 1115, 1120, 1124 and 1135 with grade of "C" or better or consent of instructor (1 lecture hour)

DENTAL HYGIENE 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

DENTAL HYGIENE 2201

**Dental Hygiene Theory I**

2 credit hours

Application of dental hygiene theory to direct patient care. Techniques and theory related to local anesthesia administration of local anesthetic agents. Emphasis of dental hygiene care of patients with various systemic, mental and physical disorders in the dental office setting. Introduction to use of heavy scaling hand instruments is included. **Prerequisite:** Dental Hygiene 1102 with grade of "C" or better or consent of instructor (1 lecture hour, 3 lab hours)

DENTAL HYGIENE 2202

**Dental Hygiene Theory II**

2 credit hours

Application of dental hygiene theory to direct patient care. Overview of dental hygiene care of patients with various systemic and mental disorders. Presentation of periodontal cases is included. **Prerequisite:** Dental Hygiene 2201 with grade of "C" or better or consent of instructor (2 lecture hours)

DENTAL HYGIENE 2211

**Periodontics I**

2 credit hours

Periodontal anatomy. Physiology/etiology of periodontal diseases. Clinical, histopathogenesis of gingivitis/periodontitis. Role of genetics, tobacco use and systemic preventative/therapeutic procedures associated with diagnosis, prognosis, treatment and initial phase of periodontal therapy. **Prerequisite:** Dental Hygiene 1102, 1105, 1112, 1121, 1135 and 1145 with a grade of "C" or better or consent of instructor (2 lecture hours)

DENTAL HYGIENE 2212

**Periodontics II**

2 credit hours

Description of clinical procedures associated with surgical phase of periodontal therapy. Evaluation of periodontal treatment,

maintenance phase, and relationship between periodontics and other dental specialties. Discussion of clinical management of the periodontium and adjunctive therapies. **Prerequisite:** Dental Hygiene 2211 with a grade of "C" or better or consent of instructor (2 lecture hours)

#### DENTAL HYGIENE 2213

##### **Dental Radiology II**

2 credit hours

Advanced dental radiographic and related procedures, including exposure and technique errors, occlusal and localization techniques, normal anatomy, panoramic films and radiography, extraoral radiography and digital radiography. Radiography for patients with special needs, introduction to radiographic interpretation: dental caries, periodontal disease, trauma and pulpal and periapical lesions. Introduction to forensic odontology. **Prerequisite:** Dental Hygiene 1112 with a grade of "C" or better or consent of instructor (1 lecture hour, 3 lab hours)

#### DENTAL HYGIENE 2222

##### **Clinical Dental Hygiene II**

2 credit hours

Continuation of clinical dental hygiene practice. Includes assessment, planning and implementation of patient care. Adjunctive clinical services include dental sealants, ultrasonic scaling, air polishing, topical fluoride treatments and dental radiographs. **Prerequisite:** Dental Hygiene 1121 with grade of "C" or better or consent of instructor

#### DENTAL HYGIENE 2223

##### **Clinical Dental Hygiene III**

2 credit hours

Continuation of clinical dental hygiene practice. Includes assessment, planning and implementation of patient care. Adjunctive clinical services include dental sealants, ultrasonic scaling, air polishing, topical fluoride treatments, amalgam polishing, application of desensitizing agents and dental radiographs. Introduction to outside rotational experiences. **Prerequisite:** Dental Hygiene 2222 with grade of "C" or better or consent of instructor

#### DENTAL HYGIENE 2224

##### **Clinical Dental Hygiene IV**

2 credit hours

Continuation of clinical dental hygiene practice. Includes assessment, planning and implementation of patient care. Adjunctive clinical services include dental sealants, ultrasonic scaling, air polishing, topical fluoride treatments, amalgam polishing, application of desensitizing agents and dental radiographs. Administration of topical and local anesthetic agents. **Prerequisite:** Dental Hygiene 2223 with grade of "C" or better or consent of instructor

#### DENTAL HYGIENE 2225

##### **Review of Dental Literature**

1 credit hour

Review and evaluation of dental literature for the contemporary dental hygienist. Focus on research methodologies and statistical analysis as it applies to dentistry. (1 lecture hour)

#### DENTAL HYGIENE 2232

##### **Community Dental Health I**

2 credit hours

Dental hygienist's role in community. Epidemiological concepts, trends in oral diseases, research assessment tools, and strategies to improve public access to oral health care. Review of biostatistics, federal and state agencies, and managed care. **Prerequisite:** Dental Hygiene 2225 with grade of "C" or better or consent of instructor (2 lecture hours)

#### DENTAL HYGIENE 2233

##### **Community Dental Health II**

2 credit hours

Creation, implementation and evaluation of a dental health care program in the community. Presentation of projects to faculty and peers. **Prerequisite:** Dental Hygiene 2232 with a grade of "C" or better, or consent of instructor (6 lab hours)

#### DENTAL HYGIENE 2235

##### **Dental Pharmacology and Local Anesthetics**

2 credit hours

Classifications and varieties of drugs, pharmacologic effects, adverse reactions, usual indications and contraindications. Discussion of drugs utilized to treat common diseases. Pharmacokinetics of local and general anesthetic agents and their use. **Prerequisite:** Dental Hygiene 1115, 1125, 1135, 1136, 2211 and 2222 with a grade of "C" or better, or consent of instructor (2 lecture hours)

#### DENTAL HYGIENE 2245

##### **Ethics and Jurisprudence: Practice Management for the Dental Hygienist**

2 credit hours

Preparation for professional role as health care provider and member of dental health team. Focus on ethical and legal responsibilities, dental practice act, malpractice issues and scope of dental hygiene practice. **Prerequisite:** Dental Hygiene 2201 and 2222 with a grade of "C" or better, or consent of instructor (2 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 1100

##### **Basics of Nuclear Medicine**

3 credit hours

History and evolution of Nuclear Medicine as an imaging modality. Radionuclide identification, radionuclide energies and half-lives, and commonly used radiopharmaceuticals for Diagnostic Nuclear Medicine procedures. Introduction to Diagnostic Nuclear Medicine procedures. Patient handling techniques and nursing and laboratory procedures relating to Nuclear Medicine. Introduction to professional medical ethics, legal issues and patient rights. Quality assurance procedures for the radiation protection of Nuclear Medicine personnel. **Prerequisite:** Admission to program or consent of instructor (2 lecture hours, 2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 1101

##### **Physics and Instrumentation in Nuclear Medicine**

6 credit hours

Principles of atomic structure, nomenclature and radiation. Introduction to radionuclides, physics of radiation (particulate and non-particulate), natural and artificial radiation, calculations of radioactive decay, exponential equations, calculation of radiation dosimetry, half-life equations, radionuclide production, radiopharmaceutical dose determinations, radiation interactions with matter, radiation protection and safety methodology, radiation shielding formulation and counting statistics. Basic aspects in imaging and non-imaging radiation detection instrumentation, including scintillation detectors, planar, SPECT (Single Photon Emission Computerized Tomography), PET (Positron Emission Tomography), multichannel analyzers, quality assurance testing for Nuclear Medicine instrumentation, including G-M detectors, ionization chambers and scintillation detectors. **Prerequisite:**

Admission to program or consent of instructor (4 lecture hours, 4 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 1102

##### ***Nuclear Medicine Radiopharmacy***

6 credit hours

Nuclear Medicine radiopharmacy, including production of radionuclides, radiopharmaceutical chemistry, radiopharmaceuticals and methods of radiolabeling, characteristics of specific radiopharmaceuticals, biorouting and physiological mechanisms of tracer uptake, pharmacokinetics, radiation units, specific activity, concentration determination, dose calculations, methods of dispensing, quality assurance of radiopharmaceuticals, and universal precautions. Specialized clinical radiopharmaceuticals include: monoclonal antibodies, peptides, receptors, Positron Emission Tomography, therapy, and current research. Radio-pharmacy design, management and record keeping, radiation safety and Nuclear Regulatory Commission (NRC) and Illinois Emergency Management Agency (IEMA) radiopharmacy rules and regulations. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 1100, 1101 and 1111 or equivalent or consent of instructor (4 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 1103

##### ***Radiation Biology and Radiation Safety Bridge***

2 credit hours

Topics in radiation biology will include qualitative and quantitative effects on the human body following exposure to various types of ionizing radiation, and the potential harmful effects and the benefits of the medical uses of radiation. Procedures for personnel and environmental monitoring, emergency management, decontamination and proper methods of receiving, storing and disposing of radioactive materials. Basic concepts of radiation exposure reduction. Concepts of radiation safety for personnel, patients and the environment. **Prerequisite:** Admission to program or consent of instructor (2 lecture hours, 1 lab hour)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 1111

##### ***Clinical Nuclear Medicine I***

3 credit hours

First in a three-course sequence of supervised clinical instruction in Nuclear Medicine Technology. Comprehensive study of imaging and non-imaging techniques, instrumentation quality control, patient care, radiopharmacy, computer analysis and quality assurance. Students are expected to demonstrate competency according to defined objectives at prospective clinical affiliates. **Prerequisite:** Admission to program or consent of instructor

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 1840

##### ***Independent Study – Individualized***

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 2200

##### ***Nuclear Medicine Procedures II***

4 credit hours

Applied anatomy and physiology of cardiovascular, skeletal, genitourinary, gastrointestinal, respiratory and endocrine systems. Diagnostic imaging techniques, radiopharmaceutical agents, indications and limitations of nuclear medicine procedures, normal and abnormal pathology, dosimetry. Computer acquisition and processing techniques. Case study critiques, journal review and case study presentations. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 1100, 1101, 1103 and 1111 and admission to program or consent of instructor (3 lecture hours, 2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 2202

##### ***Nuclear Medicine Procedures III***

4 credit hours

Applied anatomy and physiology of the central nervous, immune, lymphatic, hematopoietic, exocrine, gastrointestinal systems. Non-imaging tests, including Schilling's, Helicobacter pylori and blood volume determination. Advanced topics in nuclear cardiology, tumor imaging, neurology, radioimmunoimaging, radioimmunotherapy and miscellaneous procedures. Diagnostic imaging techniques, radiopharmaceutical agents, indications and limitations of nuclear medicine procedures, normal and abnormal pathology, dosimetry. Computer acquisition and processing techniques. Case study critiques, journal review and case study presentations. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 1102 and 2200 or consent of instructor (3 lecture hours, 2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 2211

##### ***Clinical Nuclear Medicine II***

3 credit hours

Second in a three-course sequence of supervised clinical instruction in Nuclear Medicine Technology. Comprehensive study of imaging and non-imaging techniques, instrumentation quality control, patient care, radiopharmacy, computer analysis and quality assurance. Students are expected to demonstrate competency according to defined objectives at prospective clinical affiliates. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 1111 or consent of instructor

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 2212

##### ***Clinical Nuclear Medicine III***

3 credit hours

Third in a three-course sequence of supervised clinical instruction in Nuclear Medicine Technology. Comprehensive study of imaging and non-imaging techniques, instrumentation quality control, patient care, radiopharmacy, computer analysis and quality assurance. Students are expected to demonstrate competency according to defined objectives at prospective clinical affiliates. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 2211 or consent of instructor

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 2221

##### ***PET/CT***

3 credit hours

Physics, instrumentation and radiochemistry of PET (Positron Emission Tomography). Quality assurance of the PET and PET-CT (computerized tomography) instrumentation. Physiological, biochemical and pharmacological mechanisms of PET radiopharmaceuticals. Radiation safety and protection. Clinical PET imaging in neurological, cardiovascular, oncological and psychiatric disorders. Image reconstruction and display protocols. Case study presentations and journal review. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 2202 and 2211 or consent of instructor (2 lecture hours, 2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE 2222

##### ***Nuclear Medicine Review Seminar***

1 credit hour

Prepares students for the Nuclear Medicine Technology Certification Board Examination (NMTCB). Testtaking tips and practice exams. Practical application of patient care, human anatomy and physiology, pathology, radiation biology, radiation protection, physics, instrumentation, radiopharmacy, in vivo and in vitro procedures, Diagnostic and Therapeutic Nuclear Medicine procedures, Positron Emission Tomography. Students will complete a registry review project and a mock registry. **Prerequisite:** Diagnostic Medical Imaging Nuclear Medicine 2202 and 2211 or consent of instructor (1 lecture hour)

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## DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1100

#### **Introduction and Fundamentals of Medical Imaging**

2 credit hours

An introduction and overview of the fundamentals of diagnostic medical imaging in the disciplines of Radiography, Diagnostic Medical Sonography, Nuclear Medicine Technology, Computed Tomography, Magnetic Resonance Imaging, Positron Emission Tomography, Mammography, and Bone Mineral Densitometry for non-majors. Includes the history, basic theories, development of each discipline, educational requirements, employment skills, national certification examinations, and professional associations. Course includes a required Service Learning component. (2 lecture hours)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1111

#### **Clinical Education I**

2 credit hours

Applied radiography at assigned clinical education setting. Satisfies the clinical objectives and competency requirements listed in the Radiography Program Design for the first semester. **Prerequisite:** Admission to the DMIR program is required

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1112

#### **Clinical Education II**

2 credit hours

Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiologic Program Design for the second semester. **Prerequisite:** Diagnostic Medical Imaging Radiography 1111 and 1131 with grade of "C" or better or consent of instructor

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1113

#### **Clinical Education III**

2 credit hours

Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiologic Program Design. **Prerequisite:** Diagnostic Medical Imaging Radiography 1112, 1121 and 1132 with grade of "C" or better or consent of instructor

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1121

#### **Radiographic Equipment**

4 credit hours

Elementary physical principles, including systems of measurement, classical mechanics, structure of matter, electricity and magnetism, X-ray production, X-ray circuits, and radiographic and fluoroscopic systems. **Prerequisite:** Diagnostic Medical Imaging Radiography 1111 and 1131 with grade of "C" or better or consent of instructor (4 lecture hours)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1122

#### **Image Formation and Evaluation**

4 credit hours

Advanced principles and applications of radiographic equipment. Radiographic image production, image quality, film processing, analog image receptors, digital image receptors and production and control of scattered radiation. **Prerequisite:** Diagnostic Medical Imaging Radiography 1112, 1121 and 1132 with a grade of "C" or better or consent of instructor (3 lecture hours, 2 lab hours)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1131

#### **Radiographic Procedures I**

4 credit hours

Radiographic patient care, terminology, routine radiographic positioning and radiographic image evaluation of the thorax, abdomen and urinary tract. **Prerequisite:** Admission to Diagnostic Medical Imaging Radiography program and consent of instructor (3 lecture hours, 2 lab hours)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1132

#### **Radiographic Procedures II**

3 credit hours

Routine radiographic positioning and radiographic image evaluation of the upper and lower extremities, bony thorax and digestive system. **Prerequisite:** Diagnostic Medical Imaging Radiography 1111 and 1131 with a grade of "C" or better or consent of instructor (2 lecture hours, 2 lab hours)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1133

#### **Radiographic Procedures III**

3 credit hours

Routine and special projections/methods of radiographic positioning and radiographic image evaluation of the head and neck, spine and pelvis. **Prerequisite:** Diagnostic Medical Imaging Radiography 1112, 1121 and 1132 with a grade of "C" or better or consent of instructor (2 lecture hours, 2 lab hours)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1140

#### **Ethics and Law in Diagnostic Medical Imaging**

1 credit hour

Provides a fundamental background in medical ethics and law specific to diagnostic medical imaging. Students will use actual case studies and clinical scenarios for application of topics discussed. **Prerequisite:** Diagnostic Medical Imaging Radiography 1113, 1122 and 1133 with a grade of "C" or better or consent of instructor and program admission approval required (1 lecture hour)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 1151

#### **Basic Pharmacology**

1 credit hour

Basic concepts of pharmacology, drug classification, indications and the types of reactions to diagnostic contrast agents and intravenous medications. Included are the theory of venipuncture and appropriate patient care during these procedures.

**Prerequisite:** Diagnostic Medical Imaging Radiography 1113, 1122 and 1133 with a grade of "C" or better or consent of instructor. Admission to the DMIR program is required. (1 lecture hour)

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2112

#### **Clinical Practice II**

3 credit hours

Expands the skills learned in Diagnostic Medical Imaging Radiography 2111. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined and evaluated. **Prerequisite:** Admission to program, ARRT certification and Diagnostic Medical Imaging Radiography 2111 with a grade of "C" or better

### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2113

#### **Clinical Practice III**

3 credit hours

Advanced integration of skills learned in Diagnostic Medical Imaging Radiography 2111 and 2112. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined and evaluated.

**Prerequisite:** Diagnostic Medical Imaging Radiography 2311, 2102, 2302 and 2112 grade of "C" or better and consent of instructor and program admission approval required



DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2201

**Radiation Physics, Biology and Protection**

3 credit hours

Advanced radiological physics, including interactions with matter, electromagnetic radiation, particulate radiation, radioactivity, radiation monitoring instruments and dosage units. Also included are the biological effects of ionizing radiation as well as sections on nuclear medicine, radiation therapy and the most recent radiation protection rules and regulations. **Prerequisite:** Diagnostic Medical Imaging Radiography 1140 and 2211 with a grade of "C" or better or consent of instructor (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2211

**Clinical Education IV**

3 credit hours

Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography Program Design. **Prerequisite:** Diagnostic Medical Imaging Radiography 1113, 1122 and 1133 with a grade of "C" or better or consent of instructor. Admission to DMIR program is required.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2212

**Clinical Education V**

3 credit hours

Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography Program Design. **Prerequisite:** Diagnostic Medical Imaging Radiography 1140, 1151 and 2211 with a grade of "C" or better or consent of instructor

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2213

**Clinical Education VI**

3 credit hours

Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography Program Design. **Prerequisites:** Diagnostic Medical Imaging Radiography 2201, 2212 and 2225 with a grade of "C" or better or consent of instructor

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2220

**Sectional Anatomy for Diagnostic Imaging**

2 credit hours

Study of human anatomy as demonstrated in sectional planes seen in Computed Tomography (CT), Positron Emission Tomography (PET) and Magnetic Resonance Imaging (MRI). Comparison of planar anatomy to sectional anatomy through the use of diagrams and radiologic images. Emphasis is on anatomy of the head, neck, spine, thorax, abdomen, pelvis and musculoskeletal system. **Prerequisite:** American Registry of Radiologic Technologists Certification and/or Nuclear Medicine Certification or consent of instructor (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2225

**Basic Pathophysiology**

3 credit hours

Basic concepts of pathology and the causes of disease in the body systems that are illustrated with diagnostic medical imaging disciplines. Included are radiographic interpretation, imaging techniques using the disciplines of Radiography primarily with new digital imaging systems, Computed Tomography, Magnetic Resonance Imaging, and also pathology illustrated using Medical Sonography, Nuclear Medicine Technology and Positron Emission Tomography. Culminates with a major project of a pathology research paper and an accompanying pathology poster display using diagnostic medical imaging disciplines. **Prerequisite:** Diagnostic Medical Imaging Radiography 1140 and 2211 with a grade of "C" or better or consent of instructor (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2226

**Advanced Pathophysiology**

1 credit hour

Advanced study of pathophysiology in diagnostic medical imaging of the heart and vascular system, the hematopoietic system, central nervous system and the endocrine system. Included are radiographic interpretation, imaging techniques using the disciplines of Radiography primarily with new digital imaging systems, Computed Tomography, Magnetic Resonance Imaging, and also pathology illustrated using Diagnostic Medical Sonography, Nuclear Medicine Technology and Positron Emission Tomography. **Prerequisite:** Consent of instructor (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2235

**Quality Management in Diagnostic Imaging**

2 credit hours

Teaches the student the advanced technical aspects of quality assurance and quality management. Includes analog film processing, digital image processing as well as radiographic equipment. Focus is on practical applications in the radiology department. **Prerequisite:** Diagnostic Medical Imaging Radiography 1151, 2201, 2211 and 2225 with a grade of "C" or better or consent of instructor (1 lecture hour, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2240

**Radiographic Image Analysis**

3 credit hours

Systematic approach for evaluating radiographic images to determine diagnostic quality. Review and correlation of previous subjects. **Prerequisite:** Diagnostic Medical Imaging Radiography 2211 and 2225 with a grade of "C" or better and/or consent of instructor (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2280

**Radiography Review Seminar**

1 credit hour

Overview of Radiography coursework in preparation for the national certification examination of the American Registry of Radiologic Technologists (ARRT) based on the content specifications. Content areas included are radiation protection, equipment operation and maintenance, image production and evaluation, radiographic procedures, and patient care. Strategies in testing, test anxiety and the computer-based test are included in the course. **Prerequisite:** Graduate of a Radiologic Technology program or consent of instructor (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2301

**Principles and Practice of Radiation Therapy I**

4 credit hours

Provides an overview of cancer and the specialty of radiation therapy. The medical, biological and pathological aspects as well as the physical and technical aspects are discussed. Roles and responsibilities of the radiation therapist, the treatment prescription, the documentation of treatment parameters and delivery are also discussed. **Prerequisite:** Admission to Radiation Therapy program and consent of instructor (4 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2302

**Principles and Practice of Radiation Therapy II**

4 credit hours

Examines the management of neoplastic disease from a multidisciplinary perspective. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease are presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease is examined and linked to the skills required to analyze complex issues and make informed decisions. **Prerequisite:** Diagnostic Medical Imaging Radiography 2101, 2111

and 2301 with a grade of "C" or better and consent of instructor (4 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2303

##### **Principles and Practice of Radiation Therapy III**

4 credit hours

Establishes factors that influence and govern clinical planning of patient treatment. Encompassed are isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, compensation and clinical application of treatment beams. Optimal treatment planning is emphasized along with particle beams. Stereotactic and emerging technologies are presented.

**Prerequisite:** Diagnostic Medical Imaging Radiography 2102, 2112, 2302 and 2311 with a grade of "C" or better and consent of instructor and program admission approval required (4 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2310

##### **Radiation Therapy Physics**

3 credit hours

Establishes a basic knowledge of physics necessary to develop an understanding of radiation used in the clinical setting, and to develop a knowledge base in factors that govern and influence the production and recording of radiographic images for patient simulation, treatment planning and treatment verification in radiation oncology. Fundamental physical units, measurements, types of radiation, fundamentals of X-ray generating equipment, X-ray production, radiation oncology imaging equipment and related devices are emphasized. **Prerequisite:** Consent of instructor and admission to Radiation Therapy program (3 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2311

##### **Radiation Biology and Protection**

4 credit hours

Presents basic concepts and principles of radiation biology and radiation safety as they relate to radiation therapy. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events are presented. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are also incorporated. **Prerequisite:** Diagnostic Medical Imaging Radiography 2101, 2111, 2301 and 2310 with a grade of "C" or better and consent of instructor (4 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2312

##### **Quality Management in Radiation Therapy**

3 credit hours

Focuses on the evolution of quality management (QM) programs and continuing quality improvements in radiation oncology. Topics include the need for quality assurance (QA) checks; QA of the clinical aspects and chart checks; film checks; the various types of evaluations and tests performed on simulators, megavoltage therapy equipment and therapy planning units; the role of radiation therapists in QM programs; legal and regulatory implications for maintaining appropriate QM guidelines as well as the role of computers and information systems within the radiation oncology department. **Prerequisite:** Admission to program and ARRT certification; Diagnostic Medical Imaging Radiography 2102, 2112, 2302 and 2311 with a grade of "C" or better (3 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2321

##### **Cross-Sectional Anatomy**

2 credit hours

Basics of cross-sectional anatomy related to lesion localization in Radiation Therapy, normal sectional anatomy as shown in diagrams and radiographic, sonographic, computerized tomography (CT), nuclear medicine, and magnetic resonance (MR) images. **Prerequisite:** Admission to Radiation Therapy program and consent of instructor (2 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2322

##### **Pathophysiology for Radiation Therapy**

3 credit hours

Introduces basic disease concepts, theories of disease causation, and system-by-system pathophysiologic disorders most frequently encountered in clinical practice. The processes involved in the development and classification of both benign and malignant tumors and site-specific information on malignant tumors are addressed. **Prerequisite:** Diagnostic Medical Imaging Radiography 2301 and 2310 or Diagnostic Medical Imaging Radiography 2321 and 2331, with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2323

##### **Operational Issues in Radiation Therapy**

3 credit hours

Focuses on various radiation therapy operational issues. Addresses concepts of team practice, patient-centered clinical practice and professional development. The interrelatedness of standards of care, law, ethical standards and competence will also be examined. **Prerequisite:** Admission to Program and ARRT certification; and Diagnostic Medical Imaging Radiography 2311, 2322, 2302, and 2332 with a grade of "C" or better. (3 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2331

##### **Clinical Practice I**

3 credit hours

Provides sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined and evaluated. **Prerequisite:** Admission to Radiation Therapy program and consent of instructor.

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2400

##### **Clinical Applications of Mammography**

2 credit hours

Experience in the performance of mammography exams, including patient preparation and education, interventional procedures and the required quality control tests described by the American College of Radiology (ACR) Mammography Quality Control Manual. Designed to meet or exceed the minimum competency requirements for certification by the American Registry of Radiologic Technologists (ARRT). **Prerequisite:** Admission to Program and ARRT certification or consent of instructor.

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2402

##### **Breast Anatomy, Physiology, and Pathology**

1 credit hour

Establishment of baseline knowledge in breast anatomy and physiology. Correlation between breast anatomic structures and mammographic anatomic structures. Introduction to breast viability, benign and cancerous pathology, and mammographic appearance. **Prerequisite:** Admission to Program or consent of instructor (1 lecture hour)

#### DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2403

##### **Mammography Principles and Procedures**

2 credit hours

Introduction to technologist-performed physical breast assessment. Preliminary patient assessment, physical breast assessment, and documentation of findings required for a comprehensive examination for imaging correlation of the breasts will be discussed. A knowledge base of the various positions and projections in mammography along with the clinical data needed to perform the exam and positioning techniques for both screening and diagnostic mammography, including interventional procedures. **Prerequisite:** Admission to Program or consent of instructor (1 lecture hour, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2404

**Mammography Quality Management**

2 credit hours

Introduction to mammography equipment along with mandated requirements governing use and factors that influence the production and recording of mammographic images. Accreditation and service delivery standards included. **Prerequisite:** Admission to Program or consent of instructor (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2500

**Sectional Anatomy & Pathology for Computed Tomography**

3 credit hours

Basics of sectional anatomy related to the study of anatomic structures for location, relationship to other structures and function. Normal anatomy and pathology are located and identified on axial, sagittal, coronal, and oblique planes in computed tomography (CT) images. Characteristic appearance of each anatomical structure as it appears on CT images with pathologic and trauma processes as diagnosed by CT imaging. **Prerequisite:** Consent of instructor and admission to Computed Tomography Program (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2501

**Principles of Computed Tomography & Patient Care**

3 credit hours

Basic principles and procedures related to computed tomography imaging, indication for the procedure, patient education, preparation, orientation and positioning, patient history and assessment, contrast media, scout image, selectable scan parameters, filming and archiving of the images. Basic concepts of patient care specific to computed tomography, including pediatric patients. Routine and emergency procedures, with infection control using standard precautions for venipuncture and power injections of contrast media. Review of computed tomography images for quality, positioning, and anatomy illustrated. **Prerequisite:** Consent of instructor and admission to Computed Tomography (CT) Program (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2502

**Physics & Instrumentation for Computed Tomography**

3 credit hours

Basic physical principles and instrumentation involved in computed tomography. Physics topics covered include the characteristics of x-radiation, computed tomography (CT) beam attenuation, linear attenuation coefficients, tissue characteristics and Hounsfield numbers application. Data acquisition and manipulation techniques, image reconstruction algorithms such as filtered back-projection. Computed tomography systems and operations with full coverage of radiographic tube configuration, collimator design and function, detector type, characteristics and functions and the CT computer and array processor. CT image processing and display from data acquisition through post processing and archiving and patient factors related to other elements affecting image quality and artifact production and reduction and image communication. **Prerequisite:** Diagnostic Medical Imaging Radiography 2500 and 2501 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2503

**Radiation Safety and Quality Management for Computed Tomography**

3 credit hours

Principles of radiation protection, including the responsibilities of the computed tomography (CT) technologist for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations. Components of a Quality Management Program which includes quality assurance and quality control measures. **Prerequisite:** Diagnostic Medical Imaging Radiography 2502 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2511

**Clinical Applications of Computed Tomography I**

3 credit hours

Provides structured clinical education experiences to sequentially develop, apply, analyze, and evaluate concepts and theories in the performance of computed tomography (CT) procedures. Designed competency-based clinical assignments and patient-centered clinical practice provides patient care and assessment in the performance of CT procedures. Competency and outcome measures ensure the supervised completion of CT procedures in head, brain, neck, spine and musculoskeletal, chest, thorax, abdomen and pelvis. **Prerequisite:** Consent of instructor

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY 2512

**Clinical Applications of Computed Tomography II**

3 credit hours

Provides structured clinical education experiences in the performance of advanced computed tomography (CT) imaging procedures, using patient-centered clinical practice and assessment. Competency outcomes and measures for supervised completion of CT special procedures with contrast, venipuncture, and power injector. Competence demonstrated in CT image display, post processing, and quality assurance. **Prerequisite:** Consent of instructor

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## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1100

**Introduction to Diagnostic Medical Sonography**

3 credit hours

History of ultrasound including medical applications. Description of the roles, responsibilities and rules of the diagnostic medical sonographer. Introduction to the fundamental principles of the use and maintenance of ultrasound equipment. Indications of diagnostic sonography procedures, positioning, safety and image processing. Legal and ethical issues in an ultrasound department. **Prerequisite:** Formal admission to the Diagnostic Medical Imaging Sonography program or consent of the program coordinator (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1101

**Sonographic Physics and Instrumentation I**

3 credit hours

Introduction to physics of acoustics and sonographic instrumentation. Production and types of sound waves discussed. Demonstration of propagation of ultrasound through tissues, transducers, pulse-echo instruments and display methods. **Prerequisite:** Formal admission to the Diagnostic Medical Imaging Sonography program or consent of program coordinator (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1102

**Sonographic Physics and Instrumentation II**

3 credit hours

Continuation of pulse-echo instrumentation, including harmonics, image artifacts and color flow imaging with Doppler instrumentation. Bioeffects and safety in ultrasound imaging. Quality management applied to Sonography. **Prerequisite:** Diagnostic Medical Imaging Sonography 1100 and 1101 or consent of program coordinator (2 lecture hours, 2 lab hours)



## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1105

**Introduction to Pathophysiology for Sonographers**

2 credit hours

Introduction to concepts of pathophysiology and causes of disease in the body systems. Cases are illustrated with diagnostic medical sonography and other medical imaging disciplines. Included are medical image interpretation, imaging techniques with Sonography, digital imaging systems, Computed Tomography, Magnetic Resonance Imaging, Nuclear Medicine and Radiography. (2 lecture hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1110

**Patient Care Skills for Sonographers**

2 credit hours

Introduction in patient care skills applied to the role of a sonographer in an imaging department. An exploration of nursing care skills, scanning ergonomics, patient confidentiality, and communication skills with hospital personnel as applied to all areas of sonography. **Prerequisite:** Consent of Sonography program coordinator (1 lecture hour, 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1111

**Clinical Education I**

1 credit hour

Supervised clinical training in a health care institution or clinic in abdominal, superficial structures, obstetrical and gynecologic imaging procedures. Students will observe, assist and perform various patient imaging procedures taught in the classroom. Focus of this course is on clinical skills, professionalism, and correct hospital procedures and policies. **Prerequisite:** Formal admission to the Diagnostic Medical Imaging Sonography program or consent of the program coordinator

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1112

**Clinical Education II**

3 credit hours

Continuation of Diagnostic Medical Imaging Sonography clinical experience in a health care institution. Reinforcement and broadening of knowledge gained in Clinical Education I. Correlation and application of skills learned in Diagnostic Medical Imaging Sonography 1102, 1121 and 1131. Technical and professional aspects of patient scanning in obstetrics, pelvic, abdominal and superficial structures. **Prerequisite:** Diagnostic Medical Imaging Sonography 1100, 1101, 1111 and 1120 or consent of program coordinator

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1113

**Clinical Education III**

6 credit hours

Continuation of Diagnostic Medical Imaging Sonography clinical experience in a health care institution. Reinforcement and broadening of knowledge gained in Diagnostic Medical Imaging Sonography 1112. Correlation and application of skills learned in Diagnostic Medical Imaging Sonography 1122 and 1132. Technical and professional aspects of patient scanning in obstetrics, pelvic, abdominal and superficial structures. **Prerequisite:** Diagnostic Medical Imaging Sonography 1102, 1112, 1121 and 1131 or consent of program coordinator and program admission approval required

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1114

**Clinical Education IV**

3 credit hours

Continuation of Diagnostic Medical Imaging Sonography clinical experience in a health care institution. Reinforcement and broadening of knowledge gained in Diagnostic Medical Imaging Sonography 1113. Correlation and application of skills learned in Diagnostic Medical Imaging Sonography 1142. Technical and professional aspects of patient scanning in obstetrics, pelvic, abdominal superficial structures. **Prerequisite:** Diagnostic Medical

Imaging Sonography 1113, 1122 and 1132 or consent of program coordinator (24 clinical hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1120

**Sonographic Cross-Sectional Anatomy**

3 credit hours

Introduction to the basics of cross-sectional anatomy as interpreted on diagnostic sonographic images. Sectional human anatomy in the transverse, sagittal and coronal planes. Correlation of anatomy with cadavers and ultrasound images. **Prerequisite:** Admission to the Diagnostic Medical Imaging Sonography program and/or consent of program coordinator (2 lecture hours, 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1121

**Fundamentals of OB/GYN I**

3 credit hours

Ultrasound evaluation of the female pelvis and reproductive system. Introduction to imaging in the first trimester of pregnancy and gynecology. Ultrasound films of normal anatomy and pathology. Ultrasound appearance of the cervix, uterus, fallopian tubes, ovaries, placenta and fetus. Techniques and management of gynecologic infertility and post-menopausal women. **Prerequisite:** Diagnostic Medical Imaging Sonography 1100, 1101 and 1120 or consent of program coordinator (2 lecture hours, 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1122

**Fundamentals of OB/GYN II**

3 credit hours

Advanced fetal ultrasound techniques in the second and third trimester. Demonstration of multiple gestations, antenatal syndromes, congenital fetal disorders, placenta, umbilical cord and membranes. Fetal growth assessment and management of growth disorders. **Prerequisite:** Diagnostic Medical Imaging Sonography 1112, 1121 and 1141 or consent of program coordinator and program admission approval required (2 lecture hours, 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1131

**Abdomen/Superficial Structures I**

3 credit hours

Introduction to abdominal cross-sectional anatomy and ultrasound. Vascular and abdominal organs systems discussed with normal and pathologic conditions, ultrasound evaluation of upper abdominal organs include liver, gallbladder and biliary tree, spleen, pancreas, great vessels, scrotum, prostate and urinary tract. Introduction to pathologic sonographic appearances of the abdomen. **Prerequisite:** Diagnostic Medical Imaging Sonography 1100, 1101, 1111 and 1120 or consent of program coordinator (2 lecture hours, 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1132

**Abdomen/Superficial Structures II**

2 credit hours

Continuation of anatomy and pathology of the abdominal and superficial structures in ultrasound imaging. Areas include: thyroid, parathyroid, breast, neck, thorax, gastrointestinal tract, musculoskeletal system, extracranial vessels and neonatal brain. Introduction of color flow Doppler techniques. **Prerequisite:** Diagnostic Medical Imaging Sonography 1112, 1131 and 1141 or consent of program coordinator and program admission approval required (2 lecture hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1140

**Fundamentals of Breast Sonography**

2 credit hours

Principles and fundamentals of breast sonography. Exploration of physics of sonography as it relates to normal and abnormal breast tissue and anatomy. Correlation with other imaging modalities and surgical techniques in breast pathology. **Prerequisite:** Concurrent enrollment in Diagnostic Medical Imaging Sonography 1122 or



Registered Diagnostic Medical Sonographer (ARDMS) or Registered Radiologic Technologist (ARRT) and program admission approval required (2 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1141

##### **Case Study Critique I**

1 credit hour

Critical analysis of anatomical variants, normal and pathological sonographic findings in diagnostic ultrasound case presentations. Reference to imaging technique, positioning and patient care. Sonographic cases presented with procedures described in Diagnostic Medical Imaging Sonography 1121, 1131, 1122 and 1132. **Prerequisite:** Diagnostic Medical Imaging Sonography 1100, 1101 and 1111 and concurrent enrollment in Diagnostic Medical Imaging Sonography 1121 and 1131 or consent of program coordinator (1 lecture hour)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1142

##### **Case Study Critique II**

1 credit hour

Continuation of critical analysis of anatomical variants, normal and pathological sonographic findings in diagnostic ultrasound case presentations. Reference to imaging technique, positioning and patient care. Sonographic cases presented with procedures described in Diagnostic Medical Imaging Sonography 1122 and 1132. **Prerequisite:** Concurrent enrollment in Diagnostic Medical Imaging Sonography 1122 and 1132 or consent of program coordinator and program admission approval required (1 lecture hour)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1151

##### **Abdominal/Superficial Structures and Obstetrics/Gynecology Hands-on Scanning Lab – 1**

1 credit hour

Overview and emphasis of principles taught in Diagnostic Medical Imaging Sonography 1100 in Abdominal/Superficial Structures and Obstetrics/Gynecology. Students perform hands-on scanning techniques in the scanning lab. Various scanning techniques are demonstrated on fellow students under the guidance of the instructor. Proper techniques in manipulating the transducer probe are demonstrated. Identification of organ systems and corresponding ultrasound images. **Prerequisite:** Formal admission to Diagnostic Medical Imaging Sonography Program or consent of the program coordinator (2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1152

##### **Abdominal/Superficial Structures and Obstetrics/Gynecology Hands-on Scanning Lab-2**

1 credit hours

Continuation of principles taught in Diagnostic Medical Imaging Sonography 1151 in Abdominal/Superficial Structures and Obstetrics/Gynecology. Students perform advanced hands-on scanning techniques in the scanning lab. Techniques are demonstrated on fellow students and volunteer patients under the guidance of the instructor. Proper techniques in manipulating transducer probe are demonstrated. Identification of organ systems and corresponding ultrasound images. **Prerequisite:** Diagnostic Medical Imaging Sonography 1151 or consent of instructor (2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1153

##### **Abdominal/Superficial Structures and Obstetrics/Gynecology Hands-on Scanning Lab-3**

1 credit hour

Continuation of principles taught in Diagnostic Medical Imaging Sonography 1152 in Abdominal/Superficial Structures and Obstetrics/Gynecology. Emphasis placed on advanced skills in obstetrical scanning. Students perform hands-on scanning techniques on volunteer patients under the guidance of the

instructor. Proper techniques in manipulating the transducer probe are demonstrated. Identification of organ systems and corresponding ultrasound images. **Prerequisite:** Diagnostic Medical Imaging Sonography 1152 and program admission approval required (2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1154

##### **Abdominal/Superficial Structures and Obstetrics/Gynecology Hands-on Scanning Lab-4**

1 credit hour

Continuation of principles taught in Diagnostic Medical Imaging Sonography 1151, 1152 and 1153 in Abdominal/Superficial Structures and Obstetrics/Gynecology. Emphasis will be placed on students demonstrating their scanning skills to their instructors and fellow students. Identification of organ systems and corresponding ultrasound images will be emphasized. **Prerequisite:** Concurrent enrollment in Diagnostic Medical Imaging Sonography 2280 and 2285 (2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1160

##### **Legal Aspects of Health Care in Sonography**

2 credit hours

Legal principles of health care in sonography. Exploration of medical law cases reviewing standard of care, negligence, liability, malpractice insurance, depositions, trials and verdicts. Individual occurrences will be highlighted to avoid and protect from future lawsuits. **Prerequisite:** Concurrent enrollment in Diagnostic Medical Imaging Sonography 2280 and 2285 or a Registered Diagnostic Medical Sonographer (2 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1820

##### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of program coordinator (1 to 3 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1822

##### **Selected Topics III**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in the college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of program coordinator (1 lecture hour, 1 to 4 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1823

##### **Selected Topics IV**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of program coordinator (1 to 6 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1824

##### **Selected Topics V**

1 to 2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of program coordinator (1 to 2 lecture hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 1826

**Selected Topics VII**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in the college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of program coordinator (1 to 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2200

**Vascular Hemodynamics and Physics**

2 credit hours

A review of the circulatory system blood as fluid, and how blood circulates. A description of the various forms of energy and how they affect blood movement will be covered. The principles of blood movement, conduits and circulation will be examined along with laboratory demonstration of these principles. The Doppler effect and the Doppler will be explained and applied. Various Doppler instruments used to assess blood flow in vascular ultrasound will be reviewed and utilized in class and lab. (2 lecture hours, 2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2201

**Abdominal and Peripheral Arterial I**

2 credit hours

Review and evaluation of blood vessels, their purpose and composition along with detailed physiology of the arterial blood flow system. Arterial anatomy of the abdomen, pelvic and upper extremities as well as the lower extremities are reviewed. Diseases of the arterial system along with their effects are addressed with indications for ultrasound arterial examinations. **Prerequisite:** Concurrent enrollment required in Diagnostic Medical Imaging Sonography 2221 or consent of program coordinator (2 lecture hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2203

**Cerebrovascular Ultrasound**

2 credit hours

Overview of the purpose and composition of blood vessels and the physiology of the cerebrovascular system. Cerebrovascular anatomy are reviewed. Disease of the cerebrovascular system are addressed with the indications for ultrasound cerebrovascular examinations. A review and demonstration of cerebrovascular ultrasound testing and findings and other laboratory modalities. Treatments for various diseases of the cerebrovascular system are addressed. Cerebrovascular testing as a part of ongoing, post-intervention patient management are included. **Prerequisite:** Concurrent enrollment required in Diagnostic Medical Imaging Sonography 2223 or consent of program coordinator and program admission approval required (2 lecture hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2204

**Abdominal and Peripheral Venous**

2 credit hours

Overview of the purpose and composition of blood vessels and the physiology of the venous blood flow system. Venous anatomies of the abdomen, pelvis, upper extremities, as well as the lower extremities are addressed. Diseases of the venous system, their effects and indications for ultrasound venous examinations are included. An overview of the abdominal and peripheral venous ultrasound testing, their findings and other laboratory modalities. Treatments for various diseases of abdominal and peripheral venous systems are reviewed. **Prerequisite:** Concurrent enrollment required in Diagnostic Medical Imaging Sonography 2224 or consent of program coordinator (2 lecture hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2212

**Clinical Education – Vascular Imaging I**

3 credit hours

Supervised clinical training in a health care institution or clinic in the vascular imaging skills taught in the classroom. Students will observe, assist, and perform various patient imaging procedures. The focus of this course is on clinical skills, professional and correct hospital procedures and policies. **Prerequisite:** Admission to the program (24 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2213

**Clinical Education – Vascular Imaging II**

3 credit hours

Supervised clinical training in a health care institution or clinic in the vascular imaging skills taught in the classroom. Students observe, assist, and perform various patient imaging procedures. The focus of this course is on clinical skill, professionalism and correct hospital procedures and policies. This course builds upon those skills learned in the classroom and Diagnostic Medical Imaging Sonography 2212. **Prerequisite:** Diagnostic Medical Imaging Sonography 2212 with a grade of "C" or better and program admission approval required

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2221

**Abdominal and Peripheral Arterial Hands-on Scanning Lab I**

1 credit hour

An overview of abdominal and peripheral arterial ultrasound testing that offers hands-on training in the classroom with vascular ultrasound equipment. Application of principles taught in Diagnostic Medical Imaging Sonography 2201. Various arterial testing techniques and scanning are demonstrated and performed on fellow students under the guidance of the instructor. Proper techniques in these testing modalities are reviewed along with proper identification of the arterial system. **Prerequisite:** Concurrent enrollment in Diagnostic Medical Imaging Sonography 2201 (2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2222

**Abdominal and Peripheral Arterial Hands-on Scanning Lab-2**

1 credit hour

Continuation of Diagnostic Medical Imaging Sonography 2221 that provides a further understanding of abdominal and peripheral arterial ultrasound testing by offering hands-on training in the classroom with vascular ultrasound equipment. This course is taught in conjunction with Diagnostic Medical Imaging Sonography 2202. Under the guidance of the instructor, students will practice these techniques on fellow students. Proper techniques in these testing modalities will be reviewed along with proper identification of the arterial system. **Prerequisite:** Diagnostic Medical Imaging Sonography 2201 and concurrent enrollment in Diagnostic Medical Imaging Sonography 2202 (2 lab hours)

## DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2223

**Cerebrovascular Ultrasound Hands-on Scanning Lab**

1 credit hour

Continuation of Diagnostic Medical Imaging Sonography 2203 that provides a further understanding of cerebrovascular ultrasound testing by offering hands-on training in the classroom with vascular ultrasound equipment. Various cerebrovascular testing techniques and scanning are demonstrated to the students. Under the guidance of the instructor, students will practice these techniques on fellow students. Proper techniques in these testing modalities will be reviewed along with proper identification of the cerebrovascular system. **Prerequisite:** Concurrent enrollment required in Diagnostic Medical Imaging Sonography 2204 (2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2224

##### **Abdominal and Peripheral Venous Hands-on Scanning Lab**

1 credit hour

Continuation of Diagnostic Medical Imaging Sonography 2204 that provides an understanding of abdominal and peripheral venous ultrasound testing by offering hands-on training in the classroom with vascular ultrasound equipment. Various venous testing techniques and scanning are demonstrated to the students. Under the guidance of the instructor the students will practice these techniques on fellow students. Proper techniques in these testing modalities are reviewed along with proper identification of the venous system. **Prerequisite:** Concurrent enrollment is required in Diagnostic Medical Imaging Sonography 2204 (2 lab hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2280

##### **Sonographic Physics Registry and Review**

1 credit hour

Intensive review of topics taught in Diagnostic Medical Imaging Sonography 1101 and 1102. Preparation for taking the American Registry of Diagnostic Medical Sonography certificate examination. Review of physical principles of sound and sonographic instrumentation. Principles of propagation of ultrasound through tissues, transducers, pulse-echo instruments, image storage and display. Review of Doppler ultrasound, image artifacts and quality management. **Prerequisite:** Diagnostic Medical Imaging Sonography 1102 or consent of program coordinator and program admission approval required (1 lecture hours)

#### DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY 2285

##### **Clinical Sonographic Registry and Review**

1 credit hour

Intensive review of topics taught in Diagnostic Medical Imaging Sonography 1100, 1121, 1122, 1131 and 1132. Preparation for taking the American Registry of Diagnostic Medical Sonography certification examination. Review of Diagnostic Medical Sonography applications in the specialties of abdominal/superficial structures and obstetrics/gynecology. **Prerequisite:** Diagnostic Medical Imaging Sonography 1121, 1122, 1131 and 1132 or consent of program coordinator (1 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## EARLY CHILDHOOD EDUCATION AND CARE

#### EARLY CHILDHOOD EDUCATION AND CARE 1100

##### **Introduction to the Early Childhood Profession**

3 credit hours

An introduction to the field of Early Childhood Education and Care, including the history of early childhood education and the various types and components of current early childhood and care programs. Ways that early childhood programs support the development of children and the professional roles and responsibilities of the early childhood educator are explored. (2 lecture hours, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1101

##### **Growth and Development of the Young Child**

3 credit hours

An overview of all aspects of child growth and development from conception through adolescence. Child development theory, principles of sequential growth with emphasis on the significance of family, peers, school and culture. (2 lecture hours, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1102

##### **Child Guidance Practices**

3 credit hours

A study of guidance practices that support the development of the young child, including the relationship of developmental theories to guidance practices. Lab experiences provide practice in observation, reflection and interaction with young children.

**Prerequisite:** Early Childhood Education and Care 1100 and 1101 with a grade of "C" or better (2 lecture hours, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1110

##### **Parenting and the Young Child**

2 credit hours

A practical analysis of parent-child interaction with emphasis on understanding developmental tasks of the early childhood years. Motivation and guidance as applied to child and parent are explored. (2 lecture hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1116

##### **Care of the Infant, Toddler and Two-Year Old Child I**

3 credit hours

Introduction to theories and research related to the development of infant, toddler and two-year-old children. Ways of providing a safe, stimulating and nurturing environment that fosters the optimum growth and development of the individual child are examined.

Thirty hours laboratory work of group care of children aged six weeks to 36 months are required. (2 lecture hours, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1117

##### **Care of the Infant, Toddler and Two-Year-Old Child II**

3 credit hours

Continuation of the study of development, education and care of infant, toddler and two-year-old children. The teacher's role in providing an environment that fosters the optimum growth and development of the individual child is examined. Thirty hours of laboratory work in group care of children aged six weeks to 36 months are required. **Prerequisite:** Early Childhood Education and Care 1101 or Early Childhood Education and Care 1116

(2 lecture hours, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1120

##### **Family Child Care Management**

2 credit hours

This course includes the practical consideration of issues and responsibilities in providing family child care for infants and young children. (1 lecture hour, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1121

##### **Family Child Care Curriculum and Guidance**

2 credit hours

Specialized knowledge and skills for family child care providers. Curriculum and guidance skills appropriate for the multi-age groups of children in family child care. (1 lecture hour, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1130

##### **Methods: Discovery and the Physical World**

3 credit hours

An overview of experiences and methods for helping children learn about the physical world. Emphasizes the adult's responsibilities in the implementation of nature, science, blocks, mathematics, motor coordination, cooking and the sensory activities. **Prerequisite:** Early Childhood Education and Care 1100 and 1101 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

#### EARLY CHILDHOOD EDUCATION AND CARE 1140

##### **Methods: Self-Expression and the Social World**

3 credit hours

An overview of a wide variety of experiences and methods for developing children's self-expression and helping them learn about

the social world. Emphasizes the adult's responsibilities in the implementation of literacy, dramatic play, art, construction, social studies, music and movement. **Prerequisite:** Early Childhood Education and Care 1100 and 1101 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 1151  
**Language and Literacy Development of the Young Child**  
3 credit hours

An introduction to speech and language development of young children and teaching practices that support language and literacy development. Typical and atypical language development and the factors that influence that development will be emphasized. Planning and implementing developmentally appropriate activities and instructional materials is included. **Prerequisite:** Early Childhood Education and Care 1100 and 1101 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 1161  
**Multicultural Curriculum for the Young Child**  
2 credit hours

Introduction to multicultural curriculum activities, materials and environments for young children. Special emphasis on applying multicultural education principles to curriculum planning. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 1162  
**Multicultural Perspectives in Child Development and Education**  
2 credit hours

Exploration of multicultural perspectives of child care and development. Emphasis on cultural and family factors that shape and influence the contexts in which young children develop. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 1163  
**Practicum: At-Risk Early Childhood Programs**  
1 credit hour

Daily participation in an at-risk early childhood program for young children. Students will assist teachers in the program under the supervision of a faculty supervisor. Students apply knowledge and practice skills gained in child care classes. Seventy-five hours of practicum required. **Prerequisite:** Early Childhood Education and Care 1102, 1161 and 1162 or consent of instructor (5 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 1820  
**Selected Topics in Early Childhood Education and Care I**  
1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** This course is designed for students nearing completion of the Early Childhood Education and Care program or for child care practitioners. Students should have attained minimum Department of Children and Family Services credit hours for a child care director position before enrolling in the course. (1 lecture hour)

EARLY CHILDHOOD EDUCATION AND CARE 1840  
**Independent Study – Individualized**  
1 to 4 credit hours

Exploration and analysis of topics within Early Childhood Education and Care to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2201  
**Creative Art Activities for the Young Child**  
2 credit hours

Introduction to a variety of materials and experiences suitable for creative artistic expression of the young child. The use of various media to provide opportunities for expression and exploration is emphasized. (2 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2203  
**Music and Movement for the Young Child**  
2 credit hours

An introduction to music and movement experiences for the young child. The relationship of children's developmental needs to the music and movement curriculum is explored. Students will compile resources of music and movement activities. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2204  
**Child Care Environment**  
2 credit hours

This course explores indoor and outdoor environments in child care centers that support the development of young children. Materials and equipment selection and room arrangement are included. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2206  
**Science and Nature for the Young Child**  
2 credit hours

Introduction to theories and practice of science and nature curriculum for young children. Emphasis is placed on the planning, implementation and evaluation of developmentally appropriate activities and instructional materials. (2 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2208  
**Mathematics Activities for the Young Child**  
2 credit hours

Introduction to theories and practice related to the curriculum area of mathematics for young children. Emphasis is placed on the development of mathematical thinking. Implementation and evaluation of developmentally appropriate activities and instructional materials are included. (2 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2210  
**The Young Child with Special Needs**  
2 credit hours

An introduction to child care services for young children (under 8 years of age) with special needs. Descriptions of special needs, curriculum, programs, services and current issues are included. (2 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2211  
**Child Health, Safety and Nutrition**  
3 credit hours

A comprehensive overview of current health, safety and nutritional needs of growing children. Appropriate methods to meet the needs of young children in group care settings are emphasized. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2220  
**Early Childhood Education Practicum**  
4 credit hours

Practicum experience in the field of Early Childhood Education. Emphasizes the practical application of principles, practices and theories of early childhood education while working with young children in a professional setting. Students will also participate in a weekly practicum seminar. **Prerequisite:** Early Childhood Education and Care 1100, 1101, 1102, 1130, 1140, 2211 and 2251 with a grade of "C" or better in each of the prerequisite courses or equivalent, and consent of instructor (20 clinical hours)



EARLY CHILDHOOD EDUCATION AND CARE 2226

**Development of the School-Age Child**

2 credit hours

A study of physical, cognitive and affective domains of the 6-to 12-year old child's growth and development. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2227

**Guidance of the School-Age Child**

2 credit hours

A study of guidance practices that support the development of school-age children in group settings. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2228

**Activities for School-Age Children**

2 credit hours

This course introduces students to the process of planning, implementing and evaluating activities for school-age children in a group setting. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2230

**Foundations of Early Childhood Education**

3 credit hours

Early childhood education and child care trends and issues, including a historical and philosophical review of research. Includes a study of theories of early childhood education as reflected in program models. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2250

**Play and Learning of the Young Child**

3 credit hours

An exploration of the significance of play experiences that promote growth and learning. Emphasis is placed on the relationship between the adult and the child at play. **Prerequisite:** Early Childhood Education and Care 1101 (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2251

**Curriculum Planning for the Young Child**

3 credit hours

The principles involved in planning, implementing and evaluating developmentally appropriate curriculum. Development of curriculum based on the needs and interests of young children in group care will be emphasized. **Prerequisite:** Early Childhood Education 1130 or equivalent and Early Childhood Education 1140 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2252

**Child/Family/Community Relations and Resources**

3 credit hours

This course describes the knowledge and skills early childhood professionals need to build effective interrelationships with the child, family, and community. Programs and services for children and their families will be explored. **Prerequisite:** Early Childhood Education and Care 1100 and 1101 with a grade of "C" or better or equivalent (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION AND CARE 2254

**Administration of an Early Childhood Center – Program Operations**

3 credit hours

An overview of early childhood program operations, including legal and professional standards. Students explore licensing and accreditation standards in relation to an existing early childhood center. Design and management as well as storage and maintenance of indoor and outdoor environments are included. (3 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2255

**Administration of an Early Childhood Center – Practices and Procedures**

3 credit hours

Information about the management processes of early childhood programs. Fiscal and legal structures, community outreach programs, and early childhood program marketing, public relations and promotional strategies are included. (3 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2256

**Administration of an Early Childhood Center – Staff, Families and Children**

3 credit hours

Exploration of the knowledge and skill application of early childhood program staff management and supervision. Development of effective human relations with diverse groups is described. Early childhood leadership skills and child advocacy are included. (3 lecture hours)

EARLY CHILDHOOD EDUCATION AND CARE 2260

**Early Childhood Professional**

3 credit hours

Explores the dimensions of becoming an early childhood professional, including ethics, relationships with colleagues, time management, advocacy, critical reflection and career development.

**Prerequisite:** Early Childhood Education and Care 1100 or equivalent or consent of instructor (3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## EARTH SCIENCE

EARTH SCIENCE 1101 (IAI P1 907L)

**Physical Geology of Earth's Interior**

4 credit hours

Processes important in understanding Earth's interior. Planetary segregation, heat flow, Earth's magnetic field, earthquakes, continental drift, paleomagnetism, seafloor spreading, mantle plumes and crustal deformation are investigated in light of the unifying theory of plate tectonics. Physical and chemical properties of minerals and the genesis of igneous, sedimentary and metamorphic rocks, and their relationship to the rock and tectonic cycles. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

EARTH SCIENCE 1102 (IAI P1 907L)

**Physical Geology of Earth's Surface**

4 credit hours

Geological processes involved in the creation of a variety of landform systems and sedimentary deposits. Weathering, mass wasting, transport, deposition, depositional environments, sediment lithification, analysis and interpretation of topographic maps, cross-sections and aerial photographs. Plate tectonic theory, volcanism and rock and mineral forming processes are integrated. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

## EARTH SCIENCE 1110 (IAI P1 905L)

**Introduction to Meteorology**

4 credit hours

A first look at various aspects of meteorology, including solar radiation, global circulation, environmental issues, winds, stability, precipitation processes, weather systems and severe weather. Basic physical principles, meteorological terminology, societal impacts and weather analysis will be explored. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test, or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

## EARTH SCIENCE 1111 (IAI P1 905)

**Climate and Global Change**

3 credit hours

Introduction to the earth's climate, climate change and the interactions between climate and the global environment. Physical, chemical, biological and social factors contributing to climate and global change are investigated. Topics explored are: climate classifications, global warming and greenhouse effect, acid rain, ozone depletion, regional drought and cataclysmic climate change. Man-made climate change as opposed to natural variability, along with human responses to potential climate change are debated. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## EARTH SCIENCE 1115 (IAI P1 905L)

**Severe and Unusual Weather**

4 credit hours

In-depth study of meteorological phenomena relating to thunderstorms, El Niño/Southern Oscillation events and tropical storms. Topics will include severe weather spotting, weather radar, atmospheric soundings, tornadogenesis, El Niño, tropical meteorology, hurricanes and an introduction to numerical weather prediction. Basic physical principles, their relation to weather events and weather's impact on society are also explored. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

## EARTH SCIENCE 1116

**Weather Analysis and Forecasting I**

1 credit hour

A study of day-to-day weather patterns with an emphasis on understanding the basics of meteorological processes and forecasting. Students learn to read weather reports and weather maps needed to analyze current conditions and forecast weather. Taking advantage of a fully operational weather laboratory, students monitor current weather conditions locally and across the nation. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lab hours)

## EARTH SCIENCE 1117

**Weather Analysis and Forecasting II**

1 credit hour

A continuation of Weather Analysis and Forecasting I. Students continue investigating sources of data, learn to analyze raw images and interpret numerical weather forecasts. Taking advantage of a fully-operational weather laboratory, students monitor current weather conditions locally and across the nation. **Prerequisite:** Earth Science 1116 or equivalent. Course requires Reading Placement Test Score-Category One (2 lab hours)

## EARTH SCIENCE 1122 (IAI P1 906L)

**Astronomy: The Solar System**

4 credit hours

An introduction to the solar system using recently available astronomical data. Major topics include scale models, planetary properties, earth-sun relationships, lunar geology, terrestrial planets, jovian planets, natural satellites and ring systems, asteroids, comets, meteoroids, meteors, meteorites, interplanetary space probes and formation theories. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One. 3 lecture hours, 3 lab hours)

## EARTH SCIENCE 1124 (IAI P1 906L)

**Astronomy: Stars and Galaxies**

4 credit hours

A study of stars, galaxies, deep space objects and cosmology utilizing the latest astronomical discoveries. Major topics include constellations, the sun, stellar types, motions, parallax, magnitudes, luminosity, spectra, classifications, clusters, evolution, quasars, nebula, galaxy classification and composition, the Big Bang, inflation and cosmology. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

## EARTH SCIENCE 1126 (IAI P1 906L)

**Observational Astronomy**

4 credit hours

An introduction to observation of the heavens with emphasis on angular measurements, use of horizontal and equatorial systems of location, object identification and classification using data from sidereal time reports, naked eyes, binoculars, optical telescopes, radio telescopes and space telescopes. Use of planisphere, celestial globes, firsthand and robotic telescopic data and telescopic tools. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

## EARTH SCIENCE 1130 (IAI P1 905L)

**Introduction to Oceanography**

4 credit hours

An introduction to oceanography that focuses on the dominating influence the world ocean has upon earth processes. Topics include ocean basin evolution, sea water chemistry and physics, interrelationships between the ocean and atmosphere, waves, currents, tides, coastal development, marine communities and human impacts. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

## EARTH SCIENCE 1135 (IAI P1 905L)

**Water Science-Fundamentals of Hydrology**

4 credit hours

A scientific study of water, including its properties, occurrences, distribution, movement, utilization and control, both on and beneath the surface of the ground. An introduction to techniques for obtaining and testing water samples and the equipment necessary for determining pH, dissolved oxygen, carbon dioxide, and various nutrients and pollutants. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

EARTH SCIENCE 1140 (IAI P1 905L)

**Fundamentals of Earth Science**

4 credit hours

An introduction to the study of the Earth as a planet. Topics from the disciplines of astronomy, meteorology, oceanography and geology are explored to develop an appreciation of our planet as an integrated system. Includes analyses of the dynamic processes of the Earth's interior, surface, oceans, atmosphere and astronomical surroundings. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better, or a qualifying score on the mathematics placement test, or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 2 lab hours)

EARTH SCIENCE 1141

**Introduction to Earth Science**

3 credit hours

A non-laboratory introduction to the study of the Earth as a planet intended for non-science majors. Topics from the disciplines of astronomy, meteorology, oceanography and geology are explored to develop an appreciation of our planet as an integrated system. Includes analyses of the dynamic processes of the Earth's interior, surface, oceans, atmosphere and astronomical surroundings. Students receive credit for either 1140 or 1141 but not both.

**Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better, or qualifying score on the mathematics placement test, or a qualifying ACT math score (3 lecture hours)

EARTH SCIENCE 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the Earth Science discipline. These courses require direct experience and focused reflection in an in-depth study of a specific Earth Science topic and/or the critical analysis of contemporary issues in Earth Science. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of Earth Science concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One (1 to 3 lecture hours, 1 to 3 lab hours)

EARTH SCIENCE 1820

**Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

EARTH SCIENCE 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

EARTH SCIENCE 2102

**Origin and Evolution of the Earth**

4 credit hours

Processes and geologic events that are important in understanding the origin and evolution of the Earth. Origin of the solar system, planetary segregation, absolute and relative age dating methods, the sedimentary record, evolution of the continents, oceans and atmosphere. Plate tectonics, crustal evolution and biologic development over the course of geologic time will be a unifying theme. **Prerequisite:** Earth Science 1101, 1102, 1130 or 1140 with a grade of "C" or better or equivalent (3 lecture hours, 2 lab hours)

EARTH SCIENCE 2103

**Geologic Field Investigations**

3 credit hours

Geologic field investigation involving the stratigraphy, structural geology and economic geology of a selected region within the United States or abroad. Basic methods of geologic field work, including rock and outcrop description, sampling methods, measurement of stratigraphic sections, strike and dip measurements, orienteering and map interpretation. A supervised field investigation involving 10 to 14 days of outdoor field work and pre- and post-trip class meetings. **Prerequisite:** Earth Science 1101, 1102 or 1140 or equivalents (1 lecture hour, 4 lab hours)

EARTH SCIENCE 2110

**Intermediate Meteorology**

4 credit hours

A quantitative first look at the science of meteorology. Physical concepts will be examined using algebraic methods to prepare students for material using higher mathematics. Operational, physical and dynamical meteorology are discussed to give students an overall understanding of atmospheric science. Equations of motion, thermodynamics and the primitive equations will be among the topics covered. **Prerequisite:** Mathematics 1431 (or college equivalent) or qualifying score on the mathematics placement test or a qualifying ACT math score and either Earth Science 1110 or 1115 or consent of instructor (4 lecture hours)

EARTH SCIENCE 2115

**Mesoscale Meteorology**

4 credit hours

In-depth study of meteorological phenomena with short temporal and small spatial scales. Topics will include tools for mesoscale analysis, mesoscale modeling, thermally-forced circulations, fog, mesoscale winter events, and the morphology of convective systems, including squall lines, mesoscale convective systems and supercells and their associated threats, including flash floods and tornadoes. Other topics of current research interest will also be covered. **Prerequisite:** Earth Science 1115 or equivalent or consent of instructor (3 lecture hours, 2 lab hours)

EARTH SCIENCE 2116

**Advanced Weather Analysis and Forecasting I**

1 credit hour

A continuation of Weather Analysis and Forecasting II, Earth Science 1117. Emphasis is on independent analysis of weather events, forecast preparation and mastery of hand data analysis. Taking advantage of a fully operational weather laboratory, students monitor current weather conditions locally and across the nation. **Prerequisite:** Earth Science 1117 and Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (2 lab hours)

EARTH SCIENCE 2117

**Advanced Weather Analysis and Forecasting II**

1 credit hour

A continuation of Advanced Weather Analysis and Forecasting I. Students prepare a weekly forecast for the Chicago metropolitan

area generally and DuPage County specifically, and track and evaluate their forecasting accuracy. Taking advantage of a fully operational weather laboratory, students monitor current weather conditions locally and across the nation. **Prerequisite:** Earth Science 2116 or equivalent (2 lab hours)

#### EARTH SCIENCE 2118

##### **Severe Weather Lab**

2 credit hours

An in-depth study of severe weather forecasting and analysis. An emphasis is placed on hand analysis of raw data, assessing short term numerical weather models and nowcasting. Students monitor events prior to and during severe weather events using real time radar and other data sources. Students gain a better understanding of severe weather initiation and evolution. Local field trips to observe severe weather firsthand may be included. May be taken up to two times for credit. **Prerequisite:** Earth Science 1115 with a grade of "C" or better or consent of instructor (4 lab hours)

#### EARTH SCIENCE 2800

##### **Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the Earth Science discipline, while building upon academic knowledge and skills acquired in introductory-level Earth Science classes. These courses require direct experience and focused reflection in an in-depth study of a specific Earth Science topic and/or the critical analysis of contemporary issues in Earth Science. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical applications of more complex Earth Science concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in Earth Science or consent of the instructor

#### EARTH SCIENCE 2820

##### **Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## ECONOMICS

#### ECONOMICS 1110

##### **Consumer Economics and Personal Finance**

3 credit hours

An overview of personal and family financial planning. Emphasis is placed on financial recordkeeping, consumer spending, tax planning, making buying decisions, purchasing insurance, selecting investments, and retirement and estate planning. (3 lecture hours)

#### ECONOMICS 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the

discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) (1 to 3 lecture hours, 1 to 3 lab hours)

#### ECONOMICS 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### ECONOMICS 2200 (IAI S3 900)

##### **Principles of Economics**

3 credit hours

A survey course addressing macroeconomics and microeconomics. A study of product and resource markets, market structures, interactions between government and firms, the determinants of economic activity, money and banking, monetary and fiscal policy implications, international trade and international finance. This course is not recommended for Economics majors or those pursuing a baccalaureate degree in any field of business. Not for credit if credit earned in Economics 2201 or Economics 2202 or their equivalent. (3 lecture hours)

#### ECONOMICS 2201 (IAI S3 901)

##### **Macroeconomics and the Global Economy**

3 credit hours

A study of the major factors that determine levels of economic activity. Emphasis is placed on resource allocation, national production, demand and supply, income levels, government, money and the banking system, policy implications, economic growth, international finance and exchange rates. A score of 53 or higher in algebra domain of mathematics placement test is recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### ECONOMICS 2202 (IAI S3 902)

##### **Microeconomics and the Global Economy**

3 credit hours

A study of consumer behavior, supply and demand, price determination, market structures, factor pricing, international trade and finance and economic development. Special topics may include agricultural economics, the economics of risk, environmental economics and alternative economic systems. A score of 53 or higher in algebra domain of mathematics placement test and successful completion of Economics 2201 are recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### ECONOMICS 2210

##### **Money and Banking**

3 credit hours

A descriptive, historical and analytical introduction to the role of money, monetary policy, financial institutions and central banks in the United States and internationally. **Prerequisite:** Economics



2201. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### ECONOMICS 2220

##### **Comparative Economic Systems**

3 credit hours

A comparison of the principal economic systems, their theoretical foundations and historical backgrounds. Economic analysis of the strengths and weaknesses of the capitalist, socialist and communist systems. Developing nations are studied within their own unique paradigm and with current strategies for economic development. **Prerequisite:** Economics 2201 or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### ECONOMICS 2800

##### **Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline, while building upon academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

**Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours, 1 to 3 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010.

## EDUCATION

#### EDUCATION 1100

##### **Introduction to Education**

3 credit hours

Provides an introduction to teaching as a profession in the American education system. Offers a variety of perspectives on education, including historical, philosophical, social, legal and ethical issues in a diverse society. Includes organizational structure and school governance. A 15 clock-hour field experience is required. Field experience placement is dependent on degree pursued and/or interest and grade level area. (3 lecture hours)

#### EDUCATION 1101

##### **School Procedures I**

3 credit hours

A field experience course with each student spending a minimum of 40 clock hours in a classroom, preferably in a diverse setting. The weekly seminar focuses on the development of human relations and problem-solving skills necessary for an effective classroom. Students examine various policies, procedures and routine activities that are part of the teacher's role. Education 1100 strongly recommended. (2 lecture hours, 2 lab hours)

#### EDUCATION 1102

##### **School Procedures II**

3 credit hours

An introduction to the classroom focusing on diversity in learning styles, assessment and evaluation. Students will spend a minimum

of 30 clock hours in a field experience setting. Education 1101 is recommended. (2 lecture hours, 2 lab hours)

#### EDUCATION 1105

##### **Career Development**

2 credit hours

Focus on integrating career development into important life choices. Emphasis will be given to helping students learn the skills involved in developing career awareness, making career decisions and taking career action in a changing work environment. (2 lecture hours)

#### EDUCATION 1110

##### **Interpersonal Skills for Life and Work**

2 credit hours

Emphasizes understanding the student's style of communicating, exploring options and decreasing self-defeating behaviors. Includes awareness of communication variances among ethnic, racial and gender groups. Through an experiential approach, students have an opportunity to develop more satisfying and effective interpersonal skills for enhancing personal and work relationships, self-esteem and understanding of behavior differences among persons from diverse backgrounds. (2 lecture hours)

#### EDUCATION 1115

##### **College Success Skills**

2 credit hours

An introduction to academic success skills necessary for meeting the challenge of a college education. Students explore and apply note-taking strategies, listening skills, test preparation, test-anxiety strategies, time management, goal setting and awareness of potential that can assist in achieving their goals in higher education. (2 lecture hours)

#### EDUCATION 1150

##### **School Resources**

3 credit hours

An introduction to instructional media used in classrooms and learning centers. Emphasis is on current and emerging theories of learning with instructional technology and how to best integrate, utilize and adapt technology as a resource in teaching and learning. A variety of media are incorporated: display boards, projectors, recorders, videotapes, computers, software, e-mail, Internet, archival data files, Elmo, CDs, course management systems and electronic data storage are among the resources reviewed. Practical application of media in traditional and non-traditional learning environments addressed. (3 lecture hours)

#### EDUCATION 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) (1 to 3 lecture hours, 1 to 3 lab hours)

## EDUCATION 1820

**Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in the Teaching and Learning Center's schedule. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Must be a current faculty or staff member at College of DuPage (3 lecture hours)

## EDUCATION 2201 (IAI S1 901N)

**Education for Exceptional Children**

3 credit hours

A survey course that presents the historical, legal and philosophical foundations of special education. The primary focus is on children with disabilities, but will include children at-risk, and children from culturally diverse backgrounds. Course work includes the categories of exceptionality as identified by the Individuals with Disabilities Education Act (IDEA), their characteristics and collaborative strategies to address their needs. Students spend a minimum of 30 hours observing and assisting in special education settings. Recommended: Education 1100 or equivalent (2 lecture hours, 2 lab hours)

## EDUCATION 2202

**Introduction to Learning Disabilities**

3 credit hours

This course provides an overview of learning disabilities and includes etiology and diagnostic procedures, classification, characteristic and teaching strategies. Course work also includes discussion of service delivery models and strategies for meeting the needs of students with learning disabilities in the least restrictive environment. Recommended: Education 2201 (3 lecture hours)

## EDUCATION 2211

**Survey of Literature for Children**

3 credit hours

A study of children's literature representing a range of literary types. The literature is evaluated for age and interest appropriateness. Students may do a concentrated study of a specific age group within the 1 to 12 years of age range. A 10-hour service learning component is required. (3 lecture hours)

## EDUCATION 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of the instructor (1 to 3 lecture hours, 1 to 3 lab hours)

## EDUCATION 2820

**Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. May be taken three times for credit as long as different

topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours)

## EDUCATION 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

## EDUCATION 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## EDUCATION 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## EDUCATION 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

**ELECTRO-MECHANICAL TECHNOLOGY**

## ELECTRO-MECHANICAL TECHNOLOGY 1101

**Survey of Automation**

3 credit hours

Automation technology, including robotics, programmable controllers (PLC), process control instrumentation, industrial

electricity, plastics, motion controls, vision systems and automatic guided vehicles. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1110

##### **Motor Fundamentals**

3 credit hours

Basic principles for Alternating Current (AC) and Direct Current (DC) motors. Motor theory, operation, ratings, speeds and enclosures. Analysis of efficiency, power service factors and frame sizes. Motor control concepts, including ladder and wiring drawings. Control devices, including sensors, control transformers, and starters. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1120

##### **Residential Wiring**

3 credit hours

All facets of correct wiring methods and techniques, based on the National Electrical Code (NEC). Room-by-room, circuit-by-circuit, installation and inspection with an emphasis on symbols, branch circuits, service drops, ground-fault circuit-interrupters (GFCI), low voltage circuits, and security system circuitry. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1130

##### **Industrial Electricity**

3 credit hours

Industrial electricity, circuits, devices and power. The use of instruments on circuit analysis and test equipment. (2 lecture hour, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1140

##### **Commercial and Industrial Wiring**

3 credit hours

Designed to provide the electrician with tips and techniques for wiring in commercial buildings, offices, stores, manufacturing and other industrial environments. High voltage branch feeders, motors, appliance service, special systems and overcurrent protection are covered. Emphasis is on the National Electrical Code (NEC), minimum requirements pertaining to high and medium voltage motors, wiring, switchgear and power distribution. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1141

##### **Hydraulics and Pneumatics**

3 credit hours

Principles of fluids at rest and in motion. Hydraulic and pneumatic pumps, motors, cylinders, boosters, valves, regulators, and circuitry to transmit and control power. (3 lecture hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1150

##### **National Electrical Code**

3 credit hours

An overview of the current national electrical code (NEC) with emphasis on reading, interpretation and revisions. Definitions and terminology are covered. (3 lecture hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1171

##### **Introduction to Robotic Technology**

3 credit hours

Introduction to the basic theory and operation of robots in industrial automation. Basic robot and work-place design, safety procedures and robotic applications are studied. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1190

##### **Introduction to Programmable Logic Controllers**

3 credit hours

A survey of programmable logic controllers (PLC). Terminology, basic memory structure, I/O's (input/outputs), processors and programming devices. Basics of programming and applications. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1300

##### **Introduction to Fiber Optics**

3 credit hours

Modern theories and applications of fiber optics. Course includes history, information transmission, advantages and disadvantages of fiber, optics and practical applications. (3 lecture hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1400

##### **Maintenance Management Systems**

3 credit hours

Overview of various computerized maintenance management systems. Topics include storeroom inventory, preventive maintenance procedures and scheduling, predictive maintenance costs, records and tracking, International Standards Organization (ISO) certification, training and vendor records. (3 lecture hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1410

##### **Preventive and Predictive Maintenance**

3 credit hours

Fundamentals of preventive and predictive maintenance using vibration analysis, equipment history, repair records and tracking systems. Procedures for identifying and implementing maintenance practices. Scheduled maintenance vs. predictive maintenance, charts and predictive maintenance, analysis of dimension signatures for bearings, motors and pumps, and development of anticipatory failure analysis. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1420

##### **Drive Components**

2 credit hours

A hands-on approach to gears and gearing systems, chains and sprockets, belts and sheaves, brakes and clutches, couplings and coupling alignment, bearings and lubrication. (1 lecture hour, 3 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1820

##### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours, 1 to 4 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2310

##### **Fiber Optic Applications**

3 credit hours

Designed to provide industrial- type simulations and emulate the processes found in real life-applications. Topics include connector installation and splicing, fusing and troubleshooting. **Prerequisite:** Electro-Mechanical Technology 1300 or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2410

##### **Programmable Controller II (PLC II)**

3 credit hours

Data manipulation within programmable controllers (PLC), including data transfer, arithmetic functions, shift registers and sequencers. Topics such as analog to digital conversion, operator interface input/output (I/O) bus systems, advanced PLC cards,

factory information systems and troubleshooting of applications.  
**Prerequisite:** Manufacturing Technology 1190 with a grade of “C” or better or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2420

##### **Programmable Controller III**

3 credit hours

Advanced topics in programmable controllers (PLCs) such as data highways, programming modules, and online programming using manufacturer’s advanced software, process conversions to programmable controls and critical areas of process controls. Simulated applications of real-time processes comprise the majority of the course work, such as injection molding machines and transfer pad printing. **Prerequisite:** Electro-Mechanical Technology 2410 with a grade of “C” or better or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2430

##### **Advanced Industrial Automation**

3 credit hours

A systems approach to industrial automation. Bus structure, memory devices, digital and analog input/output (I/O) devices, data acquisition systems, digital transmission standards and networks. Emphasis is placed on multiple system design, integration and troubleshooting. **Prerequisite:** Electro-Mechanical Technology 2410 and 2520 with a grade of “C” or better or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2510

##### **Process and Automation Controls**

3 credit hours

Introduction to language, symbols and principles of process control instrumentation with emphasis on temperature, pressure, level and flow measurement, including calibration of transmitters, process feedback and feedforward loops. Discussion of hazardous area classifications. Introduction to controllers, controller modes and tuning processes. Included are deadband adjustments, proportional (gain), integral (reset) and derivative (rate) calibration. (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2520

##### **Advanced Process and Automation Controls**

3 credit hours

An in-depth study of force, stress, strain, linear position, weight and mass measurement. Also included are analytical process measurements such as pH, conductivity and resistivity. Major emphasis is given to control elements in process loops and electrical, pneumatic and hydraulic actuators. Introduction to digital process controllers and in-depth study of piping and instrumentation drawings (P&ID). Additionally, a comprehensive study of intrinsic safety and instrument purging is included. **Prerequisite:** Electro-Mechanical Technology 2510 and Manufacturing Technology 1190 with a grade of “C” or better or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2600

##### **Motion Control: Servo and Stepper Motor Application and Control**

2 credit hours

An introduction to motion control, including servo motors, DC servo drivers with control circuits, alternating current (AC) motors, steppers, actuators, sensors, fundamentals of basic control principles, and industrial and engineering applications of motion control systems. **Prerequisite:** Manufacturing Technology 1190 or consent of instructor (1 lecture hour, 3 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2610

##### **Machine Vision and Artificial Intelligence**

2 credit hours

Advanced topics in computer vision for robots, and an introduction to artificial intelligence (AI). Course covers the following main areas: sensors, manipulators, and pattern recognition and vision systems, software and control. Object-oriented programming languages and vision system robotics software will be covered in the laboratory. **Prerequisite:** Manufacturing Technology 1190 or consent of instructor (1 lecture hour, 3 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2620

##### **Critical Thinking in Technical Applications**

2 credit hours

Manufacturing processes and parameters that contribute to the system troubleshooting procedures. Through case studies and practical application, a system of thinking is developed to determine fault isolation and failure. (1 lecture hour, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2630

##### **Systems Troubleshooting**

2 credit hours

Examines troubleshooting techniques, time-proven tips and aids to troubleshooting, and use of functional block diagrams in the ICO (input-conversion-output) method of fault isolation. Emphasis is on breakdown maintenance. (1 lecture hour, 2 lab hours)

#### ELECTRO-MECHANICAL TECHNOLOGY 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### ELECTRO-MECHANICAL TECHNOLOGY 2863

##### **Cooperative Education/Internship (Occupational)**

3 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of Instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### ELECTRO-MECHANICAL TECHNOLOGY 2864

##### **Cooperative Education/Internship (Occupational)**

4 credit hours

Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of Instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)



## ELECTRONICS TECHNOLOGY

### ELECTRONICS TECHNOLOGY 1100

#### **Electricity and Electronics Fundamentals**

3 credit hours

Basic concepts in electronics are studied. An overview of direct and alternating current, circuit laws, components, troubleshooting, and use of test equipment. Hands-on experience, projects, and practical applications are included. (2 lecture hours, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1101

#### **Circuits I**

3 credit hours

Introduction to basic concepts in electronics. An exploration of the basics in electricity and electronics. Topics include an overview of direct and alternating current, circuit laws, components, troubleshooting and use of test equipment. Teamwork, critical thinking and problem solving are emphasized. Hands-on experience and practical applications are included. **Prerequisite:** Electronics Technology 1100 or consent of instructor (2 lecture hours, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1102

#### **Circuits II**

4 credit hours

Advanced concepts in circuit electronics. Topics include filtering, resonance, time and frequency response, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects are included. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1101 or consent of instructor (2 lecture hours, 4 lab hours)

### ELECTRONICS TECHNOLOGY 1110

#### **Introduction to Technology**

2 credit hours

Students will develop an understanding of the fields of technology such as computers, telecommunications, electronics, mechanics and other related fields. Through project based hands-on learning activities, students will have an opportunity to apply theory to real problems as they develop skills in solving technological problems. (1 lecture hours, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1111

#### **Introduction to Robotics**

3 credit hours

Introduction to fundamental robotic concepts, basic robot characteristics and review of robotic applications. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1100 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1118

#### **Calculus for Electronics**

2 credit hours

Basic principles of differential and integral calculus and differential equations applicable to circuit analysis. **Prerequisite:** Mathematics 1432 and Electronics Technology 1102 or college equivalent or qualifying score on the mathematics placement test or qualifying ACT math score or concurrent enrollment or consent of instructor (2 lecture hours)

### ELECTRONICS TECHNOLOGY 1120

#### **Electronic Documentation**

2 credit hours

Introduction to electronic drafting and documentation. Electronic schematics and documentation, printed circuit board documentation, and drafting techniques using computer assisted drafting and design (CADD), components, symbols and diagrams. (1 lecture hour, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1130

#### **Electronics Materials and Fabrication**

2 credit hours

Electronic equipment construction, assembly, repair, cable soldering techniques and fabrication. Coverage of the fundamentals of electronic design, fabrication and documentation, delineating various troubleshooting and test procedures, hands-on experience with connectors, fasteners, troubleshooting and testing of electronic systems. Testing of integrated circuits and personal computer boards. Concepts reinforced through student projects. **Prerequisite:** Electronics Technology 1100 with a grade of "C" or better or consent of instructor (1 lecture hour, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1141

#### **Digital Fundamentals**

3 credit hours

Introduction to basic concepts in digital electronics. Basic discrete electronics, digital logic, circuit laws, components, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. (2 lecture hours, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1142

#### **Digital Components and Architecture**

3 credit hours

A continuation of Digital Fundamentals. Digital components, digital architecture, digital systems, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1141 or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

### ELECTRONICS TECHNOLOGY 1151

#### **Electronic Devices and Applications I**

4 credit hours

Basic concepts in electronic devices. Topics include diode and transistor fundamentals and applications, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1101 or consent of instructor (2 lecture hours, 4 lab hours)

### ELECTRONICS TECHNOLOGY 1152

#### **Electronic Devices and Applications II**

4 credit hours

A continuation of Electronic Devices and Applications I. Advanced concepts in electronic devices. Topics include diode and transistor applications, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1151 or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

### ELECTRONICS TECHNOLOGY 1161

#### **Electronic Communication I**

4 credit hours

Basic concepts in telecommunication electronics and circuits. Fundamentals of analog communications, such as amplitude modulation (AM), frequency modulation (FM), television and radio fundamentals, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized.

**Prerequisite:** Electronics Technology 1151 or consent of instructor (2 lecture hours, 4 lab hours)

### ELECTRONICS TECHNOLOGY 1162

#### **Electronic Communication II**

4 credit hours

A continuation of Electronic Communication I. Advanced concepts in analog and digital communications and digital

telecommunication circuits. Transmission lines, antennas, cell systems, networks, fiber-optics, troubleshooting and use of telecommunication test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1161 or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

#### ELECTRONICS TECHNOLOGY 1201

##### **Renewable Energy Fundamentals**

2 credit hours

Survey of renewable energy technology, including wind turbines and solar photovoltaic (PV) power technology. (1 lecture hour, 3 lab hours)

#### ELECTRONICS TECHNOLOGY 1820

##### **Selected Topics I**

1 to 4 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. May be taken three times for credit. (1 to 3 lecture hours, 1 to 4 lab hours)

#### ELECTRONICS TECHNOLOGY 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### ELECTRONICS TECHNOLOGY 2001

##### **Green Energy Systems**

3 credit hours

Advanced study of principles of operation, testing, and diagnosis of green energy systems. These systems are evaluated both with discussion of theory, hands-on lab analysis and an alternative energy systems feasibility study will be included of actual green energy systems. **Prerequisite:** Electronics Technology 1100 or Electronics Technology 1201 with a grade of “C” or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2112

##### **Motor Control**

3 credit hours

Introduction to fundamental motor control concepts, basic control characteristics and review of control strategies. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1151 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2201

##### **Applied Electronics**

5 credit hours

A continuation of Electronic Devices and Applications II course. Advanced semiconductor circuits, linear and nonlinear op-amps, analog signal conditioning and linear power supplies. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1152 or equivalent or consent of instructor (3 lecture hours, 4 lab hours)

#### ELECTRONICS TECHNOLOGY 2202

##### **Advanced Applied Electronics**

5 credit hours

A continuation of Applied Electronics course. Practical semiconductor circuits, linear and nonlinear amplifiers, analog signal processors and power supplies. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 2201 or equivalent or consent of instructor (3 lecture hours, 4 lab hours)

#### ELECTRONICS TECHNOLOGY 2205

##### **Electronics Assembly Technology**

3 credit hours

Basic skills of assembly electronics technology, surface mount technology, techniques for electronic product assembly and manufacturing processes for electronics-based equipment and products, and quality assurance in electronics. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1130 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2210

##### **Advanced Calculus for Electronics**

2 credit hours

A continuation of Calculus for Electronics. Principles of differential and integral calculus and differential equations applicable to circuit analysis. **Prerequisite:** Electronics Technology 1102 and 1118 or equivalent or consent of instructor (2 lecture hours)

#### ELECTRONICS TECHNOLOGY 2220

##### **Electronic Instruments, Measurements and Control**

3 credit hours

Methods of measurements of basic electric and electronic parameters. Study of circuits and characteristics of major electronic instruments. and basic control circuits. **Prerequisite:** Electronics Technology 1141 and 1151 or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2231

##### **Digital Computer Electronics**

4 credit hours

Advanced concepts in digital computer electronics, computer architecture, computer circuit analysis and synthesis, computer organization and microprocessor programming. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1100 and 1142 or equivalent or consent of instructor (2 lecture hours, 6 lab hours)

#### ELECTRONICS TECHNOLOGY 2241

##### **Wireless Telecommunications I**

3 credit hours

Basic concepts in wireless electronics and circuits. Fundamentals of wireless telecommunication systems, frequency spectrum, cellular radio, troubleshooting and use of telecommunication test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1162 or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2242

##### **Wireless Telecommunications II**

3 credit hours

A continuation of Wireless Telecommunications I. Concepts in wireless electronics and wireless systems. Analysis of wireless telecommunication systems, personal telecommunication systems, and satellite and wireless networks. Hands-on experience, practical

applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 2241 or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2245

##### **Programmable Logic Devices**

4 credit hours

Introduction to digital systems programming. Field Programmable Gate Arrays (FPGA) and Complex Programmable Logical Devices (CPLD) are used in this course to develop sample applications. These state-of-the-art devices are programmed using the Verilog and VHDL (Very High Density Programming Language) languages, popular in science and industry today. Hands-on experience, practical applications and projects. **Prerequisite:** Electronics Technology 1141 or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

#### ELECTRONICS TECHNOLOGY 2255

##### **Industrial Controls**

3 credit hours

Introduction of basic concepts in industrial electronics. Topics include an overview of transducers and signal conditioning. Troubleshooting and use of test equipment. Principles and fundamental laws of control technology and industrial electronics are included. **Prerequisite:** Electronics Technology 1141 and 1151 or consent of instructor (2 lecture hours, 2 lab hours)

#### ELECTRONICS TECHNOLOGY 2261

##### **Digital Circuits and Systems**

4 credit hours

Introduction to basic concepts in digital circuits and systems, investigation of all phases of troubleshooting and implementation of reliable digital systems. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1141 or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

#### ELECTRONICS TECHNOLOGY 2262

##### **Introduction to Microprocessors**

4 credit hours

Introduction to basic concepts in microprocessor systems. Architecture of microprocessor systems, and investigation of all phases of troubleshooting and implementation of reliable microprocessor systems. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. **Prerequisite:** Electronics Technology 1101 and 1141 or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

#### ELECTRONICS TECHNOLOGY 2273

##### **Embedded Systems and Microcontroller Programming**

3 credit hours

Introduction to embedded systems applications involving real-time programming of microcontrollers and digital to analog conversion. Hands-on experience includes programming Reduced Instruction Set Computing (RISC) microcontrollers, Field Programmable Gate Arrays (FPGA) circuits, and digital signal processing using Operation Amplifiers, Digital Signal Processing (DSP), and Phase Locked Loop (PLL) chips. **Prerequisite:** Electronics Technology 1141 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## ENGINEERING

#### ENGINEERING 1101

##### **Engineering Graphics and Design**

3 credit hours

Introduction to engineering, engineering graphics and design. Topics include orthographic projection, isometric and oblique drawing, geometrical constructions, dimensioning, tolerances, basic shop operations, detailing and assembly drawing. Also descriptive geometry, spatial relationships of points, lines and planes in orthographic projection, and graphical presentation of data. Methods include free hand sketching, instrumental drawing and computer-aided design. Both two-dimensional computer-aided design and solid modeling are included. Plane geometry is recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (1 lecture hour, 5 lab hours)

#### ENGINEERING 1820

##### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

#### ENGINEERING 2201

##### **Statics**

3 credit hours

Force and moment vectors in two and three dimensions. Equilibrium of particles and rigid bodies. Analysis of trusses, frames, machines and beams. First and second moments of inertia, centroids, distributed forces and mass moments of inertia. Friction and virtual work. **Prerequisite:** Mathematics 2231 or college equivalent (3 lecture hours)

#### ENGINEERING 2202

##### **Dynamics**

3 credit hours

Kinematics and kinetics of particles and rigid bodies in two and three dimensions. Absolute and relative motion. Force, mass, acceleration, work and energy, impulse and momentum, and vibration. **Prerequisite:** Engineering 2201 (3 lecture hours)

#### ENGINEERING 2203

##### **Mechanics of Materials**

3 credit hours

Analysis of stress, strain and deflection in machine and structural elements (axial, shear, torsion and bending loads). Stress and strain transformation using Mohr's Circle. Combined loading, repeated loading, theories of failure, related mechanical properties and column buckling. Design of shafts, beams and columns. Elementary stress measurement devices. **Prerequisite:** Engineering 2201 (3 lecture hours)

#### ENGINEERING 2205

##### **Engineering Thermodynamics**

3 credit hours

Analysis of thermodynamic processes and systems. Engineering implications of the properties of ideal and real gases and vapors in thermal systems. Zeroth, first and second laws of thermodynamics, power and refrigeration systems, entropy and vapor power systems. **Prerequisite:** Mathematics 2233 or college equivalent (3 lecture hours)

#### ENGINEERING 2210

##### **Circuit Analysis and Theory**

4 credit hours

An introduction to engineering circuit analysis and design. Topics include basic laws and concepts of linear circuits, analysis of direct

current and alternating current circuits by mesh and nodal analysis, the operational amplifier, the inductor and capacitor, transients analysis, phasors, impedance, average and root-mean-square values, power and transfer functions. Hands-on lab is included.

**Prerequisite:** Mathematics 2270 or concurrent enrollment or college equivalent and Physics 2112 (3 lecture hours, 2 lab hours)

#### ENGINEERING 2213

##### **Introduction to Digital Systems**

4 credit hours

An introduction to computer engineering. Digital circuit design with discrete and integrated circuit components. Binary arithmetic, codes, bases, number systems, logic elements and Boolean functions. Analysis and synthesis of combinational and sequential networks. Digital computer basics, machine level programming and microprocessors. Includes hands-on lab. A programming course or programming experience is recommended.

**Prerequisite:** Course requires Reading Placement Test Score-Category Three (3 lecture hours, 2 lab hours)

#### ENGINEERING 2820

##### **Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours)

#### ENGINEERING 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. Up to 4 hours credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### ENGINEERING 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## ENGLISH

#### ENGLISH 0480

##### **Preparation for College Reading**

4 credit hours

Builds the foundational reading skills necessary to be successful in college. Develops active reading habits that lead to comprehension and that introduce critical reading. Students read and respond to a

wide variety of texts and show how the texts relate to their own lives as well as enhance their understanding of the world. This course may require visits to the Writing and Reading Center. May be taken three times for credit. **Prerequisite:** Appropriate score on the Reading Pre-Course placement test (4 lecture hours)

#### ENGLISH 0481

##### **Approaches to College Reading I**

4 credit hours

Continues to develop the reading skills necessary for success in college. Emphasizes the role reading plays in acquiring new information and extends literal comprehension to more complex reading tasks required for difficult texts. This course may require visits to the Writing and Reading Center. May be taken three times for credit. **Prerequisite:** Appropriate score on the Reading Pre-Course placement test (4 lecture hours)

#### ENGLISH 0482

##### **Approaches to College Reading II**

4 credit hours

Focuses primarily on content area reading to prepare students for the challenges of reading in college. Students begin to read critically to determine the purpose, point of view, audience and message conveyed by an author, to trace the development of the line of reasoning, and to identify and evaluate the rhetorical devices used to convey a point. Also includes vocabulary development and reader-response activities. This course may require visits to the Writing and Reading Center. May be taken three times for credit.

**Prerequisite:** Appropriate score on the Reading Pre-Course placement test (4 lecture hours)

#### ENGLISH 0490

##### **Basic Writing**

4 credit hours

Build confidence and fluency in writing and the ability to generate well-developed texts. Students will understand how their texts fit in with a larger text-based world by developing a sense of audience and purpose. Classes are workshop-intensive sessions. Because of the strong relationship between writing and reading, students are immersed in reading activities. May be taken twice for credit.

**Prerequisite:** Mandatory testing and appropriate score on the Writing Placement Test as determined by the English faculty (4 lecture hours)

#### ENGLISH 0491

##### **Approaches to College Writing I**

4 credit hours

The first of two developmental writing courses designed to prepare students for English Composition 1101. Focuses on creating effective sentences and paragraphs within the context of writing short (250 to 350-word) essays, and on developing critical thinking skills. May be taken twice for credit. **Prerequisite:** An appropriate score on the English Placement test. (4 lecture hours)

#### ENGLISH 0492

##### **Approaches to College Writing II**

4 credit hours

The second of two developmental writing courses designed to prepare students for English Composition 1101. Focuses on composing longer (500-word) essays and on further developing critical thinking skills. May be taken twice for credit. **Prerequisite:** English 0491 with a grade of "C" or higher or an appropriate score on the English Placement test (4 lecture hours)

#### ENGLISH 1080

##### **Effective Workplace Writing**

1 credit hour

Improves workplace writing skills. Emphasizes techniques that produce clear, effective communication. Assignments and materials



will be based on the tasks the student must complete in his/her workplace. May be taken three times for credit. (2 lecture hours)

ENGLISH 1101 (IAI C1 900)

**English Composition I**

3 credit hours

The first of two courses in the one-year composition sequence. Introduces students to college-level writing as a process of developing and supporting a thesis in an organized essay. Requires students to read and think critically. Emphasizes using appropriate style and voice as well as the conventions of standard English and citation. **Prerequisite:** Mandatory testing. Prior to enrollment, student must have A) a satisfactory score, as determined by the English faculty, on an English Composition entrance test, and B) evidence of having met the Reading Competency Requirement. Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1102 (IAI C1 901R)

**English Composition II**

3 credit hours

Second course in two-course composition sequence. Students continue to develop experience in reading, thinking and writing critically by writing essays that demonstrate ability to analyze and evaluate the ideas of others and integrate them into their own writing. Reinforces student experience with the conventions of standard written English and the conventions of documentation while developing student ability to carry out independently the proper method and responsibilities of research. **Prerequisite:** English 1101 with a grade of "C" or better (3 lecture hours)

ENGLISH 1105

**Introduction to Technical Writing**

3 credit hours

A basic composition course primarily for students enrolled in occupational/technical programs. The course includes a variety of writing experiences: resumes, letters of application, abstracts, internal and external memos, papers using visuals as supporting documentation, job descriptions, and a long report (a feasibility study or research report). **Prerequisite:** Satisfactory score, as determined by the English faculty, on the English Composition Entrance Exam required prior to enrollment in English 1105, or a grade of "C" or better in English 1101 or its equivalent; and evidence of having met the Reading Competency Requirement. Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1110

**Technical Writing**

3 credit hours

An introduction to instructional writing, proposals, recommendation reports, and a procedures or operator's manual. Also includes some instruction in design, layout and graphics. Intended for students entering today's technologically advanced workplace. (3 lecture hours)

ENGLISH 1115

**Writing for the Web**

3 credit hours

Concentrates on writing techniques that combine elements of technical writing and simple grammar and usage basics to develop an effective writing style appropriate for business and personal websites. (3 lecture hours)

ENGLISH 1125

**Linguistics**

3 credit hours

The first course in the scientific study of language. Includes a systematic analysis of word formation, syntax and semantics in the English language and a study of the often universal ways that

humans make meaning through language. Also includes study of related issues of language variation, particularly historical development and child language acquisition. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1130 (IAI H3 900)

**Introduction to Literature**

3 credit hours

This course develops students' understanding of the elements of literature, including character, theme, point of view, symbol, imagery, tone and rhythm. Reading selections include short fiction, poetry and drama. The course emphasizes students' appreciation of literature as an art form. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1135 (IAI F2 908)

**Introduction to Film Art**

3 credit hours

Introduces the basic elements of film as an art form, including cinematography, mise-en-scene, movement, editing and sound. The historical development and social impact of film are also considered. Through screening, discussion and critical evaluation of selected films, students develop their knowledge of film as an art form. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1150 (IAI H3 901)

**Short Fiction**

3 credit hours

A study of selected short stories. The stories are read and discussed to increase students' understanding and enjoyment of this literary form. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1151 (IAI H3 901)

**Novel**

3 credit hours

A study of selected novels. The novels are read and analyzed to increase students' understanding and enjoyment of this literary form. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1152 (IAI H3 903)

**Poetry**

3 credit hours

Introduces students to the nature and elements of poetry through reading, analysis and discussion. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1153 (IAI H3 902)

**Drama**

3 credit hours

A study of selected plays. At least one of the plays will be currently in production in the area, and students will attend a performance. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 1154 (IAI HF 908)

**Film as Literature**

3 credit hours

Introduces methods of analyzing and interpreting the literary aspects of film in order to enhance enjoyment and understanding. Includes the comparison of literary and film techniques. Through the study of a selected variety of motion pictures, the course builds sensitivity to the uses of verbal and visual language and to the characteristics of various genre and non-genre films. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1156

**Science Fiction**

3 credit hours

Study of science fiction as a literary genre and as a means of exploring contemporary concerns. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1157

**Children's Literature**

3 credit hours

Introduction to literature for and by children, with emphasis upon imaginative literature, including fantasy, fairy tales, myths and legends, poetry and nonsense rhymes, adventure-quest narratives, as well as children's original poetry and fiction. Examines critical views of children's books. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1158 (IAI H5 901)

**Bible as Literature**

3 credit hours

An analysis, interpretation and evaluation of such basic types of literature found in the Bible as the short story, ballad and song, drama, fantasy, poetry, and the worlds of satire and humor. Emphasizes the development of individual understanding and enjoyment. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1159 (IAI H9 901)

**Greek Mythology**

3 credit hours

An introduction to the mythology of Classical Greece (fifth century BCE) as it appears in narrative and dramatic forms. The myths and the ideas underpinning them are studied in relation to modern culture. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1160 (IAI H3 910D)

**Native American Literature**

3 credit hours

Survey of Native American mythology, oratory, poetry, short fiction, nonfiction and the novel. Develops reading skills in analysis, interpretation and evaluation and examines values and themes common to Native American experiences. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1161 (IAI H3 910D)

**Multicultural Literatures of the U.S.**

3 credit hours

Examines literary texts representative of one or more multicultural groups in the United States., including but not limited to Hispanic, African-American, Asian-American, Middle Eastern, etc. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1165 (IAI H3 911D)

**Literature and Gender**

3 credit hours

Studies literature centering on women's experience, identity construction, gender epistemology, and feminist philosophy and scholarship. The course also examines subject-boundaries of traditional discipline and literary canonization from interdisciplinary and culturally inclusive perspectives. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the

discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 1824

**Selected Topics in English**

2 credit hours

Introductory exploration and analysis of selected topics in English with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category On. (2 lecture hours)

## ENGLISH 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

## ENGLISH 1903

**Composition**

2 credit hours

The third of three courses in the one-year composition sequence. Students develop ability to carry out independently the processes, methods and responsibilities of research. Students select, evaluate and integrate a variety of sources to support a thesis in an organized, researched essay. Students continue to practice and apply the conventions of documentation and standard written English. **Prerequisite:** English 1102 with a grade of "C" or better, or equivalent. Students must receive a permit to certify successful completion of English 1102 and the need to take this incomplete sequence course as part of their certificate, degree or course prerequisites. (2 lecture hours)

## ENGLISH 2100

**Introduction to Writing and Reading Center Theory and Practice**

3 credit hours

Experiential course designed to train students to tutor other writers and readers and to engage in self-reflective and meta-cognitive activities on their writing and reading. Includes writing, reading, observing and practicing tutoring in the Writing and Reading Center. May be taken three times for credit. **Prerequisite:** English 1101 with a grade of "B" or better or equivalent and concurrent enrollment in English 1102 or consent of instructor (3 lecture hours)

ENGLISH 2126

**Modern English Grammar**

3 credit hours

A systematic and rigorous survey of the structure of contemporary English. Also explored are usage issues (including problems with the sentence, punctuation and agreement) and their underlying sources (language change, language attitudes and the notion of Standard English). Traces the effects of stylistic, regional and social variation on English usage. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2210

**Literary Journal: Prairie Light Review**

1 credit hour

Applies editorial and publication techniques to produce college-district humanities magazine. Includes writing, photography, editing and business management. May be taken three times for credit. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lab hours)

ENGLISH 2220 (IAI H3 912)

**British Literature to 1800**

3 credit hours

A survey of representative works illustrating the development of British literature from its beginnings to roughly 1800, with an emphasis on major literary movements understood in relation to their intellectual, social and political contexts. **Prerequisite:** English 1101 with a grade of "C" or better or consent of instructor (3 lecture hours)

ENGLISH 2221 (IAI H3 913)

**British Literature from 1800 Through the Present**

3 credit hours

A survey of representative works illustrating the development of British literature from roughly 1800 to the present, with an emphasis on major literary movements understood in relation to their intellectual, social and political contexts. **Prerequisite:** English 1101 or consent of instructor (3 lecture hours)

ENGLISH 2223 (IAI H3 914)

**American Literature from the Colonial Period Through the Civil War**

3 credit hours

Surveys works of representative American authors in their literary, intellectual, social and political contexts from the earliest periods to the Civil War. **Prerequisite:** English 1101 with a grade of "C" or better or consent of instructor (3 lecture hours)

ENGLISH 2224 (IAI H3 915)

**American Literature From the Civil War to the Present**

3 credit hours

Surveys works of representative American authors in their literary, intellectual, social and political contexts from the Civil War through the present. **Prerequisite:** English 1101 with a grade of "C" or better or consent of instructor (3 lecture hours)

ENGLISH 2226 (IAI H3 907)

**Masterpieces of World Literature**

3 credit hours

Reading of novels, drama and short stories from different cultural backgrounds and from different historical periods. Emphasis is on fictional literary masterpieces important to a liberal education. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2227 (IAI H3 907)

**Modern European Literature**

3 credit hours

Reading of major European writers of the 20th century in their individual and national contexts with emphasis on European

thought and themes. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2228 (IAI H3 905)

**Shakespeare**

3 credit hours

Involves reading and discussing various Shakespearean works, including six to nine plays. Lecture, discussion, recordings, films, oral readings or occasional student performances may be used to illuminate the material. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2250

**Introduction to Creative Writing**

3 credit hours

Students discover and develop their writing talent in several genres. Students create original fiction, poetry, creative non-fiction, and drama; experiment with various forms and styles; criticize and revise their own work; and read and examine the works of well-known writers for insight and inspiration. (3 lecture hours)

ENGLISH 2251

**Fiction Writing**

3 credit hours

A fiction writing course for students who want to develop their writing talents. Students examine elements of various forms of fiction and select and employ applicable techniques to their writing projects. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2252

**Poetry Writing**

3 credit hours

A creative writing course for students who want to explore, discover and develop their poetic talents. Students write their own poetry, experiment with various poetic forms and styles, criticize and revise their own work, receive critical feedback, and read and examine the works of well-known poets for insight and inspiration. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2253

**Creative Nonfiction Writing**

3 credit hours

An advanced writing course for students who wish to write freelance articles, essays or other nonfiction prose. Students work on one or more projects with the editorial assistance of the instructor. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2261

**Writing for Publication**

3 credit hours

This course offers instruction in analyzing the publishing market, including such publications as educational journals, business and industrial journals, general interest magazines and book-length publications. Students aim their writing projects toward a particular market. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ENGLISH 2262

**Non-Western Literature**

3 credit hours

Examines and analyzes literary texts representative of the Non-Western world, including but not limited to Latin America, South America, the Caribbean, Africa, Asia, the Middle East and/or Oceania. **Prerequisite:** English 1101 with a grade of "C" or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 2271

**Postmodern Fiction and Film**

3 credit hours

An introduction to the conflicting ideas, texts and products that define Postmodern fiction and film. **Prerequisite:** English 1101 with a grade of "C" or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline, while building upon academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

**Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 2820

**Selected Topics II**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## ENGLISH 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

## ENGLISH 2863

**Cooperative Education/Internship (Occupational)**

3 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of Instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## ENGLISH 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## ENGLISH 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## ENGLISH 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

**ENGLISH AS A SECOND LANGUAGE**

## ENGLISH AS A SECOND LANGUAGE 0441

**Academic ESL Reading I**

4 credit hours

Beginning-level academic/professional reading and comprehension skills and strategies for students whose first or primary language is not English. Emphasizes skills/strategies to improve reading comprehension and speed, expand vocabulary and use reference resources. Course is intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** Appropriate score on mandatory placement test. Course requires Reading Placement Test Score-Category Four. (4 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0442

**Academic ESL Reading II**

4 credit hours

Intermediate-level academic/professional reading comprehension skills and strategies for students whose first or primary language is not English. Emphasizes developing the critical reading and academic skills required to satisfy students' academic or



professional needs. Course is primarily intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0441 with a grade of “C” or better or appropriate score on mandatory placement test. Course requires Reading Placement Test Score-Category Three. (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0443

##### **Academic ESL Reading III**

4 credit hours

Advanced-level academic/professional reading skills and comprehension strategies for students whose first or primary language is not English. Emphasizes using authentic texts to develop the critical reading and academic skills required to satisfy students’ academic or professional needs. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable.

**Prerequisite:** English as a Second Language 0441 with a grade of “C” or better or appropriate score on mandatory placement test. Course requires Reading Placement Test Score-Category Two (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0551

##### **Academic ESL Writing I**

4 credit hours

Beginning-level academic/professional writing skills for students whose first or primary language is not English. Emphasizes writing well-formed, grammatical sentences and studying paragraph development. Focuses on recognizing spelling patterns for verbs and nouns, expanding vocabulary, generating original sentences in the six basic sentence patterns with correct punctuation, distinguishing topic sentences from supporting ideas and concluding sentences, and learning pre-writing techniques for paragraph development. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** Appropriate score on mandatory placement testing (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0552

##### **Academic ESL Writing II**

4 credit hours

Intermediate-level academic/professional writing skills for students whose first or primary language is not English. Emphasizes writing well-formed, grammatical paragraphs. Focuses on expanding the six basic sentence patterns through modification and compounding, using the writing process, organizing ideas into paragraph form, understanding elements of unity and coherence, and producing narrative, descriptive and expository paragraphs. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0551 with a grade of “C” or better or appropriate score on mandatory placement test (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0553

##### **Academic ESL Writing III**

4 credit hours

Advanced-level academic/professional writing skills for students whose first or primary language is not English. Emphasizes writing well-formed, grammatical essays. Focuses on a review of sentence expansion and modification, the four steps of the writing process,

developing research skills, and writing essays in a variety of rhetorical styles. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0552 with a grade of “C” or better or appropriate score on mandatory placement test (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0661

##### **Academic ESL Grammar I**

4 credit hours

Beginning-level academic/professional English grammar and sentence structure for students whose first or primary language is not English. Emphasizes the formal properties of the English language integrated with writing skills. Focuses on identifying sentence parts, complete sentences and fragments; subject/verb agreement; basic statement, imperative and question patterns; and simple present, present continuous, simple past and past continuous tenses. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** Appropriate score on mandatory placement testing (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0662

##### **Academic ESL Grammar II**

4 credit hours

Intermediate-level academic/professional English grammar and sentence structure for students whose first or primary language is not English. Emphasizes the formal properties of the English language integrated with writing skills. Focuses on the English system of articles, phrasal verbs, constructions of coordination and modification, and future and perfect tenses. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0661 with a grade of “C” or better or appropriate score on mandatory placement test (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0663

##### **Academic ESL Grammar III**

4 credit hours

Advanced-level academic/professional English grammar and sentence structure for students whose first or primary language is not English. Emphasizes the formal properties of the English language integrated with writing skills. Focuses on conditionals, passive voice, reported speech, verbals, emphatic constructions, performing multiple coordinating and embedding combinations, and varying tenses in discourse. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0662 with a grade of “C” or better or appropriate score on mandatory placement test (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0771

##### **Academic ESL Listening/Speaking I**

4 credit hours

Beginning-level academic/professional listening and speaking skills necessary for formal contexts for students whose first or primary language is not English. Emphasizes aural/oral discourse used in decision-making and problem-solving tasks. Focuses on such areas as listening to college lectures and taking notes,

participating in group discussions, pronouncing English sounds correctly, producing English stress and intonation patterns, and preparing short oral presentations. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable.

**Prerequisite:** Appropriate score on mandatory placement test. (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0772

##### **Academic ESL Listening/Speaking II**

4 credit hours

Intermediate-level academic/professional listening and speaking skills necessary for more formal contexts for students whose first or primary language is not English. Emphasizes longer aural/oral discourse used in decision-making and problem-solving tasks. Focuses on areas such as listening to extended college lectures and taking notes, applying a range of strategies for participating in group discussions, pronouncing English sounds correctly, producing English stress and intonation patterns, and incorporating techniques to enhance oral presentations. Intended primarily for students who hold a high school certificate or its equivalent and who have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0771 with a grade of "C" or better or appropriate score on mandatory placement test. (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0773

##### **Academic ESL Listening/Speaking III**

4 credit hours

Advanced-level listening and speaking skills and strategies for professional contexts for students whose first or primary language is not English. Emphasizes analytical skills necessary for assessing alternatives, finding creative solutions, and presenting outcomes effectively. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0772 with a grade of "C" or better or appropriate score on mandatory placement test. (4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0820

##### **Selected Topics**

2 to 4 credit hours

Academic/professional English skills for students whose first or primary language is not English. Emphasizes critical thinking in reading, writing, listening and speaking. Develops language and research skills necessary for success in the academic or professional setting. Intended for students who hold a high school certificate or its equivalent and have previously studied English. Topics will vary by term offerings. May be taken up to three times for credit; course is non-transferable and does not count toward graduation. **Prerequisite:** Appropriate score on mandatory placement tests or consent of instructor (2 to 4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0881

##### **Academic ESL Language and Culture I**

2 to 4 credit hours

Beginning-level academic/professional aural/oral skills and strategies for students whose first or primary language is not English. Emphasizes developing the skills and strategies necessary for social conversations and formal transactions, building an understanding and appreciation of U.S. culture, and enhancing cross-cultural communication. Focuses on such areas as making introductions, initiating, sustaining and ending conversations, explaining personal tastes and preferences, and

using the telephone. Addresses the linguistic and cultural instructional needs of non-English-language-background students. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** Appropriate score on mandatory placement test or consent of instructor (2 to 4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0882

##### **Academic ESL Language and Culture II**

2 to 4 credit hours

Intermediate-level academic/professional aural/oral skills and strategies for students whose first or primary language is not English. Emphasizes open-ended and problem-solving tasks to generate original conversation within the context of real-life, authentic situations. Focuses on such areas as communicating cross-culturally; making suggestions, expressing feelings, making inquiries, offering/accepting invitations, gifts and apologies; explaining problems; and agreeing/disagreeing. Addresses the linguistic and cultural instructional needs of non-English-language-background students. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0881 with a grade of "C" or better or appropriate score on mandatory placement test (2 to 4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0883

##### **Academic ESL Language and Culture II**

2 to 4 credit hours

Advanced-level academic/professional oral/aural skills and strategies for students whose first or primary language is not English. Emphasizes more complex transactions and conversation management skills in the context of decision-making and problem-solving tasks based on real-life, authentic situations. Focuses on such areas as communicating cross-culturally; agreeing, disagreeing and compromising; participating in discussions; explaining complex situations and reporting sequences of events. Addresses the linguistic and cultural instructional needs of non-English-language-background students. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. **Prerequisite:** English as a Second Language 0882 with a grade of "C" or better or appropriate score on mandatory placement test (2 to 4 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0950

##### **Beginning ESL Literacy I**

1 to 5 credit hours

Introduces basic ESL literacy communication skills, including listening, speaking, reading and writing. Emphasis is on aural/oral skills. Mandatory testing. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

#### ENGLISH AS A SECOND LANGUAGE 0951

##### **Beginning ESL Literacy II**

1 to 5 credit hours

Completes basic ESL literacy communication skills, including listening, speaking, reading and writing. Emphasis is on aural/oral skills. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0952

### **Beginning ESL I**

1 to 5 credit hours

Introduces beginning ESL communication skills, including listening, speaking, reading and writing. Emphasis continues on aural/oral skills. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0953

### **Beginning ESL II**

1 to 5 credit hours

Continues beginning ESL communication skills, including expanded basic listening, speaking, reading and writing. Emphasis is primarily on aural/oral skills. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0954

### **Beginning ESL III**

1 to 5 credit hours

Completes beginning ESL communication skills necessary to function in the United States. Continues the development of listening, speaking, reading and writing skills. Introduces grammar and structure. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0955

### **Intermediate ESL I**

1 to 5 credit hours

Introduces intermediate ESL communication skills necessary to function in the United States, including listening, speaking, reading and writing. Continues the study of grammar and structure. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0956

### **Intermediate ESL II**

1 to 5 credit hours

Completes intermediate ESL communication skills necessary to function in the United States, including listening, speaking, reading and writing. Continues the study of grammar and structure. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0957

### **Advanced ESL I**

1 to 5 credit hours

Introduces advanced ESL communication skills necessary to function in the United States, including listening, speaking, reading and writing. Continues the study of grammar and structure. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

## ENGLISH AS A SECOND LANGUAGE 0958

### **Advanced ESL II**

1 to 5 credit hours

Completes advanced ESL communication skills necessary to function in the United States, including listening, speaking, reading and writing. Continues the study of grammar and structure. May be

taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (1 to 5 lecture hours)

For additional information for the Academic English as a Second Language program, please contact the Liberal Arts Division at (630) 942-2047 or (630) 942-3307 or [www.cod.edu/Academic/ABE\\_GED](http://www.cod.edu/Academic/ABE_GED)

For additional information for the Adult English as a Second Language program, please contact the Continuing Education/Extended Learning Division at (630) 942-3697 or [www.cod.edu/Academic/ABE\\_GED](http://www.cod.edu/Academic/ABE_GED)

## FACILITY MANAGEMENT

### FACILITY MANAGEMENT 1100

#### **Introduction to Facility Management**

3 credit hours

An overview of facility and property management techniques. Topics include the organization of the facilities and property industries, budgeting, standards, labor relations, safety, personnel administration, maintenance (exterior and interior), energy conservation, HVAC systems and space planning. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### FACILITY MANAGEMENT 1840

#### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

### FACILITY MANAGEMENT 2202

#### **Facility Systems – Electrical**

3 credit hours

An overview of the electrical systems within a facility and their integration within the total structure. Systems reviewed are lighting distribution, power sources, motor controls and distribution, alarm systems, interior communications, and applicable codes and standards. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### FACILITY MANAGEMENT 2203

#### **Facility Systems – Mechanical**

3 credit hours

An overview of the mechanical systems within a facility and their integration within the total structure. Systems reviewed are interior and exterior plumbing, waste disposal, heating, ventilation, air conditioning, refrigeration, fire protection, and applicable codes and standards. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### FACILITY MANAGEMENT 2204

#### **Interior Space Planning**

3 credit hours

An overview of interior design principles and methods, including the basics of space planning, real estate transactions, systems furniture, and the processes of an interior project (renovation and new construction), hiring an outside interiors consultant and Computer-Aided Facility Management (CAFM). **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

## FACILITY MANAGEMENT 2215

**Facility and Property Management**

3 credit hours

Application of master planning, space standards, renovation and relocation of existing facilities with emphasis on major problems confronting professional planners, managers and designers.

**Prerequisite:** Facility Management 1100 or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**FASHION MERCHANDISING AND DESIGN**

## FASHION MERCHANDISING AND DESIGN 1101

**Flat Pattern Drafting I**

3 credit hours

Introduction to flat pattern drafting, including draft of personal basic pattern from body measurements for designing purposes, use of drafting tools and simple clothing design. **Prerequisite:** Current enrollment in Fashion Merchandising and Design 1155 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

## FASHION MERCHANDISING AND DESIGN 1102

**Flat Pattern Drafting II**

3 credit hours

Advanced principles of flat pattern design, including, dress, jacket and pants. **Prerequisite:** Current enrollment in Fashion Merchandising and Design 1156 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

## FASHION MERCHANDISING AND DESIGN 1105

**Design Principles in Apparel**

3 credit hours

Basic design principles as applied to apparel. The relationship of form to function, analysis of garment design, interpretation of fashion trends and expression of individuality are emphasized.

**Prerequisite:** Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

## FASHION MERCHANDISING AND DESIGN 1110

**Machine Knitting I**

1.5 credit hours

Principles and techniques of knitting on the single-bed knitting machine. Basic skills are introduced with emphasis on the creative use of color, pattern, texture and fibers in the production of knitted fabrics. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lab hours)

## FASHION MERCHANDISING AND DESIGN 1112

**Machine Knitting II**

1.5 credit hours

Intermediate and advanced techniques on knitting machines. Knit-weave, lace, jacquard, double bed techniques, garment design and knitting software are introduced. **Prerequisite:** Fashion Merchandising and Design 1110 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two (3 lab hours)

## FASHION MERCHANDISING AND DESIGN 1114

**Weaving I**

1.5 credit hours

Introduction to the loom as a tool for design and personal expression. Includes selecting yarns, making warps, dressing the loom, designing fabrics and producing a variety of cloth structures. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lab hours)

## FASHION MERCHANDISING AND DESIGN 1116

**Weaving II**

1.5 credit hours

Development of intermediate and advanced weaving skills on the loom. Twill variations, double weave, lace weave and overshot are introduced. **Prerequisite:** Fashion Merchandising and Design 1114 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two (3 lab hours)

## FASHION MERCHANDISING AND DESIGN 1120

**Fashion Promotion**

3 credit hours

Introductory course in preparation, production and merchandising of fashion shows with traditional and creative contemporary approaches. Emphasis on creative use of media in presentation.

**Prerequisite:** Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

## FASHION MERCHANDISING AND DESIGN 1130

**History of Costume I**

3 credit hours

History of costume through the ages with emphasis on the Western world. Costumes of antiquity through the 18th century. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## FASHION MERCHANDISING AND DESIGN 1131

**History of Costume II**

3 credit hours

History of costume through the ages with emphasis on the Western world. Eighteenth century through fashions of the future. National and ethnic costume. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lecture hours)

## FASHION MERCHANDISING AND DESIGN 1151

**Principles of Textiles**

3 credit hours

Identification of yarns, weaves, coloring methods and primary finishes. Analysis of physical and chemical properties of fibers.

**Prerequisite:** Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

## FASHION MERCHANDISING AND DESIGN 1155

**Clothing Construction I**

3 credit hours

Emphasis is on basic sewing construction skills, including fundamentals in the selection of fabrics, patterns, fit and construction techniques. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (6 lab hours)

## FASHION MERCHANDISING AND DESIGN 1156

**Clothing Construction II**

3 credit hours

Clothing construction course designed for those who are familiar with the operation of a sewing machine, fabric and pattern selection, and basic sewing techniques. Emphasis on professional quality construction techniques. Development of fit techniques for pants and advanced garments. **Prerequisite:** Fashion Merchandising and Design 1155 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

## FASHION MERCHANDISING AND DESIGN 1160

**Tailoring**

3 credit hours

Tailoring course for those who have mastered basic sewing construction techniques. Contemporary methods of tailoring, lining, finishing and working with fabrics that require special handling are emphasized. **Prerequisite:** Fashion Merchandising and Design 1156 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)



FASHION MERCHANDISING AND DESIGN 1165

**Clothing Construction for the Apparel Industry**

3 credit hours

Equipment, practical skills and sewing processes used in apparel manufacturing. Examines efficient and cost-effective procedures for the garment manufacturer or independent designer. **Prerequisite:** Fashion Merchandising and Design 1156 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

FASHION MERCHANDISING AND DESIGN 1180

**Business Practices for the Fashion Entrepreneur**

3 credit hours

Fundamental decision making for the person in the business of sewing, arts or crafts, includes acquisition of equipment and supplies, legalities, taxes, zoning, insurance, establishing price structures, customer relations, record keeping, financing, trade publications, organizations, advertising and time scheduling.

**Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lecture hours)

FASHION MERCHANDISING AND DESIGN 1183

**Felting and Fusing**

1.5 credit hours

Concepts and techniques related to dimensional felt-making through the study of felting fibers, their characteristics and manipulation as a fiber medium. Experimentation in contemporary fusing techniques. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lab hours)

FASHION MERCHANDISING AND DESIGN 1800

**Experiential Special Topics in Fashion**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics). May be taken up to three times for credit as long as a different topic is selected each time.

**Prerequisite:** Course requires Reading Placement Test Score-Category One or Category Two depending on topic (3 lecture hours)

FASHION MERCHANDISING AND DESIGN 1820

**Selected Topics in Fashion Merchandising**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One or Category Two depending on topic (3 lecture hours)

FASHION MERCHANDISING AND DESIGN 1821

**Selected Topics in Fashion Design**

3 credit hours

Exploration and analysis of topics within the discipline. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (2 lecture hours, 2 lab hours)

FASHION MERCHANDISING AND DESIGN 1840

**Independent Study in Fashion**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category Two (1 to 4 lecture hours)

FASHION MERCHANDISING AND DESIGN 2201

**Draping**

3 credit hours

Design using draping techniques on garment industry dress forms. Introduction to design room standards in draping. **Prerequisite:** Fashion Merchandising and Design 1102 and 1156 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

FASHION MERCHANDISING AND DESIGN 2202

**Design Studio: Apparel**

3 credit hours

Advanced exploration of a theme or advanced techniques to generate portfolio pieces. **Prerequisite:** Fashion Merchandising and Design 2201 or consent of instructor. Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

FASHION MERCHANDISING AND DESIGN 2204

**Bridal Couture I: Bridal and Special Occasion**

1.5 credit hours

Study of couture sewing methods for wedding and special occasion dresses. Various specialty fabrics, laces and equipment are used. Emphasis on inner support in the construction of a dress. **Prerequisite:** Fashion Merchandising and Design 1156 with a grade of "C" or better or consent of instructor. Course requires Reading Placement Test Score-Category Two (3 lab hours)

FASHION MERCHANDISING AND DESIGN 2206

**Bridal Couture II: Bridal and Special Occasion**

1.5 credit hours

Advanced couture sewing methods for wedding and special occasion dresses. Advanced embellishment techniques, bustle and train construction. Discussion of the independent bridal couture business. **Prerequisite:** Fashion Merchandising and Design 2204. Course requires Reading Placement Test Score-Category Two (3 lab hours)

FASHION MERCHANDISING AND DESIGN 2208

**Millinery Design I**

1.5 credit hours

Creation of custom hats from straw, felt, and fabric. Use of professional millinery techniques and supplies. **Prerequisite:** Fashion Merchandising and Design 1155 or consent of instructor. Course requires Reading Placement Test Score-Category Two (3 lab hours)

FASHION MERCHANDISING AND DESIGN 2210

**Millinery Design II**

1.5 credit hours

Advanced millinery techniques, including pattern drafting, blocking and trims. **Prerequisite:** Fashion Merchandising and Design 2208 with a grade of "C" or better. Course requires Reading Placement Test Score-Category Two (1 lecture hour, 2 lab hours)

FASHION MERCHANDISING AND DESIGN 2211

**Fashion Illustration**

3 credit hours

Fundamentals of drawing as applied to female fashion figure. Emphasis on apparel and accessory illustration. **Prerequisite:**

Course requires Reading Placement Test Score-Category Two (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2212

##### **Advanced Fashion Illustration**

3 credit hours

Emphasis on texture, color, layout and additional figure types. Includes development of portfolio. **Prerequisite:** Fashion Merchandising and Design 2211 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2220

##### **Visual Merchandising**

3 credit hours

Survey of creative and technical approaches to window and interior store display. Exploration of standard and innovative techniques in a laboratory setting. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2222

##### **Computer-Aided Apparel Design I**

3 credit hours

Use of the computer in flat-pattern drafting and design. Emphasis is on familiarity with the functions of a computer pattern-design system. **Prerequisite:** Fashion Merchandising and Design 1102 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2223

##### **Computer-Aided Apparel Design II**

3 credit hours

Continuation of Fashion Merchandising and Design 2222 with emphasis on the fashion industry applications of the computerized apparel design system. Basic industrial work flow from design concept through pattern output and garment construction. **Prerequisite:** Fashion Merchandising and Design 2222 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2224

##### **Production Pattern Grading**

3 credit hours

Methods and mechanics of production pattern grading and its applications in the apparel manufacturing process. Emphasis on development of grade rule tables, manual and computerized grading, production specifications, and grading of specific apparel styles. **Prerequisite:** Fashion Merchandising and Design 1102 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two (2 lecture hours, 2 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2231

##### **Fashion Marketing and Merchandising**

3 credit hours

Overview of the fashion design and merchandising industries, including trend analysis, fashion theories, apparel manufacturing, marketing, retailing and buying. Career opportunities are emphasized. **Prerequisite:** Course requires Reading Placement Test Score-Category One

#### FASHION MERCHANDISING AND DESIGN 2235

##### **Apparel Quality Analysis**

3 credit hours

Identification of terminology, manufacturing methods and merchandise quality as they apply to style details, workmanship, construction techniques and wearability of fashion goods. For the professional entering the field of fashion buying and merchandising or product development and manufacturing. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lecture hours)

#### FASHION MERCHANDISING AND DESIGN 2240

##### **Design Studio: Fibers**

3 credit hours

Advanced exploration of a theme or advanced techniques to generate fiber portfolio pieces. **Prerequisite:** Fashion Merchandising and Design 1110 and 1112, or 1114 and 1116. Course requires Reading Placement Test Score-Category Two (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2245

##### **Design Collection Development**

3 credit hours

Development of a marketable apparel, accessory or home fashion collection using professional trend projections, fabric and notion sourcing, sizing, grading and quality control. **Prerequisite:** Fashion Merchandising and Design 2202 with a grade of "C" or better, or equivalent or consent of instructor (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2251

##### **Fashion Motivation**

3 credit hours

Identification of economic and social forces influencing consumer and fashion demand. Color theory and analysis, wardrobing, body type identification, and corporate and personal image.

**Prerequisite:** Course requires Reading Placement Test Score-Category Two (3 lecture hours)

#### FASHION MERCHANDISING AND DESIGN 2255

##### **Design Studio: Marketing the Collection**

3 credit hours

Marketing of a design collection at the wholesale and retail level. Topics covered include development of pricing, line sheets, orders, production schedules and delivery of goods. **Prerequisite:** Fashion Merchandising and Design 2245 with a grade of "C" or better, or equivalent or consent of instructor (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2261

##### **Textile Design I**

3 credit hours

Design processes as applied to textiles, covering techniques such as silk screen, block prints and other processes. **Prerequisite:** Course requires Reading Placement Test Score-Category Two (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2262

##### **Textile Design II**

3 credit hours

Continuation of Textile Design I processes as applied to textiles, includes advanced techniques such as batik, tie dye and resist, silk screen, block prints and other textile printing processes. **Prerequisite:** Fashion Merchandising and Design 2261 or consent of instructor. Course requires Reading Placement Test Score-Category Two (6 lab hours)

#### FASHION MERCHANDISING AND DESIGN 2430

##### **Apparel Production Management**

3 credit hours

Introduction to the preproduction processes of apparel product development. Topics include planning, forecasting, fabricating, developing silhouettes and specifications, pricing and sourcing. **Prerequisite:** Fashion Merchandising and Design 1180 with a grade of "C" or better, or equivalent or Business 1100 with a grade of "C" or better, or equivalent or consent of instructor (3 lecture hours)

#### FASHION MERCHANDISING AND DESIGN 2460

##### **Fashion Law and Ethics**

3 credit hours

Covers the application of copyright, patent, trademark, and trade dress protection; agreements for licensing, selling, and marketing

fashion goods, domestically and abroad; and laws affecting treatment of employees, leasing of retail property, and international trade. Recommended courses: Business 1100 and Fashion Merchandising and Design 1180 (3 lecture hours)

FASHION MERCHANDISING AND DESIGN 2860  
**Cooperative Education/Internship (Occupational)**  
1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

FASHION MERCHANDISING AND DESIGN 2865  
**Cooperative Education/Internship Advanced (Occupational)**  
1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

FASHION MERCHANDISING AND DESIGN 2870  
**Cooperative Education/Internship (Transfer)**  
1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

FASHION MERCHANDISING AND DESIGN 2871  
**Cooperative Education/Internship Advanced (Transfer)**  
1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## FIRE SCIENCE

FIRE SCIENCE 1100  
**Introduction to Fire Science**

3 credit hours  
Introduction to the field of fire protection. History, chemistry, fire problems, fire protection, equipment, organization and fire service careers are discussed. (3 lecture hours)

FIRE SCIENCE 1101  
**Fire Fighter II-A**

4 credit hours  
For recruit firefighters to learn the fundamentals of orientation, fire behavior, hose, ladders, safety, extinguishers and self-contained breathing apparatus. **Prerequisite:** Must be member of a fire department full-time, part-time, volunteer, paid on call, or a fire brigade. Concurrent enrollment in Fire Science 1102 and 1103 is required or consent of instructor and program admission approval required (2 lecture hours, 4 lab hours)

FIRE SCIENCE 1102  
**Fire Fighter II-B**

4 credit hours  
Continuation of Fire Science 1101, including fundamentals of tools, fire streams, forcible entry, overhaul, rescue, ropes and ventilation. **Prerequisite:** Fire Science 1101 or consent of instructor (2 lecture hours, 4 lab hours)

FIRE SCIENCE 1103  
**Fire Fighter II-C**

4 credit hours  
Continuation of Fire Science 1102, including fundamentals of water supply, emergency medical care, alarms, communications, cause and origin, inspections, hazardous materials, salvage and sprinkler systems. **Prerequisite:** Fire Science 1102 or consent of instructor (2 lecture hours, 4 lab hours)

FIRE SCIENCE 1104  
**Fire Fighter III**

8 credit hours  
Continuation of Fire Science 1101, 1102 and 1103 sequence. For the experienced firefighter already proficient in the use of equipment, tools and knowledge of organizational functions. **Prerequisite:** Fire Science 1101, 1102 and 1103, or Fire Fighter II certification or consent of instructor (4 lecture hours, 8 lab hours)

FIRE SCIENCE 1111  
**Fire Prevention I**

3 credit hours  
Study of the causes of fires and the major categories of fire hazards. Analysis of heat source, fuel supply and oxygen supply hazards. Emphasis is placed on recognition and control of all fire hazards. **Prerequisite:** Fire Science 1100 or equivalent or consent of instructor (3 lecture hours)

FIRE SCIENCE 1113  
**Fire Prevention Officer Module A**

3 credit hours  
Designed for personnel whose duties are inspecting structures, conducting basic fire investigations and performing fire prevention education activities. (3 lecture hours)

FIRE SCIENCE 1114  
**Fire Prevention Officer Module B**

3 credit hours  
Continuation of Fire Science 1113, including knowledge of fire codes used in fire prevention and education. **Prerequisite:** Fire Science 1113 with a grade of "C" or better or consent of instructor (3 lecture hours)

## FIRE SCIENCE 1115

**Fire Prevention Officer Module C**

3 credit hours

Continuation of Fire Science 1114 including development of student skills in public education and fire investigation.

**Prerequisite:** Fire Science 1114 with a grade of "C" or better or consent of instructor (3 lecture hours)

## FIRE SCIENCE 1120

**Codes and Laws**

3 credit hours

Study supplemented by plan reviews of codes and standards that relate to fire prevention and life safety in structures and includes the relationship between building officials and fire prevention personnel. (3 lecture hours)

## FIRE SCIENCE 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## FIRE SCIENCE 2201

**Extinguishing and Alarm Systems**

3 credit hours

Fixed automatic fire extinguishing, alarm and detection systems. Topics discussed include automatic sprinkler systems, dry chemical, carbon dioxide, and halogenated hydrocarbon agent extinguishing systems. (2 lecture hours, 2 lab hours)

## FIRE SCIENCE 2210

**Fire Apparatus**

3 credit hours

Study of the design, function and operating characteristics of motorized fire apparatus, including evaluation of custom and commercial chassis, power plant and fire pumps, and cost/benefit approach to apparatus purchasing. (3 lecture hours)

## FIRE SCIENCE 2211

**Fire Apparatus Engineer**

3 credit hours

Continuation of Fire Science 2210. Application and skills necessary to qualify for Fire Apparatus Engineer/Driver/Operator positions. Meets or exceeds the requirements of National Fire Protection Association (NFPA) 1002, Fire Apparatus Drive/Operator Professional Qualifications. **Prerequisite:** Fire Science 2210 or consent of instructor (2 lecture hours, 2 lab hours)

## FIRE SCIENCE 2215

**Building Construction**

3 credit hours

Exploration of building construction and design with emphasis on fire safety protection. Analysis of various methods of design, construction and materials. (3 lecture hours)

## FIRE SCIENCE 2221

**Tactics I**

3 credit hours

Principles of coordinating fire ground tactics by utilization of manpower and equipment. Various fire situations presented for analysis and evaluation. **Prerequisite:** Fire Science 1100 or consent of instructor (3 lecture hours)

## FIRE SCIENCE 2222

**Tactics II**

3 credit hours

Continuation of Fire Science 2221. Fire suppression and rescue tactics employed in multi-company operations, including coordination of mutual aid operations, handling fires in high rise and abandoned structures, churches, transportation problems and natural disasters. **Prerequisite:** Fire Science 2221 or consent of instructor (3 lecture hours)

## FIRE SCIENCE 2230

**Hazardous Materials**

3 credit hours

Properties of hazardous materials based on practical everyday experiences. Includes flammable liquids, solids, oxidizers and corrosive materials. Emphasis on identifying, labeling, handling, fire fighting, personal hygiene, spill control and sampling equipment.

**Prerequisite:** Fire Science 1100 or consent of instructor (3 lecture hours)

## FIRE SCIENCE 2231

**Hazardous Materials Operations**

3 credit hours

Basic skills needed to evaluate and work defensively at an incident involving the release of a hazardous material for the purpose of protecting persons, property and the environment from the effects of the release. **Prerequisite:** Fire Science 2230 or consent of instructor (2 lecture hours, 2 lab hours)

## FIRE SCIENCE 2232

**Hazardous Materials Technician A**

3 credit hours

Laws regulating training requirements for the Hazardous Materials Technician A as set forth by Occupational Safety and Health Act (OSHA), Illinois Department of Labor (IDOL), Environmental Protection Agency (EPA), and the National Fire Protection Association (NFPA). Identifies a hazardous material incident, determines the magnitude of the problem, identifies and interprets hazard response information through the use of monitoring equipment. **Prerequisite:** Fire Science 1104 and 2231 or state equivalents or consent of instructor (2 lecture hours, 2 lab hours)

## FIRE SCIENCE 2233

**Hazardous Materials Technician B**

3 credit hours

Continuation of Hazardous Materials Technician A involves the analysis and application of rescue procedures, tactics and strategies. Both Hazardous Materials A and B are required to satisfy National Fire Protection Association (NFPA) 472, Department of Labor (DOL), Occupational Safety and Health Act (OSHA), Environmental Protection Agency (EPA), and requirements of 29 Code of Federal Requirements (CFR) 1910.120. **Prerequisite:** Fire Science 1104 and 2232 or state equivalents or consent of instructor (2 lecture hours, 2 lab hours)

## FIRE SCIENCE 2240

**Industrial Safety**

3 credit hours

Precautions and safeguards essential for protection of lives and property in various types of occupational establishments. (3 lecture hours)

## FIRE SCIENCE 2251

**Fire Leadership I**

3 credit hours

Management, supervision, and leadership training for prospective fire department managers. **Prerequisite:** Fire Science 1100 or Fire Science 1103 or consent of instructor (3 lecture hours)



FIRE SCIENCE 2252

**Fire Leadership II**

3 credit hours

Continuation of Fire Science 2251 with emphasis placed on application of principles. **Prerequisite:** Fire Science 2251 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2253

**Fire Leadership III**

3 credit hours

Continuation of Fire Science 2252 analyzing and organizing personnel assignments, developing personnel policies, preparing capital budgets and fiscal financing, developing public relations programs, and developing management systems for the fire service. **Prerequisite:** Fire Science 2252 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2254

**Fire Leadership IV**

3 credit hours

Continuation of Fire Science 2253 advanced personnel management, organizing health and safety programs, and labor relations. **Prerequisite:** Fire Science 2253 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2255

**Fire Service Instructor I**

3 credit hours

Fundamentals as applied to in-service training for fire department personnel. The course meets or exceeds the requirements of the Office of the Illinois State Fire Marshals Division of Career Development and Public Education. (2 lecture hours, 2 lab hours)

FIRE SCIENCE 2256

**Fire Service Instructor II**

3 credit hours

Curriculum planning, facilities layout and advanced teaching principles. The course meets or exceeds the requirements of the Office of the Illinois State Fire Marshals Division of Career Development and Public Education. **Prerequisite:** Fire Science 2255 or consent of instructor (2 lecture hours, 2 lab hours)

FIRE SCIENCE 2260

**Fire Investigation**

3 credit hours

Techniques and procedures for the investigation of fires, including the origin and causes of fires, fire behavior, chemistry of fire, structural fire patterns, detection of arson, role of the investigator and role of the crime laboratory. **Prerequisite:** Fire Science 1100 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2261

**Fire/Arson Investigation I**

3 credit hours

Designed for fire investigators to gain knowledge in scene examination, evidence investigation, fire protection technology and sketching. **Prerequisite:** Fire Science 2260 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2262

**Fire/Arson Investigation II**

3 credit hours

Continuation of Fire Science 2261 includes motives, communications, case presentations and explosives. **Prerequisite:** Fire Science 2261 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2263

**Fire/Arson Investigation III**

3 credit hours

Continuation of Fire Science 2262 includes crime scene photography, evidence collection, accelerant detection canines, arson for profit, and search and seizure. **Prerequisite:** Fire Science 2262 or consent of instructor (3 lecture hours)

FIRE SCIENCE 2271

**Emergency Medical Technician – Basic**

8 credit hours

Care and handling of the critically ill and injured with an emphasis on the development of student skills in assessment of illness and application of proper emergency care procedures. **Prerequisite:** Must be at least 18 years old with a high school diploma or equivalent, and pass the Writing Essay Placement Test with a “4,” and the Pre-course Reading Test with a “1” and program admission approval required (4 lecture hours, 8 lab hours)

FIRE SCIENCE 2272

**Paramedic Transition**

3 credit hours

Transition course for Emergency Medical Technician-Basic (EMT) seeking Paramedic certification. **Prerequisite:** Current certification as an EMT-B or consent of instructor (2 lecture hours, 2 lab hours)

FIRE SCIENCE 2273

**Vehicle and Machinery Operations**

3 credit hours

Introductory step in the acquisition of all knowledge and skills required in the various specialties of extrication. **Prerequisite:** Fire Science 1103 or consent of instructor (2 lecture hours, 2 lab hours)

FIRE SCIENCE 2274

**Paramedic I**

8 credit hours

Introduction to advanced emergency medical services, including the role of the paramedic and the ethical and legal aspects that influence field practice skills basic to the care of all patients. **Prerequisite:** Fire Science 2271, consent of instructor, acceptance by a hospital and program admission approval required (4 lecture hours, 8 lab hours)

FIRE SCIENCE 2275

**Paramedic II**

8 credit hours

Continuation of Fire Science 2274 with integration of previously learned principles and skills and the introduction of new theory, and preparation of the learner for expanded medical responsibilities. Further emphasis on the pharmacological agents and adjunctive equipment utilized in pre-hospital care. **Prerequisite:** Fire Science 2274 or consent of instructor (4 lecture hours, 8 lab hours)

FIRE SCIENCE 2276

**Paramedic III**

8 credit hours

Continuation of Fire Science 2275 with practice of paramedicine in the care of patients with cardiovascular disorders. In-depth study in anatomy and pathophysiology relevant to cardiovascular disorders, arrhythmia identification and subsequent treatment. Experiences in telemetry monitoring, emergency department and intensive care unit rotations. **Prerequisite:** Fire Science 2275 or consent of instructor (4 lecture hours, 8 lab hours)

FIRE SCIENCE 2277

**Paramedic IV**

8 credit hours

Continuation of Fire Science 2276 with skills and fundamentals for the care of the patient in medical or traumatic emergencies. Emphasis is placed on development of assessment practices and

the integration of appropriate treatment modalities in a pre-hospital setting. **Prerequisite:** Fire Science 2276 or consent of instructor (4 lecture hours, 8 lab hours)

#### FIRE SCIENCE 2282

##### **EMT Instructor Training**

3 credit hours

Designed to give the Emergency Medical Technician-Basic (EMT-B) an overview of the educational process for the adult learner.

**Prerequisite:** Fire Science 2271, consent of instructor, and approval of Illinois Department of Public Health (IDPH) (2 lecture hours, 2 lab hours)

#### FIRE SCIENCE 2283

##### **First Responder**

3 credit hours

Preliminary level of pre-hospital emergency care that includes cardiopulmonary resuscitation (CPR), monitoring vital signs and control of bleeding. (3 lecture hours)

#### FIRE SCIENCE 2285

##### **Trauma Patient Assessment**

2 credit hours

Primary and secondary assessments of the traumatized patient with discussion of current treatment. **Prerequisite:** Fire Science 2271 or consent of instructor (2 lecture hours)

#### FIRE SCIENCE 2286

##### **Pediatric Education for Prehospital Professionals**

3 credit hours

Develop the skills and knowledge of the prehospital professional in the care of ill and injured children. Prerequisite: Fire Science 2271 with a grade of "C" or better or consent of instructor (2 lecture hours, 2 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## FRENCH

#### FRENCH 1100

##### **Civilization and Culture of France**

3 credit hours

An introduction in English to the culture, geography, history, economics, political institutions, psychology, literature, music and art of present-day France. A survey of the French-speaking world: Canada, North and West Africa, the Caribbean, the South Pacific, Switzerland and Belgium. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### FRENCH 1101

##### **Elementary French I**

4 credit hours

Develops basic understanding of elements of French language knowledge and skill in pronunciation, vocabulary, grammar and elementary reading and writing. Oral presentations in dialogue form, including role playing are a key part of the course. (4 lecture hours)

#### FRENCH 1102

##### **Elementary French II**

4 credit hours

Continues to develop basic understanding of elements of French language: knowledge and skill in pronunciation, vocabulary, grammar, and elementary reading and writing. Oral presentations in dialogue form, including role playing are a key part of the course. For students who have successfully completed French 1101 or equivalent or one year of high school French. (4 lecture hours)

#### FRENCH 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### FRENCH 2201

##### **Intermediate French I**

4 credit hours

Continues to develop basic understanding of elements of French language: knowledge and skill in pronunciation, vocabulary, grammar, and elementary reading and writing. Oral presentations in dialogue form, including role playing are key part of the course. For students who have successfully completed French 1102 or equivalent or two years of high school French. (4 lecture hours)

#### FRENCH 2202 (IAI H1 900)

##### **Intermediate French II**

4 credit hours

Continues to develop basic understanding of elements of French language: knowledge and skill in pronunciation, vocabulary, grammar, and elementary reading and writing. Oral presentations in dialogue form, including role playing are a key part of the course. For students who have successfully completed French 2201 or equivalent or three years of high school French. (4 lecture hours)

#### FRENCH 2251 (IAI H1 900)

##### **Conversation and Composition I**

3 credit hours

Develops French listening comprehension, speaking fluency and writing ability, and encourages students to increase their total understanding of French and French culture. Classes are conducted completely in French. For students who have successfully completed French 2202 or equivalent or four years of high school French. (3 lecture hours)

#### FRENCH 2252 (IAI H1 900)

##### **Conversation and Composition II**

3 credit hours

Develops French listening comprehension, speaking fluency and writing ability, and encourages students to increase their total understanding of French and French culture. Classes are conducted completely in French. For students who have successfully completed French 2251 or equivalent or five years of high school French. (3 lecture hours)

#### FRENCH 2820

##### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## GENERAL EDUCATION DEVELOPMENT

#### GENERAL EDUCATION DEVELOPMENT 0800

##### **General Education Development Review**

3 credit hours

Prepares adult students to take the G.E.D. Literature and the Arts, Writing, Social Studies, Science, Mathematics and the U.S.

Constitution tests. Reviews skills, concepts and information needed for the G.E.D. Focuses on developing independent study habits. Step III in the General Education Development reading, writing and mathematical skills course sequence. Mandatory Testing. May be taken up to four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (3 lecture hours)

#### GENERAL EDUCATION DEVELOPMENT 0801

##### **Spanish General Education Development Review**

3 credit hours

Prepares adult students to take the Spanish General Education Development (GED) Literature and the Arts, Writing, Social Studies, Science Mathematics and the U.S. Constitution tests. Review skills, concepts and information needed for the Spanish GED. Focuses on developing independent study habits. Course is non-transferable and does not count toward GPA/graduation. May be taken up to four times for credit. This course can only be taken on a pass/fail basis. (3 lecture hours)

#### GENERAL EDUCATION DEVELOPMENT 0830

##### **General Education Review/U.S./IL Constitution**

1 credit hour

Prepares adult students to take the General Education Development (GED) U.S./Illinois Constitution tests. Course is non-transferable and does not count toward GPA/graduation. May be taken up to three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

For additional information for the Adult General Education Development program, please contact the Continuing Education/Extended Learning Division at (630) 942-3697 or [www.cod.edu/Academic/ABE\\_GED](http://www.cod.edu/Academic/ABE_GED)

## GEOGRAPHY

#### GEOGRAPHY 1100 (IAI S4 901)

##### **Western World Regional Geography**

3 credit hours

A regional survey of Anglo America, Latin America, Europe, Russia and Australia/New Zealand. Among topics covered are country locations and their physical landscapes, as well as economic and cultural landscapes. Often this course is framed in a political, economic or cultural context. Students may learn about trade agreements, U.S. military interventions and foreign policy, economic globalization, human rights, agriculture, wars, gentrification and other topics. (3 lecture hours)

#### GEOGRAPHY 1105 (IAI S4 902N)

##### **World Regional Geography: The Eastern World**

3 credit hours

A regional survey of the Middle East, Sub-Saharan Africa and Asia. Among topics covered are country locations and their physical landscapes, as well as economic and cultural landscapes. Often this course is framed in a political, economic or cultural context. Students may learn about trade agreements, U.S. military interventions and foreign policy, economic globalization, human rights, agriculture, wars, gentrification and other topics. (3 lecture hours)

#### GEOGRAPHY 1110

##### **Political Geography**

3 credit hours

An exploration of power and space relations. This course explores how political decisions and processes impact people and their environs, as well as the meaning, history, implications and combinations of the concepts of nation and state. It will explore the background and nature of borders, country shapes, regional conflicts and boundary disputes, and also compare major political

systems and electoral geography. Students will also explore the politics of globalization, trade and trade agreements, and international law. (3 lecture hours)

#### GEOGRAPHY 1120 (IAI S4 903N)

##### **Economic Geography**

3 credit hours

An overview of the spatial distribution of economic activities and resultant economic landscapes. This course includes the study of the Agricultural and Industrial Revolutions, neoliberal and participatory economics, the International Monetary Fund, World Bank and World Trade Organization. Structural Adjustment Programs and the impact of free-market economics on traditional economies are examined. (3 lecture hours)

#### GEOGRAPHY 1130 (IAI S4 900N)

##### **Cultural Geography**

3 credit hours

A study of the spatial relationships among people, culture and the environment. This course covers the spread of cultural elements and their impact on human environments, human modification of the earth, cultural regions, population and migration, spatial patterns of social problems, and environmental hazards and perception. In addition, this course covers "new cultural geography," which analyzes racial ideologies, sexuality, gender and identity, nationalism and geographies of labor. (3 lecture hours)

#### GEOGRAPHY 1140 (IAI S4 901)

##### **Urban Geography**

3 credit hours

A geographical examination of settlement patterns, economic activities, usage of space and representations in the urban environment. The form and function of cities are analyzed, as are issues of disenfranchisement and gentrification. (3 lecture hours)

#### GEOGRAPHY 1151

##### **Geographic Information System I**

3 credit hours

An introduction to the fundamentals of Geographic Information Systems (GIS) with examples of applications in various fields. Use GIS software to capture, store, query, analyze and display spatially referenced data such as roads, land parcels and vegetation stands on the earth's surface. GIS software usage is covered by tutorial exercises in textbook, with assistance by instructor. (2 lecture hours, 2 lab hours)

#### GEOGRAPHY 1152

##### **Graphic Information System II**

3 credit hours

Focuses on the principles of Geographic Information Systems (GIS) and emphasizes building skills using ESRI software. This course includes data structure, assembly of GIS data sets, map symbology, queries, spatial analysis, coordinate systems, projections and map presentation. GIS software usage is covered by tutorial exercises in textbook, with assistance by instructor. Students may also work to develop their own GIS projects. **Prerequisite:** Geography 1151 or consent of instructor (1 lecture hour, 4 lab hours)

#### GEOGRAPHY 1153

##### **Applied GIS**

3 credit hours

An opportunity for students to learn through real-life GIS projects developed by public safety officials, public works departments, planners and other industry professionals. **Prerequisite:** Proficiency with the Windows operating system required; Geography 1151 and 1152 or consent of instructor (1 lecture hour, 4 lab hours)

## GEOGRAPHY 1154

**Geodatabase Development**

3 credit hours

Advanced study of Geodatabase development, maintenance, organization and editing within the ArcGIS suite of software. Students will explore the basic features and functionality that a geodatabase provides, as well as the ArcMap editing tools for creating and editing the geometry of spatial data stored in a geodatabase. Students will learn to create and manipulate Geographic Information Systems features that mimic real-world feature behavior, apply sophisticated rules and relationships between features, and access geospatial data from a centralized location. **Prerequisite:** Geography 1153 with a grade of “C” or better, or consent of instructor (3 lecture hours)

## GEOGRAPHY 1155

**GIS Capstone Project**

3 credit hours

Focus on student-created projects solving problems in the fields of environmental science, marketing, urban planning, resource management and homeland security. Students will learn to draft a Geographic Information Systems proposal, which will include project timelines, system scope, cost-benefit analysis, risk planning, and delivering a final GIS product. Instructor will assist students with project topics, project approach, the availability and acquisition of source data, data organization and assembly, data preparation, GIS analysis techniques and project presentation. Throughout the course, instructor will guide students through the process of gaining GIS employment, including resume building, job interview techniques and obtaining national GISCI (Geographic Information Systems Certification Institute) status. **Prerequisite:** Geography 1154 with a grade of “C” or better or consent of instructor (3 lecture hours)

## GEOGRAPHY 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for Geography. These courses require direct experience and focused reflection in an in-depth study of a specific geographic topic and/or the critical analysis of contemporary issues in Geography. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

## GEOGRAPHY 1820

**Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

## GEOGRAPHY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## GEOGRAPHY 2204

**Russia**

3 credit hours

This course examines the diverse geographic aspects of Russia and the former Soviet Union. The interrelationship between people and their geographic environments — physical, social, economic, political, demographic, cultural environments — are considered. Students are expected to learn basic place names, to understand geographic relationships and concepts as found in Russia and the former Soviet Union, and to think geographically about this region. (3 lecture hours)

## GEOGRAPHY 2205

**The Slavic Lands**

3 credit hours

A survey of the natural, social and historical features of the Slavic nations of Eastern Europe and Asia (including Russia, Ukraine, Poland, the Czech Lands, Slovakia, Bulgaria and the South Slavic peoples of the former Yugoslavia). These lands are examined in terms of their level and nature of economic development, social complexity and prevailing political ideologies. The futures of these nations and peoples are a prime topic of analysis. Extensive attention is given to the Balkanization of the former Yugoslavia, the wars of Eastern Europe, the recent genocides and the NATO response. The admittance of the Eastern European states to the European Union is also studied. (3 lecture hours)

## GEOGRAPHY 2210

**United States and Canada**

3 credit hours

A regional survey of the United States and Canada. Topics may include: Agriculture, manufacturing, the territorial expansion of the United States, Quebec separatism, the North American Free Trade Agreement (NAFTA), gentrification and urbanization. (3 lecture hours)

## GEOGRAPHY 2220

**Latin America**

3 credit hours

A geographical exploration and analysis of Latin America. In this survey course, students examine Latin America and its nations through the eyes of a geographer. An array of topics are discussed, ranging from physical landscapes and locations of cities and countries to U.S. foreign policy towards the region. Students should expect extensive discussion regarding the roles of the International Monetary Fund, World Bank and Inter-American Development Bank in shaping the region and discussion of trade agreements such as the Uruguay Round, the North American Free Trade Agreement, the Central American Free Trade Agreement, and the Free Trade Area of the Americas. In addition, this course covers migration issues, and the intervention of the United States in Panama, Colombia and elsewhere, including discussion of the 1954 CIA overthrow of the government of Guatemala. (3 lecture hours)

## GEOGRAPHY 2221

**Mexico**

3 credit hours

A geographical exploration and analysis of Mexico. Topics covered may include physical landscape, economic conditions, the “War on Drugs,” Structural Adjustment and the International Monetary Fund, the North American Free Trade Agreement, the militarization of the U.S.-Mexico border, the Mexican Diaspora and Mexican communities in the United States. (3 lecture hours)

## GEOGRAPHY 2223

**Colombia**

3 credit hours

A geographical exploration and analysis of Colombia. Topics covered may include physical landscape, economic conditions, the “War on Drugs” and U.S.-led counterinsurgency in the Andean



nations, oil exploitation, the role of the International Monetary Fund, World Bank, World Trade Organization, Inter-American Development Bank in shaping the country, and U.S. foreign policy. (3 lecture hours)

#### GEOGRAPHY 2224

##### **Juarez: The Laboratory of Our Future**

3 credit hours

This course explores Ciudad Juarez, Mexico, and attempts to deconstruct the city. Explores issues leading to mass influx of individuals to Juarez from the Mexican countryside, and the ongoing femicide (a field study may be included as part of this course). When this course is offered as a field study, students must meet the legal requirements for entry into Mexico and return to the United States. (2 lecture hours, 2 lab hours)

#### GEOGRAPHY 2235

##### **The Middle East**

3 credit hours

A geographical exploration and analysis of the Middle East. This course provides a survey of the region through a geographic perspective. Included are country locations and discussion of physical features, the Israeli-Palestinian conflict, U.S. foreign policy towards the region, the exploitation of resources (particularly oil), U.S. interventions in Iraq, Iran and Afghanistan, and discussion relating to the "War on Terror" and the rise of "radical Islam." (3 lecture hours)

#### GEOGRAPHY 2820

##### **Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours)

#### GEOGRAPHY 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### GEOGRAPHY 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### GEOGRAPHY 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative

education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### GEOGRAPHY 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## GERMAN

#### GERMAN 1100

##### **German Civilization and Culture**

3 credit hours

Introduction in English to the culture, history, political institutions, mentality, literature, art and economic development of present-day Germany and other German-speaking countries. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### GERMAN 1101

##### **Elementary German I**

4 credit hours

Develops the ability to speak, understand, read and write German in a cultural context. For the beginning student. (4 lecture hours)

#### GERMAN 1102

##### **Elementary German II**

4 credit hours

Continues the development of the ability to speak, understand, read and write German in a cultural context. For students who have successfully completed German 1101 or equivalent or one year of high school German (4 lecture hours)

#### GERMAN 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### GERMAN 2200 (IAI H3 909)

##### **Modern German Literature in Translation**

3 credit hours

Survey of modern German literature with attention given to the historical and cultural trends of modern Germany. All works are read in English; no knowledge of German required. (3 lecture hours)

GERMAN 2201

**Intermediate German I**

4 credit hours

Develops students' ability to speak, understand, read and write German in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review and cultural activities. For students who have successfully completed German 1102 or equivalent or two years of high school German. (4 lecture hours)

GERMAN 2202 (IAI H1 900)

**Intermediate German II**

4 credit hours

Continues to develop students' ability to speak, understand, read and write German in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review and cultural activities. For students who have successfully completed German 2201 or equivalent or three years of high school German. (4 lecture hours)

GERMAN 2251 (IAI H1 900)

**Conversation and Composition I**

3 credit hours

Develops students' listening, speaking, reading and writing skills and expands knowledge of the culture and civilization of German-speaking countries. Classes are conducted completely in German. For students who have successfully completed German 2202 or equivalent or four years of high school German. (3 lecture hours)

GERMAN 2252 (IAI H1 900)

**Conversation and Composition II**

3 credit hours

Develops students' listening, speaking, reading and writing skills and expands knowledge of the culture and civilization of German-speaking countries. Classes are conducted entirely in German. For students who have successfully completed German 2251 or equivalent or five years of high school German. (3 lecture hours)

GERMAN 2820

**Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

**GRAPHIC ARTS TECHNOLOGY**

GRAPHIC ARTS TECHNOLOGY 1101

**Printing Methods and Processes**

3 credit hours

Basic principles, materials and equipment used in the major printing processes, as well as beginning skills in digital prepress publishing and offset print production techniques. Emphasis is placed on page layout software, typography, scanning line art and continuous tone images, file formats, direct-to-plate output, press operation and bindery techniques. (1 lecture hour, 5 lab hours)

GRAPHIC ARTS TECHNOLOGY 1102

**Introduction to Graphic Publishing Applications**

3 credit hours

This course provides the basic skills necessary to utilize the three main publishing software applications: QuarkXPress, Adobe Illustrator and Adobe Photoshop. Students are instructed on the fundamentals of the Macintosh operating system, as well as basic

document setup, creation and printing. Typography, scanning and color correction are also included. This foundations course allows for future study of the individual software programs used in the graphic, imaging and publishing industries. (1 lecture hour, 5 lab hours)

GRAPHIC ARTS TECHNOLOGY 1103

**Press Operation**

3 credit hours

Operation and maintenance of a variety of small- and medium-sized offset presses combining the study of safety, maintenance, feeders, register systems, deliveries, dampening units and inking systems. This hands-on course prepares print production students to interpret the relationships between color and registration techniques as they relate to the press. Color proofing and print progressives are prepared, along with multicolor projects for portfolio pieces. **Prerequisite:** Graphic Arts Technology 1101 or consent of instructor (1 lecture hour, 5 lab hours)

GRAPHIC ARTS TECHNOLOGY 1104

**Binding and Finishing**

2 credit hours

An overview of the basic binding and finishing techniques used in the printing industry. Techniques for paper handling and imposition, folding, trimming, stitching, binding methods, and many finishing processes are discussed. Lecture, demonstration and industry tours. **Prerequisite:** Graphic Arts Technology 1101 or consent of instructor (2 lecture hours)

GRAPHIC ARTS TECHNOLOGY 1160

**Color Reproduction Techniques**

3 credit hours

This course examines the fundamentals of color theory, measurement, color management, color psychology and proofing systems using manipulation software. Students explore digital and conventional printing, demonstrate file preparation for color, use various output systems, paper specifications and digital workflow for successful color control. **Prerequisite:** Graphic Arts Technology 1101 and 1102 or consent of instructor (1 lecture hour, 4 lab hours)

GRAPHIC ARTS TECHNOLOGY 1183

**Digital Page Layout: QuarkXPress**

3 credit hours

This course provides the basic skills necessary to utilize QuarkXPress page layout software on a Macintosh operating system for digital prepress production. Master pages, templates, style sheets, typographic controls, color separation, multi-page document construction and graphic importing are included. **Prerequisite:** Graphic Arts Technology 1101, 1102 and general keyboarding skills or consent of instructor (1 lecture hour, 5 lab hours)

GRAPHIC ARTS TECHNOLOGY 1185

**Digital Page Layout: Adobe InDesign**

3 credit hours

This course provides the basic skills necessary to utilize Adobe InDesign software on a Macintosh operating system for digital prepress production. Drawing tools, templates, gradient construction, style sheets, typographic controls, layers, color separations, PDFs and graphic importing are included. **Prerequisite:** Graphic Arts Technology 1102 or equivalent, and general keyboarding skills or consent of instructor (1 lecture hour, 5 lab hours)

GRAPHIC ARTS TECHNOLOGY 1186

**Production Illustration: Adobe Illustrator**

3 credit hours

This course provides the basic skills necessary to utilize Adobe Illustrator software on a Macintosh operating system to produce vector graphics for digital prepress production. Trapping and color separation are included. **Prerequisite:** Graphic Arts Technology

1102 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 1820

##### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

#### GRAPHIC ARTS TECHNOLOGY 2201

##### **Advanced Press Operation**

4 credit hours

Advanced operation and maintenance of sheetfed offset presses and duplicators. Techniques of printing multicolor jobs and registration requirements for production are utilized. The relationship of rollers, ink, chemicals, blankets and the dampening system to produce quality offset printing will be examined.

**Prerequisite:** Graphic Arts Technology 1103 and 1160 or consent of instructor. Course requires Reading Placement Test Score-Category One (2 lecture hours, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2220

##### **Digital Workflow and Preflight**

2 credit hours

This course explores the many facets of digital prepress production focusing on preflight software, fonts, text and graphic requirements. Students learn to recognize problem files using manual techniques and preflight software, and understand digital workflow, files analysis and repair. Adobe Acrobat software is used for prepress production, proofing and PDF document creation for the print and publishing industry. Troubleshooting file formats for digital output and workflow management are addressed.

**Prerequisite:** Graphic Arts Technology 1101, 1102, 1160 and 1183 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 2 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2230

##### **Graphic Arts Business Practices**

3 credit hours

The course examines planning, organization, inventory control, business ethics, problem solving and motivation as they relate to managing print and publishing companies. Instruction will include interpreting specifications, computerized pricing for profit margin, preparing electronic quotations, trade, OSHA, copyright law, and extensive cost analysis using estimating software. **Prerequisite:** Graphic Arts Technology 1101, 1102 and 1160, or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2240

##### **Advanced Digital Page Layout: QuarkXPress**

3 credit hours

This course provides the advanced skills necessary to utilize QuarkXPress page layout software on the Macintosh operating system for color digital prepress production. Advanced typographic and image controls, in-line graphics, tables, rules, complex multi-page document construction and file exporting are included. **Prerequisite:** Graphic Arts Technology 1183 and general keyboarding skills or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2245

##### **Digital Prepress Imaging: Adobe Photoshop**

3 credit hours

Creation and preparation of grayscale and full-color images for print, including color correction and composition of images using

Adobe Photoshop. Scanning of line art and continuous tone photographs is explored. Students create print-ready halftones, duotones and images to be utilized for classroom projects, following industry standards and guidelines for print production.

**Prerequisite:** Graphic Arts Technology 1101, 1102 and 1160 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2254

##### **Advanced Digital Imaging: Adobe Photoshop**

3 credit hours

This course explores advanced production techniques using Adobe Photoshop for the production of images for print. Production techniques used in industry applications are featured. Color correction, image manipulation and image enhancement tips and techniques are utilized to create files used in the graphic, imaging and publishing industries. **Prerequisite:** Graphic Arts Technology 2245 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2265

##### **Web Publishing**

3 credit hours

Course explores planning, creation and implementation of basic web construction techniques to create a functional website. Site mapping, interface production and site creation are covered. Construction of a site utilizing web-page editing software to produce templates, library items, tables, layers, frames, forms and HTML and CSS styles sheets. Creating, processing and optimizing graphics are stressed. **Prerequisite:** Graphic Arts Technology 1183 and 2245 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2266

##### **Advanced Web Publishing**

3 credit hours

Advanced techniques in web-page production. Producing and integrating additional media for web pages. Emphasis is placed on file organization and use of software to create basic and visual graphic media. **Prerequisite:** Graphic Arts Technology 2265 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2270

##### **Advanced Production Illustration: Adobe Illustrator**

3 credit hours

This course provides the advanced production skills necessary to utilize Adobe Illustrator software and other graphic resources on a Macintosh operating system to produce complex vector graphics for color digital prepress production. **Prerequisite:** Graphic Arts Technology 1186 and 2245 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2275

##### **Capstone: Print Production**

4 credit hours

A capstone course covering the principles and practical applications of production skills learned in previous courses, including troubleshooting, interviewing skills, product specifications and problem solving associated with multi-member work groups. **Prerequisite:** Graphic Arts Technology 2201, 2220 and 2230 or consent of instructor (1 lecture hour, 6 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2280

##### **Capstone: Digital Prepress Production**

3 credit hours

Capstone course of the Desktop Prepress Program assesses student competencies through problem-solving activities of the

graphic arts industry. Students focus on skill reinforcement and portfolio development. Permit required. **Prerequisite:** Graphic Arts Technology 1101, 1102, 1103, 1160, 1186, 2240 and 2245 or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2285

##### **Advanced Digital Page Layout: Adobe InDesign**

3 credit hours

Develops the advanced skills necessary to utilize Adobe InDesign software on a Macintosh operating system for digital prepress production. Advanced typographic and image controls, in-line graphics, tables, rules, complex multi-page document construction, and file exporting are included. **Prerequisite:** Graphic Arts Technology 1185 with a grade of "D" or better or equivalent and consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 5 lab hours)

#### GRAPHIC ARTS TECHNOLOGY 2820

##### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### GRAPHIC ARTS TECHNOLOGY 2821

##### **Advanced Selected Topics II**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## GRAPHIC DESIGN

#### GRAPHIC DESIGN 1100

##### **Drawing for Design**

3 credit hours

Foundation of drawing illustrative matter for commercial applications using various materials and techniques appropriate to the field of graphic design and illustration. Emphasis on visualization and sketching of concepts. (6 lab hours)

#### GRAPHIC DESIGN 1101

##### **Intro to Design Techniques**

3 credit hours

Introductory course that focuses on skills needed to structure and organize complex visual communications in both traditional and digital environments. Emphasis on conceptual development, structural organization of information, and interplay of form and verbal content to effectively communicate ideas. Students will learn to think critically, make aesthetic judgments, and become familiar with a variety of tools and techniques used to produce professional work in the fields of graphic design, advertising, and illustration (6 lab hours)

#### GRAPHIC DESIGN 1102

##### **Graphic Design I**

3 credit hours

Introduces the basic principles and elements of graphic design, the history of graphic design, form/symbol development, typography

and color theory. Provides practical experience in essential studio processes and procedures, critiques and group discussions. (6 lab hours)

#### GRAPHIC DESIGN 1103

##### **Project Planning for Graphic Design**

3 credit hours

Explores the intersection of business and graphic design, introducing fundamentals of planning, research, analysis, presentation techniques and production coordination. Addresses the entrepreneurial and strategic aspects of the business of design, as well as design concerns within a client's business environment. Course content may include case studies, group projects, guest speakers, and corporate events to prepare students to apply creative vision to the fulfillment of business objectives. (1 lecture hour, 5 lab hours)

#### GRAPHIC DESIGN 1104

##### **Typography**

3 credit hours

Introduction to typographic history, study of letterforms, terms, classifications and typeface selection. Exploration of type mechanics and aesthetics, using type in a variety of design applications. Examines structure, layout and information hierarchy, as well as the relationship of type to image and cultural context. **Prerequisite:** Graphic Design 1102 with a grade of "C" or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 1105

##### **Graphic Design II**

3 credit hours

An exploration of graphic design through the integration of typography and imagery from planning, conceptualization, and creation, through management of content for a variety of projects. Major themes include: contrast and fusion of graphic form, text/image collage, hierarchy, grid systems and extended layouts. Critiques and discussions of professional work, including traditional structures of books, catalogs, magazines and brochures. Emphasizes the use of Adobe InDesign in creating projects. **Prerequisite:** Graphic Design 1102 with a grade of "C" or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 1106

##### **Three-Dimensional Design**

3 credit hours

Design and construction of three-dimensional forms such as packaging, exhibits and displays. Students will conceptualize and develop preliminary construction plans, and build mock-ups of three-dimensional communication design projects using a variety of materials and techniques. **Prerequisite:** Graphic Design 1102 with a grade of "C" or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 1107

##### **Digital Illustration I**

3 credit hours

An introduction to creating digital images for use in graphic design. Use of computers and current software to develop illustrative projects. Focus on originality of imagery and image creation techniques, including collage, montage and mixed media to create professional quality images. Emphasis on the use of Adobe Photoshop and/or other raster-oriented software in creating projects. **Prerequisite:** Graphic Design 1102 with a grade of "C" or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 1108

##### **Digital Illustration II**

3 credit hours

Focuses on the originality of imagery and image creation techniques, including collage, montage and mixed media, to



create professional quality images. Emphasis on the use of Adobe Illustrator and/or other vector-based software in creating illustration projects. **Prerequisite:** Graphic Design 1102 with a grade of “C” or better, or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 1820

##### **Selected Topics**

2 credit hours

Critical discussion, review and analysis of a selected topic in advertising, design or illustration. Completion of projects appropriate to the selected topic. Topic is specified in the subtitle of the course listed in the *Class Schedule*. May be taken up to three times for credit as long as a different topic is selected each time.

**Prerequisite:** Any 1100-level Graphic Design course or consent of instructor (1 lecture hour, 2 lab hours)

#### GRAPHIC DESIGN 1821

##### **Selected Topics**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Any 1100-level Graphic Design course or consent of instructor (2 lecture hours, 2 lab hours)

#### GRAPHIC DESIGN 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### GRAPHIC DESIGN 2201

##### **Graphic Design III**

3 credit hours

Development of visual identity systems for organizations and corporations applied to print, web and broadcast media. Focuses on how organizations use identity design to express core values and impact consumer perceptions of brand. Processes include research, conceptualization, image, type generation, layout, presentation and evaluation. **Prerequisite:** Graphic Design 1105 with a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2202

##### **Web/Interactive Design I**

3 credit hours

Designing for interactivity in environments such as the web, kiosks, portfolios, games and DVDs. Examination of interactive design workflow. Fundamentals of designing HTML-based web pages, prototypes and websites utilizing Adobe Creative Suite and other applications. Development of conceptual skills in interactivity and organization of content into websites. Create, prepare and manipulate documents, illustrations and images for the web.

**Prerequisite:** Graphic Design 1105 and Graphic Design 1107 with a grade of “C” or better in each or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2203

##### **Advertising Design**

3 credit hours

Introduction to creative brief writing, concept development, brand positioning, client/agency relationship, copywriting and research methods. Study of cultural, social and psychological aspects of advertising design, including consumer behavior and effects of globalization. Survey and development of advertising design for various media, including print, broadcast, direct mail, packaging and point-of-purchase. **Prerequisite:** Graphic Design 1102 with

a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2204

##### **Digital Illustration III**

3 credit hours

Continues the development of skills necessary to create illustration projects. Uses a combination of traditional drawing skills and current industry standard vector/raster-based software, such as Adobe Illustrator and Photoshop. **Prerequisite:** Graphic Design 1108 with a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2205

##### **Graphic Design IV**

3 credit hours

Studies communication of ideas and information through symbols, images, illustration and typography as applied to print, new media and other types of graphic design projects. Emphasis on professional design, illustration processes and presentation skills. Practical application of design theory in a simulated design studio/agency environment. **Prerequisite:** Graphic Design 2201 with a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2206

##### **Web/Interactive Design II**

3 credit hours

Development of web and interactive design concepts and processes through advanced projects. Planning and development of website design, digital portfolio, mobile interface design, menus, screens and Flash-based sites are explored using current authoring tools and techniques. Use of Adobe Flash is emphasized in creation of projects. **Prerequisite:** Graphic Design 2202 with a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2207

##### **New Media Design**

3 credit hours

Integration of graphic form, typography, and message with manipulation of movement, time, sequence, and sound. Development of non-print, new media communication design through demonstrations, critiques, presentations, and hands-on experience with pertinent software. **Prerequisite:** Graphic Design 1102 with a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2208

##### **Portfolio Seminar**

3 credit hours

Capstone course in the development of a personal portfolio of communication design projects. Emphasizes creative self-assessment, portfolio preparation, written communication, presentation, interview and job search skills. Review of professional portfolio work and exploration of career opportunities in communication design. Students will demonstrate their understanding of design principles and creative problem-solving abilities through a portfolio of professional quality work. **Prerequisite:** Graphic Design 2201 with a grade of “C” or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2210

##### **Cartooning**

3 credit hours

Creation of original written and illustrated cartoons exploring a variety of formats, including greeting cards, editorials, products, spot illustrations, characters and comics. Materials and techniques to implement comic art includes sketching, penciling, inking, lettering and coloring. Emphasis on details that define and

individualize cartoons, leading to clear and concise techniques for conveying stories, humor and concepts. **Prerequisite:** Graphic Design 1100 or Art 1101 with a grade of "C" or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2211

##### **Storyboarding/Sequential Art**

3 credit hours

Study of storytelling theories and techniques of art for graphic novels, comic books, comic strips, children's books and storyboards for animation and film. Includes development of scripts, storyboarding, penciling, inking, digitizing, and computer coloring. **Prerequisite:** Graphic Design 2210 with a grade of "C" or better or equivalent or consent of instructor (6 lab hours)

#### GRAPHIC DESIGN 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### GRAPHIC DESIGN 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits.

**Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### GRAPHIC DESIGN 2870

##### **Cooperative Education /Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### GRAPHIC DESIGN 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## HEALTH INFORMATION TECHNOLOGY

#### HEALTH INFORMATION TECHNOLOGY 1101

##### **Fundamentals of Health Information Technology**

4 credit hours

Introduction to the role of health information technicians and the health information field. Covers numbering, filing, indexing and professionals in health care. Health record content in hospitals and other types of health care facilities. Internal and external agency requirements for all types of health care facility records. (3 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 1102

##### **Clinical Classification Systems**

5 credit hours

Study of nomenclature and classification of systems, including coding and abstracting. Introduction to International Classification of Diseases (ICD) coding principles. **Prerequisite:** Health Information Technology 1101 and Anatomy and Physiology 1500 or consent of instructor (4 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 1103

##### **Computerized Health Data and Statistics**

4 credit hours

Study of statistical data, including hospital census. Electronic information processing and health information systems. Study of the computerized patient record. Computer applications to health data, including abstracting, master patient index and medical transcription. **Prerequisite:** Health Information Technology 1101 and concurrent enrollment in Computer Information Systems 1150 or consent of instructor (3 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 1107

##### **C.P.T. Coding**

3 credit hours

An introduction to the Current Procedure Terminology (CPT) coding system for procedures in ambulatory care and services rendered by physicians. Emphasis is on the six sections of the CPT book. An introduction of Center for Medicare/Medicaid (CMS) Services' Common Procedure Coding System (HCPCS) is included. **Prerequisite:** Health Science 1110 or consent of instructor (3 lecture hours)

#### HEALTH INFORMATION TECHNOLOGY 1120

##### **ICD Coding for Physicians**

3 credit hours

An introduction to International Classification of Diseases (ICD) for reimbursement for physician office services. **Prerequisite:** Health Science 1110 or consent of instructor and program admission approval required (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 1121

##### **Billing in Physician Offices**

3 credit hours

An overview of medical office procedures, including billing, scheduling, legalities and office protocol. **Prerequisite:** Health Information Technology 1107 and 1120 or consent of instructor and program admission approval required (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 1125

##### **Clinical Reimbursement Methodologies**

3 credit hours

Study of health care reimbursement, prospective payment systems and case mix analysis. The use of coded data and health information in reimbursement systems appropriate to all health care settings is explored. **Prerequisite:** Health Information

Technology 1102 or consent of instructor (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 2201

##### **Legal and Qualitative Aspects of Health Information**

5 credit hours

Privacy standards, confidentiality, case law, performance improvement, utilization management, risk management, medical staff credentialing as well as accreditation standards are explored. **Prerequisite:** Health Information Technology 1103 and 2221 or consent of instructor (4 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 2202

##### **Management of Health Information**

3 credit hours

Supervisory techniques and professional relationships. Knowledge and skills relevant to operating a health record department are emphasized. Human resource issues, procedures, equipment, forms and office systems are also reviewed. **Prerequisite:** Health Information Technology 2201 or consent of instructor (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 2203

##### **Pharmacology for HIT Professionals**

3 credit hours

General introduction to pharmacological concepts. Focus on fundamental concepts of drug classification, adverse reactions, poisoning and management of common diagnoses. **Prerequisite:** Health Information Technology 2211 or consent of instructor (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 2211

##### **Pathophysiology for Health Information**

4 credit hours

Study of the origin, identification and classification of diseases of the human body. Emphasis on etiology, manifestations, diagnostic finding and treatment. **Prerequisite:** Anatomy and Physiology 1500 or consent of instructor (4 lecture hours)

#### HEALTH INFORMATION TECHNOLOGY 2221

##### **Clinical I**

3 credit hours

Supervised clinical experiences in a variety of health information settings. Application of health information science theory is emphasized. **Prerequisite:** Health Information Technology 1103 or consent of instructor (1 lecture hour)

#### HEALTH INFORMATION TECHNOLOGY 2223

##### **Medical Transcription I**

3 credit hours

Transcription of physician dictation, including medical reports commonly used by physicians. These include history and physicals, surgeries and consultations. **Prerequisite:** Health Sciences 1110 with a grade of "B" or better and concurrent enrollment in Anatomy and Physiology 1500 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 2224

##### **Medical Transcription II**

3 credit hours

Continuation of Medical Transcription I. Transcription of medical dictation into usable copy format. Includes transcription of non-native-speaking physicians. **Prerequisite:** Health Information Technology 2223 and Anatomy and Physiology 1500 or consent of instructor and program admission approval required (2 lecture hours, 2 lab hours)

#### HEALTH INFORMATION TECHNOLOGY 2231

##### **Clinical II**

5 credit hours

Continuation of clinical lab experience in primary care and secondary sites. **Prerequisite:** Health Information Technology 2221 and 2201 or consent of instructor (1 lecture hour, 16 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthhandsciences](http://home.cod.edu/academics/healthhandsciences)

## HEALTH SCIENCES

#### HEALTH SCIENCES 1100

##### **Survey of Health Care Careers**

2 credit hours

An exploration of various allied health professions, including diagnostic, medical information, rehabilitation and patient care services through classroom and field experience. (2 lecture hours)

#### HEALTH SCIENCES 1101

##### **Survey of Health Care Careers: Field Study**

2 credit hours

An exploration of various allied health professions, including diagnostic, medical information, rehabilitation and patient care services through career shadowing. (2 lecture hours)

#### HEALTH SCIENCES 1105

##### **Nurse Assistant**

6 credit hours

State-approved Certified Nursing Assistant program that provides instruction on the basic nursing skills needed to assist the professional nurse. Skills include all elements of personal care, vital signs, body mechanics, safety measures, resident's rights, infection control, communication and observation. Exploration of geriatric and Alzheimer's patients included. **Prerequisite:** Reading Placement Test with a score in category one. Writing Placement Essay with a score of four. (3 lecture hours, 4 lab hours, 3 clinical hours)

#### HEALTH SCIENCES 1106

##### **Rehabilitation Aide**

2 credit hours

Overview of the role and necessary skills of a Physical Rehabilitation Aide. Exploration of modalities of physical rehabilitation, including effects of aging, neuromuscular/neurological, musculoskeletal disorders and cardiopulmonary disease. **Prerequisite:** CNA, RN, LPN, Developmental Disabilities Aide, and Child Care Aide (2 lecture hours)

#### HEALTH SCIENCES 1110

##### **Biomedical Terminology**

4 credit hours

Introduction of medical terms for each body system and specialty medical fields. Includes word roots, prefixes and suffixes commonly encountered in the health care field. Previous medical background unnecessary. (4 lecture hours)

#### HEALTH SCIENCES 1115

##### **Pharmacy Technician**

5 credit hours

Overview of the role and fundamental skills necessary for a professional pharmacy technician. Exploration of pharmacy abbreviations, calculations, drug classifications, basic anatomy and physiology, disease states, drug interactions and prescription processing is included. **Prerequisite:** High school diploma or GED (5 lecture hours)

## HEALTH SCIENCES 1120

**Introduction to Clinical Lab Science**

3 credit hours

Introduction to the profession of clinical laboratory science and to the clinical laboratory scientist's role in the delivery of health care. An exploration of all clinical areas of the laboratory and the major work components performed in each area. (2 lecture hours, 2 lab hours)

## HEALTH SCIENCES 1122

**Basic Phlebotomy Techniques**

4 credit hours

An overview of venipuncture and capillary puncture techniques for obtaining blood specimens for laboratory analysis. **Prerequisite:** Health Science 1110 with a grade of "C" or better, or equivalent or concurrent enrollment in Health Sciences 1110 (3 lecture hours, 2 lab hours)

## HEALTH SCIENCES 1123

**Phlebotomy for Nursing**

2 credit hours

An overview of the phlebotomy procedure designed for the practicing nurse to refine phlebotomy skills and/or the nursing student who desires to learn phlebotomy techniques. Basic information about phlebotomy as well as hands-on practice are included. (1 lecture hour, 2 lab hours)

## HEALTH SCIENCES 1124

**Phlebotomy Clinical**

2 credit hours

Integrated clinical practice in the area of venipuncture and capillary puncture for the collection of blood specimens for diagnostic analysis. This course can only be taken on a pass/fail basis. **Prerequisite:** Health Sciences 1122 and CPR for Healthcare Providers or consent of instructor (8 lab hours)

## HEALTH SCIENCES 1125

**Phlebotomy Exam Review**

1 credit hour

Comprehensive review and update of phlebotomy practice, to include theory and procedures, as well as preparation for the certifying exam. **Prerequisite:** Health Sciences 1124 or concurrent enrollment in Health Sciences 1124 or consent of instructor (1 lecture hour)

## HEALTH SCIENCES 1126

**Basic Non-Invasive Electrocardiography (EKG)**

2 credit hours

An overview of the basic non-invasive 12 lead electrocardiographic (EKG) procedure. Exploration of anatomy, physiology, and electrical activity of the heart included. **Prerequisite:** Health Sciences 1110 with a grade of "C" or better, or equivalent or concurrent enrollment in Health Sciences 1110 (1 lecture hour, 2 lab hours)

## HEALTH SCIENCES 1127

**EKG Clinical**

1 credit hour

Integrated clinical practice in the area of electrocardiography. Students obtain patient Electrocardiograms (EKG), Holter monitor and the Treadmill Stress Test (TMST) via non-invasive electrocardiographic procedures. **Prerequisite:** Health Sciences 1126

## HEALTH SCIENCES 1128

**Advanced Non-Invasive Electrocardiography (EKG)**

3 credit hours

Advanced electrocardiography (EKG) includes electrophysiology of the heart and identification of waveforms. Cardiac arrhythmias,

cardiac disease states and cardiac medications included. Non-invasive cardiography testing to include Holter monitor and Treadmill Stress Testing (TMST). **Prerequisite:** Health Sciences 1126 or consent of instructor (2 lecture hours, 2 lab hours)

## HEALTH SCIENCES 1129

**Non-Invasive Electrocardiography Clinical**

1 credit hour

Integrated clinical practice in the area of electrocardiography to include electrocardiograms (EKG), Holter monitor testing and the Treadmill Stress Test (TMST) via non-invasive electrocardiographic procedures. **Prerequisite:** CPR for Health Care Providers and Health Sciences 1128 or consent of instructor (4 lab hours)

## HEALTH SCIENCES 1130

**Medical Assistant Administrative Procedures**

3 credit hours

Introduction to the profession and responsibilities of a medical assistant with an emphasis on basic administrative procedures and basic practice finances. **Prerequisite:** Computer Information Systems 1110 or higher with a grade of "C" or better or consent of instructor (2 lecture hours, 2 lab hours)

## HEALTH SCIENCES 1133

**Health Insurance for Medical Assistants**

3 credit hours

Introduction to billing, coding and health care insurance as it relates to physician offices. **Prerequisite:** Computer Information Systems 1110 or higher with a grade of C or better or consent of instructor (2 lecture hours, 2 lab hours)

## HEALTH SCIENCES 1145

**Health Care Collaboration**

2 credit hours

Examines the role of the interdisciplinary health care team as it impacts patient outcomes. Prepares students to participate in case studies and other methods of collaboration within a multidisciplinary team. Develops collaboration and communication skills. Explores support and referral networks. (2 lecture hours)

## HEALTH SCIENCES 1150

**CPR – Basic Life Support for Health Care Providers**

1 credit hour

Cardiopulmonary resuscitation (CPR) for victims of all ages intended for participants who provide health care to patients in a wide variety of settings, including in-hospital and out-of-hospital settings. (2 lab hours)

## HEALTH SCIENCES 1160

**CPR-Basic Life Support Instructor**

1 credit hour

Prepares American Heart Association (AHA) instructors to disseminate the science, skills and philosophy of Cardiopulmonary Resuscitation (CPR) programs to participants enrolled in AHA courses. Purpose of the course is to provide instructor candidates with the knowledge and skills necessary to reach and teach potential Basic Life Support providers (BLS). **Prerequisite:** Health Sciences 1150 or equivalent (may be an M.D., R.N., paramedic, EMT-B, respiratory therapist or other as described by AHA-CPR recognition) (2 lab hours)

## HEALTH SCIENCES 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)



HEALTH SCIENCES 1821

**Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

HEALTH SCIENCES 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

HEALTH SCIENCES 2211

**Legal and Ethical Aspects of Health Care**

3 credit hours

Legal and ethical aspects of health care with an emphasis on patient's rights, confidentiality, liability, code of ethics, documentation, consent, release of information and standard of care as they apply to medical assisting. **Prerequisite:** Health Sciences 1110 with a grade of "C" or better, or equivalent or concurrent enrollment (3 lecture hours)

HEALTH SCIENCES 2233

**Pathophysiology for Medical Assisting**

3 credit hours

Study of functional changes that accompany injuries, disorders and disease states as they relate to medical assisting. **Prerequisite:** Anatomy and Physiology 1500 with a grade of "C" or better or equivalent (3 lecture hours)

HEALTH SCIENCES 2235

**Pharmacology for Medical Assisting**

3 credit hours

Study of prescribed drugs as they relate to medical assisting. Emphasis on legislation, common medications prescribed, dosage calculation, preparation, administration and adverse reactions. **Prerequisite:** Health Sciences 2233 with a grade of "C" or better or concurrent enrollment or consent of instructor (3 lecture hours)

HEALTH SCIENCES 2237

**Assisting with Medical Specialties**

3 credit hours

Clinical skills required for medical assistants in a variety of physician specialty offices, including emergency settings. **Prerequisite:** Health Sciences 2233 with a grade of "C" or better or equivalent (2 lecture hours, 3 lab hours)

HEALTH SCIENCES 2239

**Medical Assistant Clinical Procedures**

3 credit hours

Study of clinical procedures performed by a medical assistant with an emphasis on medical asepsis, infection control, patient education, nutrition, health promotion and basic clinical assessment. **Prerequisite:** Health Sciences 2233 with a grade of "C" or better, or equivalent (2 lecture hours, 3 lab hours)

HEALTH SCIENCES 2245

**Workplace Development for Medical Assistants**

2 credit hours

Development of professionalism and communication skills for medical office personnel. Building effective relationships with patients, physicians, supervisors and co-workers with an emphasis on successfully securing and retaining employment. **Prerequisite:**

Health Sciences 1130 with a grade of "C" or better or equivalent, or consent of instructor (1 lecture hour, 2 lab hours)

HEALTH SCIENCES 2250

**Medical Assistant Practicum**

3 credit hours

Integrated clinical practice in medical assisting with a minimum of 180 clinical contact hours in a qualified medical office.

**Prerequisite:** Consent of instructor

HEALTH SCIENCES 2253

**Certified Medical Assistant Exam Prep**

1 credit hour

Designed to prepare the medical assistant to advance toward certification through the American Association of Medical Assisting (AAMA). Includes review of theory and skills required for medical assisting. **Prerequisite:** Health Sciences 2250 with a grade of "C" or better, or equivalent or consent of instructor or better, or equivalent or consent of instructor (1 lecture hour)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthhandsciences](http://home.cod.edu/academics/healthhandsciences)

## HISTORY

Also see Chinese 1100, French 1100, German 1100, Italian 1100, Japanese 1100, Korean 1100 and Spanish 1100.

HISTORY 1110 (IAI H2 901)

**Western Civilization Until 1600**

3 credit hours

An examination of the development of Western Civilization until 1600. Themes such as the development of governments, religions, philosophy, the arts, and social and economic relationships will be analyzed. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 1120 (IAI H2 902)

**Western Civilization Since 1600**

3 credit hours

An examination of the development of intellectual, social, economic, and political characteristics of modern Western Civilization. Themes such as the Scientific Revolution and the Enlightenment, political revolutions, the rise of industry, the world war, and the Cold War will be analyzed. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 1130 (IAI S2 900)

**History of the United States to 1865**

3 credit hours

Survey of American history from the Pre-Columbian era through the U.S. Civil War: peoples and origins, colonial development, revolution, establishment of the U.S. Constitution, Early Republic, Age of Reform and Civil War. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 1140 (IAI S2 901)

**History of the United States Since 1865**

3 credit hours

Survey of U.S. history from Reconstruction to the present: Reconstruction, Industrial Revolution, Progressive Era Politics, problems of 20th century including economic, political, cultural, international and social changes in the modern United States, including 20th century major wars, Depression era and the Cold War era. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 1160 (IAI H2 907)  
**World Civilization Since 1300**

3 credit hours

The history of the intellectual, political, social, economic and cultural development of world societies from the fourteenth century to the present. Examines landmark documents and artifacts that reflect world cultures. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 1800  
**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One (1 to 3 lecture hours, 1 to 3 lab hours)

HISTORY 1820  
**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 1824  
**Selected Topics in History**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours)

HISTORY 1840  
**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

HISTORY 2205 (IAI H2 903N)  
**East Asian Civilization**

3 credit hours

A survey of the political, social, economic and cultural changes in East Asia over the past 2,000 years, with a focus on the last 400 years. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2210 (IAI S2 907N)  
**History and Culture of Africa**

3 credit hours

An examination of the history and cultures of Africa. Themes such as the influence of geography, ethnic and cultural diversity, European domination, independence movements, and contemporary economic and political issues are analyzed. **Prerequisite:** Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY 2215 (IAI S2 916N)  
**History and Culture of India**

3 credit hours

A survey of the history and culture of India from the Indus Valley civilization to the present. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2220 (IAI H2 903N)  
**History and Culture of China**

3 credit hours

A survey of the history of China from the Hsia dynasty to the present, with emphasis on the cultural, political, social and religious aspects of Chinese society. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2225 (IAI H2 908)  
**History and Culture of Russia**

3 credit hours

A survey of the history and culture of Russia from earliest times to the present, including the adoption of Orthodoxy, the Mongol invasions, the development of a strong monarchy, Westernization, the Revolutions, and the Soviet State and its collapse. The course includes the development of Russian cultural, political and social institutions, as well as a discussion of the formation of its multi-ethnic and multi-cultural empire. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2230 (IAI H2 908)  
**History and Culture of Japan**

3 credit hours

A survey of the history and culture of Japan from the Neolithic Era to the present. Emphasis is placed on the political, social, economic, intellectual, religious and artistic aspects of Japanese culture. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2235 (IAI H2 903N)  
**20th Century World History**

3 credit hours

An examination of the world in the 20th century. Themes such as imperialism, colonialism, war, revolution, totalitarianism and globalization are analyzed. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2240  
**History and Culture of Latin America**

3 credit hours

Description and analysis of factors shaping the development of Latin American civilization, including pre-Columbian and European roots, colonial structure, independence movements, creation of modern states and relations with the United States. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2242  
**African-American History**

3 credit hours

Examines the history, culture and identity of African-Americans in the United States from the colonial era to the present. Explores the

unique challenges faced by African-Americans, as well as their contributions to the history of the United States. **Prerequisite:** Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2245

**History and Culture of England**

3 credit hours

An overview of the major political, social, economic, intellectual and cultural developments in the history of England from the Neolithic Age to the present. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2260 (IAI S2 901)

**United States Since 1945**

3 credit hours

An in-depth examination of the United States since 1945. Themes such as the growth of the presidency, economic and social developments, and the United States in the world arena are analyzed. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2265

**History of Illinois**

3 credit hours

This course surveys Illinois history from the arrival of the first humans during the Paleolithic Era to the present. It also examines the interaction of ecological, social, cultural, economic and political factors and their impact on Illinois' historical evolution. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2270

**History of Chicago**

3 credit hours

An examination of the development of the urban, political, cultural, social and economic history of Chicago. Themes such as industrialization, immigration, the rise of labor, and the impact of national politics are analyzed. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HISTORY 2800

**Advanced Experiential Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 3 lecture hours, 1 to 3 lab hours)

HISTORY 2820

**Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the

discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/history](http://www.cod.edu/history)

## HORTICULTURE

HORTICULTURE 1100

**Introduction to Horticulture**

3 credit hours

Principles and practices in the development, production and use of horticultural crops. Includes classification, structure, growth and development, environmental influences on horticultural plants, and vocational opportunities in the horticultural industries. (2 lecture hours, 2 lab hours)

HORTICULTURE 1101

**Soils and Fertilizers**

3 credit hours

Nature and characteristics of soils, including physical, chemical and biological properties, soil origins, classification, soilless media and proper soil management. Examines the interrelationship between soils and fertilizers and the selection and use of fertilizers to meet plant nutritional needs. (2 lecture hours, 2 lab hours)

HORTICULTURE 1105

**Floral Design I**

3 credit hours

Principles and elements of floral design, with practice in creating basic floral designs and using proper techniques. Includes identification, care and handling of flowers. (2 lecture hours, 2 lab hours)

HORTICULTURE 1110

**Applied Plant Taxonomy**

3 credit hours

Classification of plant families with an emphasis on plant material used in the horticulture industry. **Prerequisite:** Horticulture 1100 or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 1111

**Landscape Design I**

3 credit hours

The process of residential landscape design, site analysis and practical solutions of typical landscape problems. Includes plant selection, graphic presentation and correct placement of materials in the residential landscape. (2 lecture hours, 2 lab hours)

HORTICULTURE 1112

**Landscape Maintenance and Construction**

3 credit hours

Landscape installation, maintenance and construction for residential, recreational and public grounds. (2 lecture hours, 2 lab hours)

HORTICULTURE 1115

**Floral Design II**

3 credit hours

Continuation of the principles covered in Floral Design I. Introduces new styles and techniques and includes flower shop management. **Prerequisite:** Horticulture 1105 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 1125

**Water Conservation in the Landscape**

1 credit hour

Residential water management issues and best practices needed for the retention and infiltration of water on a landscape site.

Includes discussion of rain gardens, bio-swales and native plantings to conserve water. (1 lecture hour)

#### HORTICULTURE 1130

##### **Horticulture Business**

3 credit hours

Principles and practices of operating a horticultural business and operational procedures for dealing with the perishable and seasonal nature of horticulture. Includes trends, skills and career opportunities in the various disciplines within horticulture. (3 lecture hours)

#### HORTICULTURE 1131

##### **Landscaping for Wildlife**

1 credit hour

A study of landscape environments that offer food, water and shelter/nesting cover to local wildlife to help species compete in our changing environment. The role of native plants in sustaining wildlife will be emphasized. (1 lecture hour)

#### HORTICULTURE 1135

##### **Introduction to Green Roofs**

1 credit hour

The basics of green roof design, construction and maintenance. Includes benefits of green roofs and a review of the products, plants and growing media used in green roof applications. (1 lecture hour)

#### HORTICULTURE 1140

##### **Landscape Graphics**

2 credit hours

Drawing plans, section-elevations and perspectives for landscape design. Includes the use of pencils and markers for lettering, drafting and color renderings. (2 lecture hours)

#### HORTICULTURE 1141

##### **Sustainable Landscape Design**

1 credit hour

Sustainable landscape design and construction practices that minimize loss of natural resources. The economic benefits of sustainable practices will also be discussed. (1 lecture hour)

#### HORTICULTURE 1145

##### **Perennial Plant Communities I**

2 credit hours

Introduction to selecting perennial plants that grow well together and have similar maintenance requirements to create diverse, compatible, functional and beautiful gardens. Perennial plants are combined based on cost, maintenance and aesthetic appeal. (2 lecture hours)

#### HORTICULTURE 1185

##### **Arboriculture**

3 credit hours

Care and maintenance of trees and shrubs in the urban landscape. Includes Plant Health Care (PHC), environmental factors affecting plants, and proper and safe use of tools. (2 lecture hours, 2 lab hours)

#### HORTICULTURE 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery

incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) (1 to 3 lecture hours)

#### HORTICULTURE 1820

##### **Selected Topics in Horticulture**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

#### HORTICULTURE 1821

##### **Selected Topics in Horticulture**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

#### HORTICULTURE 1824

##### **Selected Topics in Horticulture**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours)

#### HORTICULTURE 1826

##### **Selected Topics in Horticulture**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lab hours)

#### HORTICULTURE 1827

##### **Selected Topics in Horticulture**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour)

#### HORTICULTURE 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### HORTICULTURE 2211

##### **Computer-Aided Drafting for Landscape**

Introduction to computer-aided design and drafting utilizing landscape-specific DynaSCAPE software. **Prerequisite:** Horticulture 1111 or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)



HORTICULTURE 2212

**Advanced Computer-Aided Drafting for Landscape**

3 credit hours

Advanced Computer-Aided Design (CAD) and drafting utilizing landscape-specific DynaSCAPE software. Includes producing quotes from CAD designs and producing designs in color.

**Prerequisite:** Horticulture 2211 or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 2221

**Plant Propagation**

3 credit hours

Principles and practices of sexual and asexual propagation of plants used in the horticulture industry. Includes work with seeds, cuttings, grafting, micropropagation, special structures and layering. (2 lecture hours, 2 lab hours)

HORTICULTURE 2225

**Specialty Floral Design**

3 credit hours

Advanced floral design skills using principles, elements and techniques to create party, wedding and sympathy presentations.

**Prerequisite:** Horticulture 1115 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 2231

**Turf Science and Management**

3 credit hours

Principles and methods of selecting, establishing and maintaining turf for residential lawns, parks, sports fields and golf courses. Includes cultural practices such as fertilization, irrigation and cultivation, as well as construction and renovation techniques. Also covers weed, insect and disease identification and control. (2 lecture hours, 2 lab hours)

HORTICULTURE 2241

**Landscape Plants I**

3 credit hours

Identification of woody ornamental trees, shrubs, vines and groundcovers common to northern Illinois with an emphasis on deciduous plants. Includes adaptability, cultural requirements and placement in the landscape. **Prerequisite:** Horticulture 1100 or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 2242

**Landscape Plants II**

3 credit hours

Identification of woody ornamental trees, shrubs, vines and groundcovers common to northern Illinois with an emphasis on narrow and broad-leaved evergreens. Includes adaptability, cultural requirements and placement in the landscape. **Prerequisite:** Horticulture 1100 or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 2243

**Ornamental Grasses**

2 credit hours

Identification and use of ornamental grasses in the landscape. Includes propagation, production and designing with native and non-native grasses. (2 lecture hours)

HORTICULTURE 2244

**Herbaceous Perennials**

3 credit hours

Identification, selection, design and maintenance of herbaceous perennials in the landscape. **Prerequisite:** Horticulture 1100 or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 2245

**Perennial Plant Communities II**

1 credit hour

Design, installation and evaluation of perennial plant community gardens. Plant selections are based on time, cost and sustainability.

**Prerequisite:** Horticulture 1145 or equivalent (1 lecture hour)

HORTICULTURE 2251

**Diseases of Ornamental Plants**

3 credit hours

Detection, identification and treatment of common plant diseases. Includes analysis of symptoms, selection of chemicals, preventive measures and selection of disease resistant ornamental plants. (2 lecture hours, 2 lab hours)

HORTICULTURE 2253

**Greenhouse Operations and Procedures**

3 credit hours

Principles and practices of operating a commercial greenhouse. Includes types of greenhouse structures, greenhouse components, plant nutrition, greenhouse pests, crop scheduling and business management principles for the greenhouse industry. **Prerequisite:** Mathematics 0460 (or college equivalent) or consent of instructor (2 lecture hours, 2 lab hours)

HORTICULTURE 2255

**Greenhouse Crop Production**

3 credit hours

Principles and practices utilized in growing and maintaining greenhouse crops such as bench and pot mums, poinsettias, lilies, bulbs, azaleas, hydrangeas, foliage and miscellaneous pot crops. Includes hands-on experience with these crops. (2 lecture hours, 2 lab hours)

HORTICULTURE 2257

**Bedding Plant Production**

3 credit hours

Principles and practices of bedding plant and plug production. Includes culture and identification of annual plant material such as petunias, marigolds, impatiens, begonias, geraniums and miscellaneous bedding plant varieties. Hands-on experience with these crops is provided. (2 lecture hours, 2 lab hours)

HORTICULTURE 2261

**Insects of Ornamental Plants**

3 credit hours

Detection, identification and eradication of local species of insects that damage ornamental plants. Includes selection and use of pesticides for insect control. (2 lecture hours, 2 lab hours)

HORTICULTURE 2271

**Landscape Design II**

3 credit hours

The design process with emphasis on problem solving and hardscape materials. Includes graphics, estimating, sales, and construction processes as they relate to design, installation and costs. **Prerequisite:** Horticulture 1111 and 2241 (2 lecture hours, 2 lab hours)

HORTICULTURE 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery

incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

**Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours)

#### HORTICULTURE 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### HORTICULTURE 2863

##### **Cooperative Education/Internship (Occupational)**

3 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. May be taken three times for credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### HORTICULTURE 2865

##### **Cooperative Education /Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study.

#### HORTICULTURE 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### HORTICULTURE 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under

supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## HOSPITALITY MANAGEMENT

#### HOSPITALITY MANAGEMENT 1100

##### **Introduction to the Hospitality Industry**

3 credit hours

Orientation to the hospitality industry, its history and magnitude, organization, challenges, and opportunities. Highlights interdependent nature of the public hospitality industry. (3 lecture hours)

#### HOSPITALITY MANAGEMENT 1111

##### **Front Office Operations**

3 credit hours

Supervisory management roles in the front office of a hotel or resort. Includes desk operations, reservations, sales, information management and uniformed services. Use of simulations, computers, role playing and hotel job shadowing. (2 lecture hours, 2 lab hours)

#### HOSPITALITY MANAGEMENT 1112

##### **Hospitality Facilities Management**

3 credit hours

Introduction to the environments and functions in the housekeeping, maintenance, and engineering departments of today's hospitality environment. (3 lecture hours)

#### HOSPITALITY MANAGEMENT 1121

##### **Supervision in the Hospitality Industry**

3 credit hours

Principles of effective human relations required by hospitality industry supervisory personnel. Practical skills for effective supervision, including decision making, leadership roles, motivating personnel, recruiting and training employees, conflict resolution, delegation and effective communications. (3 lecture hours)

#### HOSPITALITY MANAGEMENT 1140

##### **Quality Management of Service in the Hospitality Industry**

3 credit hours

Applies the services concept to a total management improvement system in the hospitality industry. Analysis includes ethics, practices, and case studies of leading hotel companies. (3 lecture hours)

#### HOSPITALITY MANAGEMENT 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. May be taken three times for credit as long as different topics are selected. (1 to 4 lecture hours)

HOSPITALITY MANAGEMENT 2130

**Hospitality Industry Accounting**

3 credit hours

Application of basic accounting principles to hospitality industry establishments. Systems of daily reporting and the preparation of periodic accounting statements will be covered. Recommended courses: Accounting 1110 or Accounting 1140 (3 lecture hours)

HOSPITALITY MANAGEMENT 2203

**Professional Catering and Banquet Management**

3 credit hours

Planning, production, and execution of catered events and banquets. Topics covered include needs assessment, client relationships, operations, food production, technology, primary and auxiliary services, and post event activities. (3 lecture hours, 3 lab hours)

HOSPITALITY MANAGEMENT 2204

**Wines of the World**

2 credit hours

Survey of the world's leading wines classified by type and suitability for particular use. Methods and techniques employed in purchasing, storing, and merchandising of wine will be discussed. Restaurant service staff's role in customer satisfaction is emphasized. **Prerequisite:** Must be 21 years of age or older (1 lecture hours, 2 lab hours)

HOSPITALITY MANAGEMENT 2230

**Law for the Hospitality Industry**

2 credit hours

Introduction to the legal principles that affect the hospitality industry. Special emphasis is placed on the rights and responsibilities of a manager in a hospitality enterprise. (2 lecture hours)

HOSPITALITY MANAGEMENT 2253

**Professional Meeting and Event Management**

3 credit hours

Meeting and special event planning, including exhibits, trade shows, and conventions. Emphasis is on techniques of conference service, related food and beverage services, and sales management. (3 lecture hours)

HOSPITALITY MANAGEMENT 2261

**Beverage Management Operation**

2 credit hours

Overview of the commercial beverage service industry. Emphasis on the management and training of personnel to be responsible, professional alcohol servers. Includes the development of product specifications, marketing strategies, and purchasing procedures. (2 lecture hours)

HOSPITALITY MANAGEMENT 2262

**Restaurant Beverage Service: Mixology**

2 credit hours

Essential skills of beverage service with emphasis placed upon the need for responsible beverage service. Includes the proper use of equipment and techniques used in beverage preparation. (1 lecture hour, 2 lab hours)

HOSPITALITY MANAGEMENT 2275

**Hospitality Concept Design**

2 credit hours

Exploration of culinary and hospitality based businesses. Vision, product development, marketing, management and operations are all emphasized. (2 lecture hours)

HOSPITALITY MANAGEMENT 2280

**Hospitality Marketing Management**

3 credit hours

Successful marketing principles employed in the hospitality industry. Demand variables, distribution channels, communications,

promotions, research, packaging, collateral materials, pricing strategies, the marketing plan, and enhancing internal sales may be covered. (3 lecture hours)

HOSPITALITY MANAGEMENT 2285

**Advanced Hospitality Operations**

3 credit hours

Study of the integration of hotel industry departments such as hotel operations, marketing, technology, human resource management, accounting, and purchasing. Special emphasis is placed on decision-making and problem-solving models used in the hospitality industry. Current issues in the hospitality industry will also be discussed. **Prerequisite:** Hospitality 1111 or equivalent or consent of instructor (3 lecture hours)

HOSPITALITY MANAGEMENT 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

HOSPITALITY MANAGEMENT 2862

**Cooperative Education/Internship (Occupational)**

2 credit hours

Continuation of Cooperative Education/Internship I (Occupational). Participation in occupational area of work experience under supervision of an employer and faculty adviser. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Occupational), 2.0 cumulative grade point average, and 12 semester credits in a related field of study

HOSPITALITY MANAGEMENT 2863

**Cooperative Education/Internship (Occupational)**

3 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

HOSPITALITY MANAGEMENT 2864

**Cooperative Education/Internship (Occupational)**

4 credit hours

Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## HOSPITALITY MANAGEMENT 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**HUMAN SERVICES**

## HUMAN SERVICES 1100

**Introduction to Human Services**

4 credit hours

Introduction to Human Services systems through tours of facilities, discussions with professionals in the field, and examination of related films, articles and books pertinent to the field of Human Services. Students are familiarized with the roles and functions of Human Services workers through examination of the skills, knowledge, traits and attitudes necessary to enter the Human Services field. The ethical principles that guide the Human Services professional are explored in depth. (3 lecture hours, 2 lab hours)

## HUMAN SERVICES 1105

**Esteem Building**

2 credit hours

An overview of cognitive behavioral interventions that increase self-esteem. The construct of self-esteem are explored through research and assessment tests. Specific interventions and appropriate utilization of these interventions for various age groups are discussed. (2 lecture hours)

## HUMAN SERVICES 1113

**Interpersonal Dynamics**

4 credit hours

Overview of interpersonal skills that enhance therapeutic communication. Skills of empathy, respect, concreteness, genuineness, appropriate self-disclosure and confrontation are addressed. Assessment, interviewing and de-escalation techniques are introduced. (3 lecture hours, 2 lab hours)

## HUMAN SERVICES 1114

**Contemporary Treatment Approaches**

3 credit hours

An introduction to current treatment approaches. Each approach is viewed in its historical, cultural and philosophical perspectives. Students demonstrate each theoretical model and assess its potential for incorporation into their developing counseling style. (2 lecture hours, 2 lab hours)

## HUMAN SERVICES 1115

**Behavior Modification**

4 credit hours

This course provides an exploration of the practical applications of behavior modification to childrearing, education, maladaptive behavior, interpersonal relationship and self-control. Class discussions, skills practice and a behavior-change project emphasizing the relationship of material learned to the real-life situations of students are included. (2 lecture hours, 4 lab hours)

## HUMAN SERVICES 1121

**Cross-Cultural Communications**

3 credit hours

Introductory course exploring a variety of issues related to cultural competency in Human Services practice. The concepts of race, ethnicity, culture, class, religion, gender, sexual orientation, ethnocentrism, oppression and power are explored. Practical application of acquired awareness, knowledge and skills is stressed. (2 lecture hours, 2 lab hours)

## HUMAN SERVICES 1125

**Introduction to Addictions**

4 credit hours

An overview of historical, cultural and current attitudes toward alcohol use; the model of alcoholism and other addictions; systems applications of the addictions model; the interaction of physical, psychological, social and spiritual aspects of addiction; the clinical manifestations, methods and models of treatment; and various concepts of early intervention and prevention. (4 lecture hours)

## HUMAN SERVICES 1126

**Psychopharmacology for Addictions Counselors**

3 credit hours

An introduction to the pharmacology, physiology and biochemical principles necessary to understand the effects of the nature, action, effects and use of psychoactive drugs. Utilization of psychoactive drugs in psychiatry as it applies to dual diagnosis substance abuse counseling is explored. (3 lecture hours)

## HUMAN SERVICES 1141

**Psychiatric Rehabilitation**

4 credit hours

Rehabilitative approach to treating individuals with severe mental illness. Emphasis is placed on collaborating treatment methods with the clients. Students are introduced to the mental health team, understanding legal and ethical issues surrounding treatment, psychiatric symptoms and disability. Psychiatric rehabilitation is introduced through vocational skills training, interview techniques and assessment methods. (3 lecture hours, 2 lab hours)

## HUMAN SERVICES 1142

**Psychiatric Rehabilitation Skills**

4 credit hours

Continuation of Psychiatric Rehabilitation Certificate training. Course focuses on interviewing and listening skills, skills training, preventing and managing behaviors, assessment skills, treatment planning and crises intervention. (3 lecture hours, 2 lab hours)

## HUMAN SERVICES 1143

**Health Skills for Psychiatric Rehabilitation**

4 credit hours

Continuation of Psychiatric Rehabilitation Certificate training program. Course examines three dimensions of wellness: physical, emotional and environmental. Psychoeducational training sessions are introduced, as well as medication management skill training. (3 lecture hours, 2 lab hours)

## HUMAN SERVICES 1144

**Vocational and Community Living Skills**

4 credit hours

Examines fundamentals of vocational rehabilitation. Job coaching, job analysis, medication management, negotiation skills and networking skills will be practiced. Policy standards, both state and federal, will be discussed and integrated into coursework. (3 lecture hours, 2 lab hours)



HUMAN SERVICES 1160

**Residential Child Care**

2 credit hours

Introductory course in residential child care. Provides an overview of the settings and clinical skills needed to assist children with emotional problems. Students are introduced to the models of care utilized in outpatient and inpatient settings. (1 lecture hour, 2 lab hours)

HUMAN SERVICES 1165

**Dynamics of Child Abuse**

3 credit hours

An in-depth look at child neglect, and child sexual, physical and emotional abuse. Students investigate treatment issues surrounding each area. Victim and perpetrator treatment issues, prevention of abuse and the long-term impact on the individual are discussed. Clinical issues that arise in children, adolescents and adults as a result of child abuse are covered. (3 lecture hours)

HUMAN SERVICES 1170

**Role of Advocacy in Human Services**

2 credit hours

Introduction to advocacy skills in relation to counseling in Human Services. Overview of political and public advocacy issues. Essential skills and knowledge of legal processes for effective solutions are introduced. (1 lecture hour, 2 lab hours)

HUMAN SERVICES 1175

**Crisis Intervention**

2 credit hours

Introduction to clinical interventions utilized in crisis intervention. This course covers crises throughout the life cycle and situations such as medical and psychological traumas, post traumatic stress disorder and professional burnout. (1 lecture hour, 2 lab hours)

HUMAN SERVICES 1180

**Domestic/Family Violence**

4 credit hours

Comprehensive exploration of domestic/family violence. The history, nature, extent, causes and consequences of family/ domestic violence are examined. Skill building in direct service is stressed. This course meets the requirement for the State of Illinois 40-hour domestic violence training. (3 lecture hours, 2 lab hours)

HUMAN SERVICES 1190

**Introduction to Developmental Disabilities**

5 credit hours

Introduction to developmental disabilities. Course covers treatment history and present methods. Behavioral management programs, record maintenance, and facility and/or home maintenance techniques are explored. Students are introduced to working with an interdisciplinary team to provide care to a varied population. (4 lecture hours, 2 lab hours)

HUMAN SERVICES 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential course covers topics not otherwise covered by general education courses and other course in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. (1 to 3 lecture hours, 1 to 3 lab hours)

HUMAN SERVICES 1820

**Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected Human Services topics with a specific theme indicated by course title listed in the college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

HUMAN SERVICES 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

HUMAN SERVICES 2200

**Introduction to the Juvenile Justice System**

4 credit hours

Introduction to the structure and function of the juvenile justice system. Students explore the legal issues pertinent to juvenile offenders with an emphasis on conduct disorder legal infractions, chemical dependency issues and parental abuse. The functions of rehabilitation settings and clinical interventions provided in these settings are examined. (3 lecture hours, 2 lab hours)

HUMAN SERVICES 2212

**Group Dynamics**

5 credit hours

Introduction to leadership functions that affect collective behavior. Exploration of the dynamics of change as it applies to group functions. Analysis of group stages and differing theoretical models to conduct the group process are addressed. Ethical guidelines that govern the establishment and maintenance of groups are explored. (3 lecture hours, 4 lab hours)

HUMAN SERVICES 2213

**Grief Counseling**

3 credit hours

An overview of grief counseling, including history and research, normal and abnormal grief responses, and physiological and psychological implications of grief. Lab emphasizes acquiring skills in assisting others to successfully resolve grief issues. (2 lecture hours, 2 lab hours)

HUMAN SERVICES 2214

**Older Adult Care Management**

4 credit hours

Introduction to the basic components of older adult care management. Content covers the physical, emotional, social, psychological and cognitive aspects of aging. Course covers practical applications of interviewing and counseling families, managing client behavior, and assessing individual needs for appropriate treatment. (3 lecture hours, 2 lab hours)

HUMAN SERVICES 2223

**Generalist Practice I**

2 credit hours

Interviewing skills, psychological assessment techniques, individual and group counseling skills, development of treatment plans, discharge planning and documentation skills are addressed. Ethical guidelines governing practice are reinforced throughout each skill practiced. Students are prepared for the fieldwork experience. (1 lecture hour, 2 lab hours)

## HUMAN SERVICES 2225

**Addictions Counseling I**

4 credit hours

Focuses on the methods and skills utilized in treating the chemically dependent individual and his/her family. Skill development is accomplished through role-play, video and audiotape review. Topics covered include, but are not limited to, assessment, diagnosis, treatment planning, relapse prevention, ASAM criteria, levels of care, motivational interviewing, legal and ethical issues and documentation skill. (2 lecture hours, 4 lab hours)

## HUMAN SERVICES 2226

**Addictions Counseling II**

3 credit hours

Expands on issues related to addiction. Topics include advanced issues in psychopharmacology, addictions and sexuality, interventions, treatment applications consistent with the needs of special population, employee assistance programs, motivational skills in the treatment of change, counselor self-care, advanced group skills, and effective didactic presentations to client populations. (2 lecture hours, 2 lab hours)

## HUMAN SERVICES 2240

**Family Education and Treatment Models**

3 credit hours

Overview of the effects of family interaction on individual growth and change. The impact of crises such as divorce, addictions, death, troubled children and/or aging parents on the family system is explored. Diverse family systems are also introduced. Clinical approaches as well as preventive interventions with families are explained. (3 lecture hours)

## HUMAN SERVICES 2245

**Introduction to Eating Disorders**

3 credit hours

An overview of the historical, cultural, biological, social and psychological factors related to eating disorders. This course addresses assessment and methods of treatment, including individual treatment, group treatment, family treatment and self-help groups. (3 lecture hours)

## HUMAN SERVICES 2251

**Fieldwork I**

4 credit hours

Practicum experience in the field of Human Services. Students from all certificate/degree options in Human Services are required to fulfill 300 clinical hours in the field. One hour of class lecture time per week is required with this course. Supervision of skill development and an introduction to the network of community services are introduced.

## HUMAN SERVICES 2252

**Fieldwork II**

4 credit hours

Continuation of Human Services 2251. This course provides an additional 300 hours of clinical internship along with weekly one-hour clinical supervision classroom consultation time. Students are provided with advanced training to improve their skills. (2 lecture hours, 2 lab hours)

## HUMAN SERVICES 2274

**Legal Issues in Counseling**

1 credit hour

Overview of basic legal concepts as they relate to counseling. Course presents relevant case law and provides a framework for clinical practice. (1 lecture hour)

## HUMAN SERVICES 2279

**Ethics in Counseling**

2 credit hours

Presents the codes of ethics from several Human Services disciplines. Utilizes a variety of realistic clinical situations to illustrate potential ethical dilemmas and the principles guiding the student's response. (2 lecture hours)

## HUMAN SERVICES 2280

**Addictions Counseling III**

3 credit hours

Course explores the most current information in addictions treatment and prevention. In addition students will be introduced to primary prevention strategies, the clinical needs of special populations, addictions treatment planning according to best practices guidelines, holistic approaches to addictions treatment, psycho-educational principles in treatment and prevention, effective clinical supervision, and administrative practices. This course is a hybrid class involving hours of work outside the classroom. **Prerequisite:** Human Services 2226 with a grade of "C" or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## HUMAN SERVICES 2284

**CADC Exam Preparation**

1 credit hour

A review of basic concepts and information presented in the Addictions Counselor Training Program that will guide the individual preparation for the IODAPCA certification exam. Test-taking strategies will be reviewed. (1 lecture hour)

## HUMAN SERVICES 2285

**Divorce and Family Mediation**

4 credit hours

A conflict resolution framework is presented for use in divorce and family mediation. Students learn to work effectively with families experiencing divorce through lecture, discussion and experiential learning. (4 lecture hours)

## HUMAN SERVICES 2286

**Assessment of Trauma for Veterans**

3 credit hours

Overview of sources of stress and trauma in active military and veteran populations, and the impact such trauma has on level of functioning. Military experience involving the military family, military service, call-up and mobilization deployment to peacetime and combat assignments, combat duty, demobilization and reunion, experiencing injury and recovery, discharge from active military duty, reserve status, and life as a veteran will be examined. Paradigms for understanding trauma using both schema/belief and neurobiology lenses will be explored using case studies of peacetime and combat military experience and their legacy for the veteran. (3 lecture hours)

## HUMAN SERVICES 2287

**Assessment of Post-Traumatic Stress Disorder and Co-Morbid Disorders**

3 credit hours

Assessment measures for military personnel, veterans, and their families. Topics include military culture, combat trauma, suicidal risk, blast-related traumatic brain injury (TBI), and post-traumatic stress disorder (PTSD) (3 lecture hours)

## HUMAN SERVICES 2288

**Treatment Approaches for Veteran Population and Families**

3 credit hours

Best practices for the treatment of behavioral health-related problems which affect veteran populations and their families. Discussion and planning of viable strategies for ongoing support

for continuing recovery and wellness will also be included. Students will have the opportunity to practice treatment approaches and discharge planning in simulated group and individual settings. (3 lecture hours)

#### HUMAN SERVICES 2289

##### **Individual and Group Counseling Focused on Veteran Population**

3 credit hours

Individual and group counseling techniques that promotes recovery from acute stress reactions and related issues. Diagnosis and treatment of post-traumatic stress disorder (PTSD) and acute stress disorder (ASD) will be explored. Students will learn to recognize and manage their personal response to dealing with veterans with trauma related disorders. (3 lecture hours)

#### HUMAN SERVICES 2290

##### **Assessment for Appropriate Referral Focusing on Veterans' Needs**

1 credit hour

Assessment of the veteran population for services and/or benefits. Topics of discussion will include family adjustment problems, parenting issues, post-traumatic stress disorder (PTSD), and other debilitating problems. Students will learn standardized assessment criteria and best practices used by the US Department of Veterans Affairs (VA). (1 lecture hour)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## HUMANITIES

#### HUMANITIES 1101 (IAI F9 900)

##### **Introduction to Humanities: The Arts**

3 credit hours

An exploration of creativity as expressed in music, literature and/or the visual and performing arts of the Western tradition. Emphasis is on students' consideration and development of their own personal aesthetic values within a historical framework. Attendance at cultural events and an individual project may be required.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### HUMANITIES 1102 (IAI H9 900)

##### **Introduction to Humanities: Ideas and Values**

3 credit hours

An exploration of the nature of mankind, primarily as reflected in the disciplines of philosophy, history, literature and religious studies. Particular attention is paid to individual and communal identities, to questions of values, and to the struggle for personal fulfillment. Emphasis on students' consideration and development of their own personal, moral and ethical values. Attendance at outside events may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### HUMANITIES 1103 (IAI H9 901)

##### **Introduction to World Mythology**

3 credit hours

Exploration of the significant myths, legends and folktales of world cultures, with an emphasis upon the various ways in which they function in culture. Examines myth not only as a cultural artifact reflective of the values and ideals of a culture, but also as a source of universal themes and values in literature, drama, art, music and film. Participation at outside activities may be required. (3 lecture hours)

#### HUMANITIES 1105 (IAI HF 904N)

##### **Non-Western Humanities**

3 credit hours

Interdisciplinary survey of the significant intellectual and artistic achievements of several non-Western cultures, such as Asian, African, South American, Native American and Islamic. The course surveys selected works of literature, philosophy, visual art, music and other performing arts from each culture, as well as offers a comparative examination of their values, motifs and aesthetics with those of Western cultural expression. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### HUMANITIES 1110 (IAI HF 906D)

##### **The Arts and Cultural Diversity**

3 credit hours

An exploration of human relations and cultural diversity in the contemporary United States and their roots in African, Native American, Asian and Latin American civilizations. Creative artworks in the humanities, such as literature, film, art, music, photography, dance and drama, serve as catalysts to look in-depth at the topics of race, ethnicity, gender and other issues related to improving human relations. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### HUMANITIES 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One.

#### HUMANITIES 1820

##### **Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### HUMANITIES 1824

##### **Selected Topics in Humanities**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours)

#### HUMANITIES 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and

approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

HUMANITIES 2019 (IAI HF 907D)

**Women in the Arts**

3 credit hours

An interdisciplinary study of the contribution of women to the arts and humanities, exploring the role of gender in the creation of the arts. With analyses informed by contemporary feminist and gender theories, artworks from the visual and performing arts, music and literature will be studied in their artistic, historical and cultural contexts. Both Western and non-Western modes of artistic expression may be examined. Attendance at outside events may be required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HUMANITIES 2210

**Leadership Development**

3 credit hours

Development of leadership ability through an investigation of leadership styles, group dynamics theory and experiential exercises. Students will also develop a personal philosophy of leadership which will demonstrate an awareness of the moral and ethical responsibilities of leadership. The opportunity to develop essential leadership skills through classic case studies, the Great Books and other classical and contemporary literature and film. There is a service learning component to this course. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

HUMANITIES 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One

HUMANITIES 2820

**Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## INTERIOR DESIGN

INTERIOR DESIGN 1110

**Drafting Interiors**

3 credit hours

Introductory drafting course for interior design applications.

**Prerequisite:** Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 1120

**Interior Systems**

2 credit hours

Building systems as applied to interior design projects with emphasis on National Kitchen and Bath Association (NKBA) standards. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (1 lecture hour, 2 lab hours)

INTERIOR DESIGN 1130

**Perspective Techniques**

2 credit hours

Graphic communication skills, including one-point, two-point and bird's-eye-view perspective, plus other selected paraline methods of axonometric drawing related to interior design and furniture illustrations. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (1 lecture hour, 2 lab hours)

INTERIOR DESIGN 1140

**Color Rendering**

2 credit hours

Marker and pencil color rendering techniques including, texture and shadow applications. **Prerequisite:** Interior Design 1130 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (1 lecture hour, 2 lab hours)

INTERIOR DESIGN 1151

**Architecture and Design History I**

3 credit hours

Historical review of architecture and decorative arts from ancient cultures through the Hispanic Renaissance. Includes selected vocabulary, classical forms, use of ornament, colors, motifs and furniture styles. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (3 lecture hours)

INTERIOR DESIGN 1152

**Architecture and Design History II**

3 credit hours

Historical review of architecture and decorative arts from the French Renaissance through the 21st century. Includes selected vocabulary, classical forms, use of ornament, colors, motifs and furniture styles. **Prerequisite:** Interior Design 1151 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (3 lecture hours)

INTERIOR DESIGN 1153

**Architecture and Design History: Non-Western Cultures**

3 credit hours

Survey of non-Western architecture history, styles and decorative arts. Emphasis on cultural design concepts, furniture motifs, color applications and vocabulary. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (3 lecture hours)

INTERIOR DESIGN 1160

**Environmental Textiles**

2 credit hours

Textile fiber identification categories, serviceability concepts, properties, construction methods, and required life safety codes for residential and contract interior applications. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (1 lecture hour, 2 lab hours)



INTERIOR DESIGN 1170

**Environmental Materials and Applications**

3 credit hours

Survey course on interior design materials and resources and their application in the built environment, with a focus on sustainable design. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 1180

**Professional Practice and Ethics**

2 credit hours

Interior design ethics, principles, practices, typical contract document formats, and resume concepts related to professional practice. **Prerequisite:** Course requires Reading Placement Test Score-Category Three (1 lecture hour, 2 lab hours)

INTERIOR DESIGN 1190

**Barrier-Free and Life-Safety Codes**

3 credit hours

Code information and specifications concerning built environment, life-safety issues, barrier-free access, Americans with Disabilities Act (ADA), and universal design requirements applied to residential, contract and office design. Includes current international codes and standards. **Prerequisite:** Interior Design 1110 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (3 lecture hours)

INTERIOR DESIGN 1821

**Selected Topics I**

3 credit hours

Guided study and exploration of subjects not covered by other courses in the discipline. Class offerings may use such resources as recognized experts, lectures, library research, selected readings and/or field trips. Class may be taken a maximum of three times for credit if different topics are selected or covered. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category Three (1 to 4 lecture hours)

INTERIOR DESIGN 2211

**Computer Applications I**

3 credit hours

Introduction to two-dimensional computer-aided design and drafting techniques and commands for interior design applications. **Prerequisite:** Interior Design 1110 or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2212

**Computer Applications II**

3 credit hours

Advanced computer-aided design and drafting techniques and commands for interior design applications. **Prerequisite:** Interior Design 2211 or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2213

**Computer Applications III**

3 credit hours

Computer-aided design and drafting as a three-dimensional drawing tool for Interior Design applications. **Prerequisite:** Interior Design 2212 or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2220

**Interior Architectural Details**

2 credit hours

Design and drafting of architectural details for interior design applications. **Prerequisite:** Interior Design 1120 and 1170 or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category Three (1 lecture hour, 2 lab hours)

INTERIOR DESIGN 2311

**Lighting I**

3 credit hours

Fundamental lighting course that covers lighting specifications and working drawings for residential and contract lighting applications. **Prerequisite:** Interior Design 1110 or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2312

**Lighting II**

3 credit hours

Advanced design studio that incorporates residential and commercial lighting environment and technology applications. **Prerequisite:** Interior Design 2311, or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2410

**Residential Design Studio**

3 credit hours

Design studio course with emphasis on the development and presentation of residential design projects. **Prerequisite:** Interior Design 1140, 1160, 1190, 2211, 2220 and 2311 all with a grade of "C" or better or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2420

**Universal Design Studio**

3 credit hours

Residential design studio projects, which include barrier-free design codes and universal design principles. **Prerequisite:** Interior Design 1140, 1160, 1190, 2211, 2220 and 2311, all with a grade of "C" or better or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2430

**Contract Design Studio**

3 credit hours

Studio projects with emphasis on retail, hospitality, restaurant or health care design as applied to actual interior environments. **Prerequisite:** Interior Design 1140, 1160, 1190, 2211, 2220 and 2311, all with a grade of "C" or better or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

INTERIOR DESIGN 2440

**Office Design Studio**

3 credit hours

Studio projects with emphasis on current office design trends, techniques and practices as applied to interior environments. **Prerequisite:** Interior Design 1140, 1160, 1190, 2211, 2220 and

2311, all with a grade of "C" or better or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2450

##### **Senior Design Studio**

3 credit hours

Capstone course of advanced research and analysis of selected projects utilizing reality based end-user interior environment program requirements that emphasize the interrelationship of codes, regulations, standards, material specifications, and sustainable interior applications and design solutions.

**Prerequisite:** Interior Design 2532 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2511

##### **Kitchen and Bath Design I**

3 credit hours

Design studio projects that incorporate National Kitchen and Bath Association (NKBA) standards. **Prerequisite:** Interior Design 2410 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2512

##### **Kitchen and Bath Design II**

3 credit hours

Advanced kitchen and bath design skills, market trends, special populations, professional ethics and technology applications as endorsed by the National Kitchen and Bath Association (NKBA).

**Prerequisite:** Interior Design 2511 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2515

##### **Kitchen and Bath Computer Applications**

3 credit hours

Introduction to industry-standard computer software for design and drafting techniques and commands to create kitchen and bath design production drawings. **Prerequisite:** Interior Design 2211 and 2511 or equivalents or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2520

##### **Furniture Design**

3 credit hours

Furniture design theory, construction joinery methods, materials and specifications applied to detail drawings and/or models.

**Prerequisite:** Interior Design 1110 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2531

##### **Green Interiors I**

3 credit hours

Introduction to the changing world of sustainable and green design interiors utilizing specific vocabulary, best practice and design methods through the understanding of local and national resources, professional organizations and governmental Leadership in Energy and Environmental Design (LEED) standards. (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2532

##### **Green Interiors II**

3 credit hours

Advanced exploration of sustainable and green design interior solutions. Emphasis is placed on application of Leadership in Energy and Environmental Design (LEED) professional standards

and other recognized methods and practices. **Prerequisite:** Interior Design 2531 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2610

##### **Portfolio Review**

3 credit hours

Capstone course to develop a presentation portfolio utilizing printed and multimedia applications. **Prerequisite:** Interior Design 2410 and 2430 or equivalents or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2821

##### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category Three (2 lecture hours, 2 lab hours)

#### INTERIOR DESIGN 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of Instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study.

#### INTERIOR DESIGN 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### INTERIOR DESIGN 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### INTERIOR DESIGN 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative

education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## ITALIAN

ITALIAN 1100

### ***Civilization and Culture of Italy***

3 credit hours

Introduction in English to the culture, geography, history, economics, political institutions, literature, music, art, architecture and educational system of Italy. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

ITALIAN 1101

### ***Elementary Italian I***

4 credit hours

Develops the ability to speak, understand, read and write Italian in a cultural context. For the beginning student. (4 lecture hours)

ITALIAN 1102

### ***Elementary Italian II***

4 credit hours

Continues the development of the ability to speak, understand, read and write Italian in cultural context. For students who have successfully completed Italian 1101 or equivalent or one year of high school Italian. (4 lecture hours)

ITALIAN 1840

### ***Independent Study – Individualized***

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course descriptions, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

ITALIAN 2201

### ***Intermediate Italian I***

4 credit hours

Develops students' ability to speak, understand, read and write in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Italian 1102 or equivalent or two years of high school Italian. (4 lecture hours)

ITALIAN 2202 (IAI H1 900)

### ***Intermediate Italian II***

4 credit hours

Further develops students' ability to speak, understand, read and write in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review and cultural activities. For students who have successfully completed Italian 2201 or equivalent, or three years of high school Italian. (4 lecture hours)

ITALIAN 2251

### ***Conversation and Composition I***

3 credit hours

Develops students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Italy. For students who have successfully completed Italian 2202 or equivalent or four years of high school Italian. (3 lecture hours)

ITALIAN 2252

### ***Conversation and Composition II***

3 credit hours

Continues to develop students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Italy. For students who have successfully completed Italian 2251 or equivalent or five years of high school Italian. (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## JAPANESE

JAPANESE 1100

### ***Japanese Civilization and Culture***

3 credit hours

Introduction in English to the culture, history, political institutions, mentality, literature/art and economic position of present-day Japan. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

JAPANESE 1101

### ***Elementary Japanese I***

4 credit hours

An introduction to modern Japanese: pronunciation, useful expressions, speech patterns, listening, reading and writing. (4 lecture hours)

JAPANESE 1102

### ***Elementary Japanese II***

4 credit hours

Continuation of Japanese 1101 with emphasis on increased accuracy in listening and speaking skills together with a continued emphasis on reading and writing. For students who have successfully completed Japanese 1101 or equivalent or three years of high school Japanese. (4 lecture hours)

JAPANESE 1840

### ***Independent Study – Individualized***

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course descriptions, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

JAPANESE 2201

### ***Intermediate Japanese I***

4 credit hours

Continuation of Japanese 1102 with emphasis on listening, speaking and writing of kana and kanji as well as reading of authentic materials. For students who have successfully completed Japanese 1102 or equivalent or four years of high school Japanese. (4 lecture hours)

JAPANESE 2202 (IAI H1 900)

**Intermediate Japanese II**

4 credit hours

Continuation of Japanese 2201 with emphasis on listening, speaking and writing of kana and kanji as well as reading of authentic materials. For students who have successfully completed Japanese 2201 or equivalent or five years of high school Japanese. (4 lecture hours)

JAPANESE 2251

**Conversation and Composition I**

3 credit hours

Develops students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Japanese-speaking countries. For students who have successfully completed Japanese 2202 or equivalent. (3 lecture hours)

JAPANESE 2252

**Conversation and Composition II**

3 credit hours

Continue to develop students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Japanese-speaking countries. For students who have successfully completed Japanese 2251. (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## JOURNALISM AND MASS COMMUNICATION

This subject area participates in the Illinois Articulation Initiative (IAI) Mass Communication major. To see how courses transfer to participating schools, go to [www.itransfer.org/iai/majors](http://www.itransfer.org/iai/majors) or consult a COD faculty adviser.

JOURNALISM AND MASS COMMUNICATION 1100

**Introduction to Mass Communication**

3 credit hours

Overview of the mass media as a functionally integrated system with emphasis on the historical development, nature, functions and responsibilities in a global environment, in addition to the role of mass media in American society and the effect on consumer attitudes, expectations and behaviors. (3 lecture hours)

JOURNALISM AND MASS COMMUNICATION 1105

**News Reporting and Writing**

3 credit hours

Develops basic journalistic skills in reporting and writing news stories. Includes form and organization of news stories, leads, reporting of speeches and meetings, interviews, news gathering simulations and live exercises. Uses Internet, CD, word processing and other reporting resource technologies for assignments. (3 lecture hours)

JOURNALISM AND MASS COMMUNICATION 1110

**Newspaper Lab**

1 credit hour

Provides laboratory experience in writing, editing, photography, circulation, advertising and other aspects of publishing the campus newspaper during the regular academic year, or writing news and feature stories for local newspapers during the summer term. Experiences are assigned by the instructor as needed. Course may be taken three times for credit. (2 lab hours)

JOURNALISM AND MASS COMMUNICATION 1115

**Feature Magazine Lab**

1 credit hour

Laboratory experience in publishing the campus feature magazine, Chaparral. Opportunities for writing, editing, photography, page

design and layout, advertising and circulation. Students are assigned to the campus feature magazine staff. Course may be taken three times for credit. (2 lab hours)

JOURNALISM AND MASS COMMUNICATION 1120

**Introduction to Broadcasting**

3 credit hours

Surveys roles and effects of broadcasting and cable industries. Emphasizes historical development, media regulations, terminology, programming and career opportunities. (3 lecture hours)

JOURNALISM AND MASS COMMUNICATION 1130

**Basic News Editing**

3 credit hours

Introduction to principles and techniques of electronic editing, information management and publication design. Emphasizes editing of body copy and display type for maximum clarity and impact. Students learn and apply Associated Press standard style for mass media publication writing. (3 lecture hours)

JOURNALISM AND MASS COMMUNICATION 1800

**Field and Interdisciplinary Studies in Journalism and Mass Communication**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for journalism and mass communication. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses hold an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, and other appropriate requirements).

JOURNALISM AND MASS COMMUNICATION 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## KOREAN

KOREAN 1100

**Korean Civilization and Culture**

3 credit hours

Introduction in English to the culture, history, political institutions, mentality, literature/art and economic position of present-day Korea. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

KOREAN 1101

**Elementary Korean I**

4 credit hours

An introduction to modern spoken Korean: pronunciation, useful expressions, speech patterns, listening, reading and writing. (4 lecture hours)



KOREAN 1102

**Elementary Korean II**

4 credit hours

Continuation of Korean 1101 with emphasis on increased accuracy in listening, speaking skills, reading and writing. For students who have successfully completed Korean 1101 or equivalent or three years of high school Korean. (4 lecture hours)

KOREAN 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

KOREAN 2201

**Intermediate Korean I**

4 credit hours

Continuation of Korean 1102 with emphasis on listening, speaking and writing of han-gul as well as reading of authentic materials. For students who have successfully completed Korean 1102 or equivalent or four years of high school Korean. (4 lecture hours)

KOREAN 2202 (IAI H1 900)

**Intermediate Korean II**

4 credit hours

Continuation of Korean 2201 with emphasis on listening, speaking, and writing of han-gul as well as reading of authentic materials. For students who have successfully completed Korean 2201 or equivalent or five years of high school Korean. (4 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## LIBRARY AND INFORMATION TECHNOLOGY

LIBRARY AND INFORMATION TECHNOLOGY 1101

**Introduction to Libraries and the Information Age**

3 credit hours

Introduction to different types of libraries and the information industry. The role of the Library Technical Assistant (LTA) in all areas of the library profession is explored. An overview of basic library and information research methods and tools, both print and digital format, is presented. (3 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 1102

**Introduction to Reference and Information Services**

4 credit hours

Introduction to reference and information services for the Library Technical Assistant. Includes basic tools needed to answer directional and ready reference questions. Print and electronic resources, interview techniques and virtual reference services are discussed. **Prerequisite:** Library and Information Technology 1101 with a grade of “C” or better or consent of instructor (4 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 1103

**Acquisition of Library Materials**

3 credit hours

Introduces the Library Technical Assistant to the process of how to acquire materials from the decision to obtain them to the time they are ready to be cataloged. Automation processes and techniques are incorporated. **Prerequisite:** Library and Information Technology 1101 with a grade of “C” or better or consent of instructor (3 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 1104

**Essential Library Workplace Skills**

3 credit hours

Overview of the skills necessary to communicate effectively with coworkers and the public, work in team settings, deal with a variety of personality types, resolve conflicts and become an effective part of the library workforce. (3 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 1105

**Readers Advisory**

3 credit hours

Introduces genres of literature and techniques for patron interaction. Topics include library collection analysis, display creation, bibliographic tool development and reading programs. **Prerequisite:** Library and Information Technology 1101 or equivalent or consent of instructor (3 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 1820

**Selected Topics in Librarianship**

3 credit hours

Addresses current issues in the field that necessitate a greater depth, broader scope or fuller assimilation of a particular area of study. **Prerequisite:** Library and Information Technology 1101 or equivalent or consent of instructor or program coordinator (3 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 2100

**Introduction to Cataloging and Classification**

4 credit hours

The role of Library Technical Assistant (LTA) in descriptive and subject cataloging and processing of print and non-print materials. Emphasis is on the organization of information resources in print and non-print formats. Includes the philosophy, tools and techniques for performing cataloging. **Prerequisite:** Library and Information Technology 1101 with a grade of “C” or better or consent of instructor (4 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 2200

**Serving the Public in Today’s Libraries**

4 credit hours

Role of the Library Technical Assistant (LTA) in serving the public, including programming, creating displays, basic circulation desk duties, shelf maintenance, interlibrary loan activities, registering and effective interaction with patrons. Automated and online systems are emphasized. **Prerequisite:** Library and Information Technology 1101 with a grade of “C” or better or consent of instructor (4 lecture hours)

LIBRARY AND INFORMATION TECHNOLOGY 2300

**Multimedia Services and Equipment in Today’s Library**

3 credit hours

Basic operation, evaluation, selection and uses of media, hardware and software. Emphasis on hands-on experience and creation of a media portfolio. **Prerequisite:** Library and Information Technology 1101 with a grade of “C” or better or consent of instructor (3 lecture hours)

## LIBRARY AND INFORMATION TECHNOLOGY 2600

**Library Practicum**

4 credit hours

Capstone course integrating the application of all course work in the Library Technology program. Required seminars provide a forum for discussing issues related to working in the library field, guidance in searching for jobs, and instruction about how to create a professional portfolio. **Prerequisite:** Library and Information Technology 1102, 1103, 1104, 1820, 2100, 2200 and 2300 with a grade of “C” or better or consent of instructor (2 lecture hours, 4 lab hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**LITERACY**

## LITERACY 0410

**Assessment of Language Development**

1 credit hour

Evaluates the language development of native speakers of English in order to ensure a knowledge/skill/strategy base for appropriate placement for reading and writing instruction. This course can only be taken on a pass/fail basis. May be taken three times for credit.

**Prerequisite:** Mandatory Testing: Appropriate scores on the Reading and Writing Pre-Course Placement Exams. (1 lecture hour)

## LITERACY 0411

**Beginning Reading I**

1 credit hour

Fundamental course for emergent readers. Students will learn to associate sounds with letters in order to decode single-syllable and multi-syllable words and develop a repertoire of sight words. Students develop vocabulary through discussion of words heard during reading and by analyzing word parts. Students listen to texts read to them and read with assistance. Students read frequently from a wide range of texts and respond by discussing the texts with their instructor. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of “S” or better or equivalent and consent of instructor. Concurrent enrollment required in Literacy 0421 (1 lecture hour)

## LITERACY 0412

**Beginning Reading II**

1 credit hour

Fundamental course for emergent readers. Students will develop greater proficiency in using the print-sound code to read words and short texts with accuracy and fluency and expanding their repertoire of sight words. Vocabulary is built through increased independent reading, word analysis, and beginning dictionary use. Comprehension is built through multiple readings of more complex texts that contain more challenging vocabulary and fewer illustrations. Students will apply various strategies when they recognize that a text does not make sense. Frequent reading is expected. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of “S” or better, or equivalent and consent of instructor. Concurrent enrollment in Literacy 0422 is required. (1 lecture hour)

## LITERACY 0413

**Beginning Reading III**

1 credit hour

Fundamental course for emergent readers. Students will develop proficiency in using the print-sound code to read regularly and irregularly spelled words automatically. More reading is done

independently and silently. Students begin to discuss features of different kinds of texts and to examine different parts of one text to see how the information is connected. Vocabulary is built through defining unfamiliar words and through exploring a word’s functions and forms. Students also keep a personal vocabulary list and a reading log. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of “S” or better, or equivalent and consent of instructor. Concurrent enrollment is required in Literacy 0423 (1 lecture hour)

## LITERACY 0418

**Beginning Reading Extended Practice**

1 credit hour

Provides reading opportunities that enhance automatic word recognition, fluency in oral and silent reading, vocabulary development, and comprehension of texts at an appropriate level for the individual student in one of the Beginning Reading courses. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of “S” or better, or equivalent and consent of instructor (1 lecture hour)

## LITERACY 0421

**Beginning Writing I**

1 credit hour

Writing fundamentals course for emergent writers. Students will write frequently for a variety of purposes and begin to gain confidence as a writer, using whatever means are at hand to communicate and make meaning, including drawing, letter strings, letter approximations, and dictation. Students will learn about the writing process and use elements as appropriate to communicate ideas that are important to them. Language use and conventions will be learned so that student writing contains a high proportion of correctly spelled high-frequency words. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of “S” or better, or equivalent and consent of instructor. Concurrent enrollment is required in Literacy 0411. (1 lecture hour)

## LITERACY 0422

**Beginning Writing II**

1 credit hour

Writing fundamentals course for emergent writers. Students will generate their own topics and make decisions about which pieces to work on more extensively. Students will begin to write sentences of varied structures; incorporate learned vocabulary into their writing; correctly spell words with regular spelling patterns and use logic to guide their spelling of unfamiliar words; and use correct punctuation for sentence boundaries. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of “S” or better, or equivalent and consent of instructor. Concurrent enrollment in Literacy 0412 is required. (1 lecture hour)

## LITERACY 0423

**Beginning Writing III**

1 credit hour

Writing fundamentals course for beginning writers. Students will use language to make their writing interesting and clear. Students will use the writing process and pay more attention to purpose and audience, and they will create a rubric to guide their revisions. Students will spell words with irregular spelling patterns and will expand their use of punctuation. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:**

Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent enrollment in Literacy 0413 is required. (1 lecture hour)

#### LITERACY 0428

##### ***Beginning Writing Extended Practice***

1 credit hour

Provides opportunities to enhance writing skill for students in a Beginning Writing course. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor (1 lecture hour)

#### LITERACY 0431

##### ***Intermediate Reading I***

1 credit hour

Foundational course for beginning readers. Students will continue to build fluency and learn vocabulary through exploration of and practice with unfamiliar words and through wide reading of a variety of kinds of texts. Comprehension is strengthened through using strategies before, during, and after reading. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent enrollment required in Literacy 0441. (1 lecture hour)

#### LITERACY 0432

##### ***Intermediate Reading II***

1 credit hour

Foundational course for intermediate readers. Students will strengthen their reading skills and reinforce their knowledge of syllable patterns in order to achieve fluent oral and silent reading. Emphasis is placed on building vocabulary and beginning to understand the complexities of words. Students read more challenging texts, especially content-area texts, attending more to information that is implicitly stated and examining the connections in text by analyzing formatted features. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent enrollment required in Literacy 0442. (1 lecture hour)

#### LITERACY 0433

##### ***Intermediate Reading III***

1 credit hour

Foundational course for intermediate readers. Students will continue to solidify their decoding skills in order to read fluently and comprehend more challenging texts, especially expository texts. Students will continue to connect ideas in text and use organizational patterns to understand and remember information. Students will read widely to build background knowledge on a variety of subjects and build vocabulary by beginning to analyze the complexities of words. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent enrollment required in Literacy 0443. (1 lecture hour)

#### LITERACY 0438

##### ***Intermediate Reading Extended Practice***

1 credit hour

Provides opportunities to practice reading strategies and strengthen reading skills for students in an Intermediate Reading course. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor (1 lecture hour)

#### LITERACY 0441

##### ***Intermediate Writing I***

1 credit hour

Basic writing course for beginning writers. Students will practice writing well-developed paragraphs as part of a longer composition and spend more time revising and reflecting on how changes improve their writing. Students will become more independent when editing their work and rely more on resources than on the instructor to correct surface-level mistakes. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent Enrollment is required in Literacy 0411. (1 lecture hour)

#### LITERACY 0442

##### ***Intermediate Writing II***

1 credit hour

Basic writing course for intermediate writers. Students will decide what ideas to incorporate into their writing, how to organize them for a specific purpose, and how to develop them effectively. Students will choose precise words and sentence structures that create interest and clarity. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent enrollment in Literacy 0432 is required. (1 lecture hour)

#### LITERACY 0443

##### ***Intermediate Writing III***

1 credit hour

Basic writing course for intermediate writers. Students will pay attention to how parts of their composition fit in with it as a whole and to begin to understand why writing is considered a recursive process. Assignments require more formal types of writing than the previous course. Students will gain more familiarity with accepted language conventions. This course may require visits to the Writing and Reading Center. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor. Concurrent Enrollment in Literacy 0433 is required. (1 lecture hour)

#### LITERACY 0448

##### ***Intermediate Writing Extended Practice***

1 credit hour

Provides opportunities to enhance writing skill for students in an Intermediate Writing course. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor (1 lecture hour)

#### LITERACY 0449

##### ***Intermediate Reading and Writing Capstone Course***

1 credit hour

Establishes readiness for coursework in the Developmental English sequence, in both Reading and Writing. This course can only be taken on a pass/fail basis. May be taken three times for credit. **Prerequisite:** Literacy 0410 with a grade of "S" or better, or equivalent and consent of instructor (1 lecture hour)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## LONG-TERM CARE ADMINISTRATION

### LONG-TERM CARE ADMINISTRATION 1140

#### **Introduction to Long-Term Care Administration**

3 credit hours

Overview of the various settings for long-term care, including nursing homes, adult day care, assisted living and hospice. Introduction to the responsibilities of the administrator, certification and licensure procedures and standards, and relevant legal, funding and program issues. (3 lecture hours)

### LONG-TERM CARE ADMINISTRATION 1151

#### **Nursing Home Administrative Practices I**

3 credit hours

Introduction to personnel management specific to long-term care, including staffing, scheduling, recruitment, training, performance appraisal, wage and benefit administration, job satisfaction, and employee health and safety. (3 lecture hours)

### LONG-TERM CARE ADMINISTRATION 1152

#### **Nursing Home Administrative Practices II**

3 credit hours

Introduction to financial management in long-term care administration, including budgeting, accounting, internal controls, and equity and debt financing. (3 lecture hours)

### LONG-TERM CARE ADMINISTRATION 1161

#### **Aging and Long-Term Care I**

2 credit hours

Survey of the physical, psychological, sociological and financial aspects of aging. Introduces related long-term care options, and current social policies and programs. (2 lecture hours)

### LONG-TERM CARE ADMINISTRATION 1162

#### **Aging and Long-Term Care II**

2 credit hours

Continuation of Long-Term Care Administration 1161. Expands on the physical, psychological, sociological and financial aspects of aging as well as current policies and programs that can benefit the older adult. **Prerequisite:** Long-Term Care Administration 1161 or equivalent or concurrent enrollment (2 lecture hours)

### LONG-TERM CARE ADMINISTRATION 1840

#### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## MANAGEMENT

### MANAGEMENT 1100

#### **Supervision**

3 credit hours

Prepares the individual to manage front-line workers and the responsibilities, problems, challenges and opportunities facing a supervisor. Presents the range of supervisory methods from classical to behavioral.

### MANAGEMENT 1820

#### **Selected Topics in Management**

3 credit hours

Introductory exploration, discussion, review and analysis of selected topics in management with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

### MANAGEMENT 1840

#### **Independent Study – Individualized**

1 to 3 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

### MANAGEMENT 2170

#### **Project Management**

3 credit hours

Overview of project management tools and methodology. Includes the strategic significance of projects, project selection, team building and decision-making, and project planning, scheduling, budgeting and resource allocation. Project implementation, control and termination are also included. Provides a foundation for those involved in using project management to decrease cycle times in e-commerce and traditional business operations. (3 lecture hours)

### MANAGEMENT 2210

#### **Principles of Management**

3 credit hours

Essential principles and concepts of management. Includes theoretical bases and practical applications of planning, controlling, organizing and directing human, financial, material and informational resources. Integrates management history, decision-making models, international and diversity management with the functions of management. Covers classical and behavioral approaches to management. Completion of Business 1100 recommended prior to enrollment. (3 lecture hours)

### MANAGEMENT 2215

#### **Leadership**

4 credit hours

Characteristics of leaders, leadership styles and methods, power, politics and influence styles, teamwork and leadership problem solving. Strategic leadership, international and diversity aspects of leadership and leadership development. Completion of Business 1100 or equivalent is recommended prior to enrollment. (3 lecture hours)

### MANAGEMENT 2220

#### **Organizational Behavior**

3 credit hours

How people behave in organizations and the forces that affect individuals within organizations. Study of the working environment, organizational communications, the organizational framework and their effects on individual behavior, including self-management, motivation, morale, job satisfaction, change, leadership and organization etiquette. Includes current and future challenges organizations face. (3 lecture hours)

### MANAGEMENT 2230

#### **Purchasing**

3 credit hours

Introduction to the materials acquisition process in industry and non-profit organizations. Topics include structure, tools and techniques for purchasing agents. **Prerequisite:** Business 1100 (3 lecture hours)



## MANAGEMENT 2240

### **Human Resource Management**

3 credit hours

Attracting, selecting, training and maintaining the human assets of an organization. Includes human resource planning, job design, performance appraisal, motivations, methods of compensation, workplace policies, labor relations and internationalization of human resource management function. Completion of Business 1100 and Management 2210 or equivalents recommended prior to enrollment. (3 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## MANUFACTURING TECHNOLOGY

### MANUFACTURING TECHNOLOGY 0480

#### **Blueprint Reading for Machinists**

1 credit hour

Lines, dimensions, tolerances, notes, symbols, specifications, materials, manufacturing processes and standards. Orthographic and pictorial projections. Machine shop terminology. (1 lecture hour)

### MANUFACTURING TECHNOLOGY 1101

#### **Industrial Design/CAD**

3 credit hours

An introduction to the use of microcomputers for design of industrial blueprints of intermediate complexity. Sketching, lettering, orthographic projections, descriptive geometry, point, line and basic geometric shapes. The use of menus, layers, fonts and weights. Basic dimensioning, tolerancing and pictorial drawings. The student is expected to draw a blueprint with simple dimensions label and notes using different layers. (2 lecture hours, 2 lab hours)

### MANUFACTURING TECHNOLOGY 1104

#### **Technical Mechanics**

2 credit hours

Analysis and solution of practical problems in technical mechanics. Application of basic calculations and standards for design and maintenance of mechanical systems. (2 lecture hours)

### MANUFACTURING TECHNOLOGY 1110

#### **Metrology**

3 credit hours

Initial course in the science of precision measurement techniques. Basic and advanced methodology behind measurement principles and tools used in the measurement process. Emphasis on laboratory skills in dimensional measurement using micrometers, calipers and gage blocks. Basics of geometric tolerancing and data analysis. Various applications of measurement, including the Coordinate Measuring Machine (CMM), roundness measurement and surface finish measurement. Additional topics include optical systems and quality control methods, as well as calibration standards. (2 lecture hours, 2 lab hours)

### MANUFACTURING TECHNOLOGY 1121

#### **Physical Metallurgy**

3 credit hours

Functions of the metallurgical laboratory and equipment, including mechanical testing, metallography, heat treatment and extractive metallurgy. Basic principles concerning materials science, including atomic and crystal arrangements and their effect on mechanical properties. Simple phase equilibrium. Ferrous and nonferrous metals and alloys classification systems. (2 lecture hours, 2 lab hours)

### MANUFACTURING TECHNOLOGY 1126

#### **Introduction to Plastics**

3 credit hours

The theory and use of plastics in industry. Physical, chemical and electrical properties of plastics and testing criteria are discussed. Processes such as injection molding, extrusion, blow molding, rotational molding, and thermoforming are covered. Control factors affecting the quality of parts, applications, benefits and limitations of plastics are explained. Related topics include process relationships, parameter setting techniques, rapid changeover techniques, process control and troubleshooting. (3 lecture hours)

### MANUFACTURING TECHNOLOGY 1127

#### **Engineering Materials of Industry**

3 credit hours

Basic principles of materials technology, including the internal structures of materials, physical and mechanical properties, fusion and bonding, annealing and plastic deformation (3 lecture hours)

### MANUFACTURING TECHNOLOGY 1151

#### **Machine Shop I**

3 credit hours

Designed for students with little background in the use of metal-working machine tools. Basic principles and operations on the engine lathe, vertical milling machine and surface grinder. Precision measurement. (2 lecture hours, 2 lab hours)

### MANUFACTURING TECHNOLOGY 1153

#### **Advanced Machine Processes**

3 credit hours

The application of skills that are commonly known in the industry as "machine shop." The development of operation skills of traditional engine lathes, vertical/horizontal mills and grinding as well as operations on similar machines. Emphasis is on those skills needed by trades persons who have achieved proficiency in the operation of machines and related tooling and equipment. Quality skills related to machining and some planning and job control skills related to machine work. **Prerequisite:** Manufacturing Technology 1151 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

### MANUFACTURING TECHNOLOGY 1160

#### **Technical Static and Strength of Material**

4 credit hours

Basic analysis of external force systems acting upon bodies in equilibrium with subsequent treatment of the stresses and strains induced. Laboratory projects involve the use of nondestructive and destructive testing equipment to determine the various mechanical properties of materials and their behavior under load. Not intended for engineering students. **Prerequisite:** Physics 1201 or equivalent and Mathematics 1432 (or college equivalent) or qualifying score on the mathematics placement test or qualifying ACT math score or consent of instructor (3 lecture hours, 2 lab hours)

### MANUFACTURING TECHNOLOGY 1180

#### **Quality Control**

3 credit hours

An introduction to quality control and the development of the concept of total quality control engineering, process improvement and quality information systems. A broad overview of total quality control and its scope throughout the business organization enables the student to analyze the various costs of quality and improve productivity. Topics will include 100 percent inspection versus statistical inspection and process control charts, as well as some of the tools of Organizational Development (OD) useful in promoting a Total Quality Control (TQC) and Total Quality Management (TQM) environment (3 lecture hours)

## MANUFACTURING TECHNOLOGY 1700

**Fundamentals of Plastics and Plastic Products**

3 credit hours

Fundamentals of plastics materials as they pertain to plastic products. Topics include comparing and contrasting elastomers and plastics, and testing methods. Data sheet analysis used to predict product characteristics. **Prerequisite:** Manufacturing Technology 1126 with a grade of "D" or better or equivalent (3 lecture hours)

## MANUFACTURING TECHNOLOGY 1820

**Selected Topics I**

10 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. May be taken three times for credit as long as different topics are selected. (6 lecture hours, 8 lab hours)

## MANUFACTURING TECHNOLOGY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## MANUFACTURING TECHNOLOGY 2200

**Machine Tool Technology**

4 credit hours

A second-year apprentice course that is a continuation of the theory of process planning and process control. Emphasis is on the study of these concepts as they apply to Geometric Dimensioning and Tolerancing (GD&T), Computer Numerical Control (CNC) programming, basic fixturing, and advanced lathe and milling operations. Theory related to heat treating, machinability of materials and cutting tool materials. (4 lecture hours)

## MANUFACTURING TECHNOLOGY 2201

**Geometric Dimensioning and Tolerancing**

3 credit hours

Introduces the principles of industrial drafting as specified by the American National Standards Institute (ANSI). Topics include part dimensional control techniques, interchangeability of parts and the differences between traditional dimensioning and geometric dimensioning. Symbols and terms for dimensioning, datum and materials condition symbols are introduced. Various tolerances of form, profile orientation, run-out and location are demonstrated. Feature control frames are discussed. **Prerequisite:** Manufacturing Technology 1101 or consent of instructor (3 lecture hours)

## MANUFACTURING TECHNOLOGY 2202

**Solid Modeling and Design**

3 credit hours

The theory and application of solid modeling techniques for product design and manufacturing. **Prerequisite:** Manufacturing Technology 1101 or consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2203

**Manufacturing Processes and Design**

3 credit hours

A survey of manufacturing methods and materials employed in cold working processes. The student will understand the various methods of product fabrication and the manufacturing processes for sound economic decision-making in manufacturing and product design. Other topics include the interrelationship among materials, their selection for use in product design and processes, and conversion of these materials into finished components.

**Prerequisite:** Manufacturing Technology 2202 or consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2206

**Mechanical Computer-Aided Drafting/Design**

3 credit hours

Computer-aided drafting/design (CADD) as drafting tool for the creation of mechanical production drawings. Solids modeling concepts and application of geometric dimensioning techniques are explained. The student is expected to finish detail and assembly drawings from a layout and demonstrate an understanding of the principles of engineering and design.

**Prerequisite:** Manufacturing Technology 2201 and 2202 or equivalents and consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2207

**Tool Design**

3 credit hours

An advanced course on the designing of manufacturing production tools, molds, dies, jigs and fixtures. **Prerequisite:** Manufacturing Technology 2202 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2208

**Mechanical Design Portfolio**

3 credit hours

Practical overview of the design process with case materials and real-life design problems. Provides the student with an opportunity to create a design portfolio. **Prerequisite:** Manufacturing Technology 2207 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2240

**Basic Parametric Design-Pro/E**

3 credit hours

A basic course in creating three-dimensional (3-D) parametric parts, two-dimensional (2-D) drawings and 3-D assemblies. Includes multi-part models. Emphasis is on the philosophy of parametric design and constraints. **Prerequisite:** Experience in design and drafting (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2242

**Advanced Parametric Design-Pro/E**

3 credit hours

Advanced course in creating multi-part parametric assemblies, exploded assemblies, parts having complex surface features, and design of sheet metal parts in both a flattened and bent state using parametric modeling software. Includes associated drawing files. **Prerequisite:** Manufacturing Technology 2240 with a grade of "D" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2251

**Computer Numerical Control (CNC)**

3 credit hours

An introduction to CNC machinery as it applies to the operator and programmer. Introduction to CNC programming coding, set-up, tooling, operation and troubleshooting. Basic principles and applications of numerically controlled equipment and the set-up and operation of CNC machines. **Prerequisite:** Manufacturing Technology 1151 or equivalent, or consent of instructor (2 lecture hours, 2 lab hours)

## MANUFACTURING TECHNOLOGY 2253

**Computer-Aided Manufacturing (CAM)**

3 credit hours

Introduction to computer-assisted part of programming (CAM) as it applies to computer numerical control (CNC). Various types of programming systems. Piece part geometry definition, computer

input of this geometry, and post-processing this information into CNC code. This code is then used to machine parts. Familiarity with CAM software and mathematical skills required. The student is expected to demonstrate a measurable level of skill in geometry definition of the CAM system, post-processor knowledge to modify CNC code, and application of computer-aided design (CAD) to generate CNC code. **Prerequisite:** Manufacturing Technology 2251 or equivalent (2 lecture hours, 2 lab hours)

#### MANUFACTURING TECHNOLOGY 2261

##### **Basic Die Making I**

4 credit hours

Fundamental theory and study of tool and die making, including punch press sizes and feeds for dies, and their uses and relationships to each other. **Prerequisite:** Consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2262

##### **Basic Die Making II**

4 credit hours

Continuation of Basic Die Making I. Principles and processes used in sheet metal work, using stock-strip layouts, cutting and stripping pressures, and flat blank layouts. **Prerequisite:** Manufacturing Technology 2261 or equivalent or consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2265

##### **Mold Making I**

4 credit hours

Mold construction, elastics, die casting, proper selection and heat treatment. **Prerequisite:** Consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2267

##### **Mold Making II**

4 credit hours

An advanced class in mold making. Emphasis is on the use of side cores, various methods of mold construction, fitting clearances, locking devices and finishes required in mold cavities. **Prerequisite:** Manufacturing Technology 2265 or equivalent or consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2271

##### **Robotic Application**

3 credit hours

Industrial applications of robots with emphasis on set-up, programming and operations. End effect or design and production line interfacing are studied. **Prerequisite:** Manufacturing Technology 1171 (2 lecture hours, 2 lab hours)

#### MANUFACTURING TECHNOLOGY 2272

##### **Advanced Die Making and Engineering I**

4 credit hours

An introduction to draw dies: the theory of the drawing of metal, metal reaction, problems and solutions used, lubricants and draw die reductions along with advanced work in gages, fixtures and intricate progressive dies. **Prerequisite:** Manufacturing Technology 2262 or equivalent or consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2274

##### **Advanced Die Making and Engineering II**

4 credit hours

An advanced study of draw dies, including types, materials used, lubricants, and the theory of draw die reductions with a continuation of advanced work in gages, fixtures and intricate progressive dies. **Prerequisite:** Manufacturing Technology 2272 or equivalent and consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2276

##### **Advanced Mold Making and Engineering I**

4 credit hours

Theory and process of mold cavities using electrical impulse methods, thread molding and automatic unscrewing methods. **Prerequisite:** Manufacturing Technology 2267 or equivalent or consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2277

##### **Advanced Mold Making and Engineering II**

4 credit hours

A continuation of Advanced Mold Making and Engineering I. Product standards for die casting and analysis of mold cavities by electrical impulse methods. Thread molding and automatic unscrewing methods, current advances in molds, molding machines and mold-making methods. **Prerequisite:** Manufacturing Technology 2276 or equivalent and consent of instructor (4 lecture hours)

#### MANUFACTURING TECHNOLOGY 2280

##### **Industrial Safety**

2 credit hours

Survey and analysis of current problems and trends in the design and supervision of industrial accident prevention programs. (2 lecture hours)

#### MANUFACTURING TECHNOLOGY 2281

##### **Cost Analysis**

2 credit hours

Study of the economic interdependency of the design, tooling, manufacturing, inspection and testing decisions and the means of quantifying such decisions. Sources and controls of direct, indirect and fixed costs. Influences of cost-accounting practices on engineering decisions. Generating alternatives based on the principles of time and motion economics and work simplification. Cost estimation procedures and controls. (2 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## MARKETING

#### MARKETING 1100

##### **Consumer Marketing**

3 credit hours

Consumer behavior and marketing principles, concepts, functions and activities involved in generating consumer satisfaction through business and marketing transactions. (3 lecture hours)

#### MARKETING 1170

##### **E-Marketing**

3 credit hours

Strategic use of Internet and interactive electronic media to improve marketing efficiency and effectiveness in satisfying the needs of customers. (3 lecture hours)

#### MARKETING 1171

##### **Database Marketing**

3 credit hours

Strategy, methods and techniques used to design, generate, compile, analyze and strategically use marketing databases. (3 lecture hours)

#### MARKETING 1175

##### **Customer Relationship Management**

3 credit hours

Strategy and methods used to increase customer satisfaction and to improve and maintain customer relationships. (3 lecture hours)

## MARKETING 1820

**Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

## MARKETING 1840

**Independent Study – Individualized**

1 to 3 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

## MARKETING 2210

**Principles of Marketing**

3 credit hours

Study of satisfying customer needs for goods and services. Marketing environments, marketing planning and marketing research. Market segmentation, targeting and positioning. Essentials of consumer behavior. Products, pricing, promotions and distribution. Basic competitor analysis and global marketing. Completion of Business 1100 recommended prior to enrollment. (3 lecture hours)

## MARKETING 2215

**Domestic Distribution Channels**

3 credit hours

Creation and maintenance of a domestic logistics system to move products from producers to consumers. Role of distribution in the marketing effort and in meeting the needs of customers. Distribution channel design, management, motivation, evaluation, price determination and conflict resolution. Domestic logistics and distribution for Internet and direct marketing. **Prerequisite:** Business 1100 and Marketing 2210 or equivalents (3 lecture hours)

## MARKETING 2220

**Principles of Selling**

3 credit hours

Selling as a problem-solving activity, strategic development, and implementation of the sales process and its components within the context of effective communication, customer relationships, motivation and behavioral theories, determination of customer needs and sales ethics. Completion of Business 1100 recommended prior to enrollment (3 lecture hours)

## MARKETING 2230

**Principles of Retail**

3 credit hours

Strategic approach to principles and problems of retailing. Includes market information, organization, layout, location, merchandising, buying, receiving, display, promotion, price, control systems, human resources and government regulations. Completion of Business 1100 recommended prior to enrollment (3 lecture hours)

## MARKETING 2240

**Advertising**

3 credit hours

Theoretical and descriptive survey of the advertising function. Explains how advertising is used, identifies specific tasks employed, and describes how advertising is integrated into the entire marketing strategy. Included are analyses of regulatory issues, creative processes and media outlets. Completion of Business 1100 and Management 2210 recommended prior to enrollment (3 lecture hours)

## MARKETING 2250

**Business to Business**

3 credit hours

Application of marketing principles to the business/industrial/organizational market. Covers demand, marketing intelligence, and the development of strategy for products and services, supply chain management, pricing, promotion, control, customer relationship management, communication, and electronic marketing methods. Completion of Business 1100 and Marketing 2210 recommended prior to enrollment (3 lecture hours)

## MARKETING 2255

**International Logistics**

3 credit hours

Planning, implementing and controlling an international system to move products from point of origin to consumers located in a different country. Covers the primary elements of international logistics, including legal considerations, transportation modes and packaging for export. (3 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**MATHEMATICS**

## MATHEMATICS 0405

**Study Skills: Math Anxiety**

1 credit hour

Basic course designed for students who want to reduce or manage math anxiety. Students examine underlying issues that contribute to math anxiety; discuss various learning styles; assess own learning style; learn ways to accommodate an instructor's teaching style; and learn strategies and techniques to effectively cope with math anxiety. May be taken two times for credit. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor required (1 lecture hour)

## MATHEMATICS 0408

**Arithmetic Whole Numbers I**

0.5 credit hour

Computation skills involving addition and subtraction of whole numbers and applications. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor required (.5 lecture hour)

## MATHEMATICS 0409

**Arithmetic Whole Numbers II**

0.5 credit hour

Computation skills involving multiplication and division of whole numbers and applications. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

## MATHEMATICS 0410

**Arithmetic of Whole Numbers**

0.5 credit hour

Computation skills involving addition, subtraction, multiplication, division and applications of whole numbers. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

## MATHEMATICS 0412

**Arithmetic of Fractions I**

0.5 credit hour

Computation skills involving addition and subtraction of fractions and mixed numbers. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)



MATHEMATICS 0413

**Arithmetic of Fractions II**

0.5 credit hour

Computation skills involving multiplication and division of fractions and mixed numbers. May be taken three times for credit.

**Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0415

**Arithmetic of Decimals**

0.5 credit hour

Computation skills involving addition, subtraction, multiplication and division of decimals. May be taken three times for credit.

**Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0417

**Arithmetic of Percents**

0.5 credit hour

Computation skills involving percents, conversions among fractions, decimals and percents, including applications. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0418

**Arithmetic of Ratio/Proportion**

0.5 credit hour

Computation skills involving ratio and proportion. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0420

**Arithmetic: Special Topics**

0.5 credit hour

Topics include exponents, roots, rounding and estimating. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0422

**Arithmetic of Signed Numbers**

0.5 credit hour

Computation skills involving addition, subtraction, multiplication and division of signed numbers, and properties of numbers. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0424

**Algebra: Solving Linear Equations**

0.5 credit hour

Solve linear equations algebraically. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0426

**Algebra: Word Problems**

0.5 credit hour

Word problems involving money, ratio and proportion, percent and variation. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0428

**Algebra: Exponents**

0.5 credit hour

Algebraic expressions involving positive, negative and zero exponents. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0430

**Algebra: Factoring**

0.5 credit hour

Factoring polynomials and its application in solving equations. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0432

**Algebra: Fractions**

0.5 credit hour

Computation skills involving addition, subtraction, multiplication and division of algebraic fractions and applications of algebraic fractions. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0434

**Algebra: Graphing**

0.5 credit hour

Graph linear and quadratic equations and linear inequalities. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0436

**Algebra: Systems of Linear Equations**

0.5 credit hour

Solving systems of linear equations, including applications by graphing, elimination and substitution. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0438

**Algebra: Radicals**

0.5 credit hour

Simplifying algebraic expressions containing radicals by addition, subtraction, multiplication and division; radical equations; Pythagorean Theorem applications. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0440

**Algebra: Quadratic Equations**

0.5 credit hour

Solve quadratic equations by factoring and the quadratic formula. May be taken three times for credit. **Prerequisite:** Consent of instructor required (0.5 lecture hour)

MATHEMATICS 0451

**Essentials of Arithmetic I**

2 credit hours

Fundamental skills in addition, subtraction, multiplication and division with respect to whole numbers, fractions, ratio and proportion, and decimals. Included are problem-solving techniques with practical application. Equivalent to the first half of Mathematics 0460. May be taken three times for credit. **Prerequisite:** Consent of instructor required (2 lecture hours)

MATHEMATICS 0452

**Essentials of Arithmetic II**

2 credit hours

Principles of arithmetic, review of fractions, exponents, order of operations, percents and applications, ratio and proportion, and applications. May be taken three times for credit. (2 lecture hours)

MATHEMATICS 0455

**Fundamentals of Algebra**

2 credit hours

Covers essential fundamentals of algebra. Students begin with signed numbers, learn to solve equations and inequalities, apply properties of exponents, and perform fundamental operations with polynomials. Included are problem-solving techniques with practical application. May be taken three times for credit. (2 lecture hours)

MATHEMATICS 0460

**College Arithmetic**

3 credit hours

Principles of arithmetic. Fundamental operations with whole numbers, common fractions and decimals. Percents and

applications in the world of business. Rational numbers, exponents and powers. May be taken three times for credit. (3 lecture hours)

#### MATHEMATICS 0470

##### **Elementary Plane Geometry**

3 credit hours

Points and lines in the plane, angles, triangles, quadrilaterals, polygonal regions, circles and their relationships. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (3 lecture hours)

#### MATHEMATICS 0481

##### **Foundations for College Mathematics I**

5 credit hours

Topics from elementary algebra: sets of numbers, operations with real numbers, variables, integral exponents, scientific notation, simplification of algebraic expressions, solving linear equations and inequalities in one variable, graphing linear equations, writing equations of lines, solving linear inequalities in two variables, solving systems of linear equations in two or more variables, applications, problem solving, operations with polynomials, factoring polynomials, and solving equations using factoring. **Prerequisite:** Mathematics 0460 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (5 lecture hours)

#### MATHEMATICS 0482

##### **Foundations for College Mathematics II**

5 credit hours

Topics from elementary algebra and intermediate algebra: operations with algebraic fractions, solving equations with the algebraic fractions, radicals and rational exponents, complex numbers, solving quadratic equations, variation, solving equations and inequalities involving absolute value, function notation, graphing functions, inverse functions, exponential and logarithmic functions, applications and problem solving. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (5 lecture hours)

#### MATHEMATICS 0485

##### **Algebra Refresher Workshop**

0.5 credit hours

Designed as a focused review of the elementary and intermediate algebra techniques and associated problem-solving skills required for a student to be successful in college-level math. Students meeting mastery-level performance qualifications in the workshop can take a written departmental exit examination for potential placement. This course can only be taken on a pass/fail basis. **Prerequisite:** Consent of instructor (0.5 lecture hour)

#### MATHEMATICS 1100

##### **Business Mathematics**

3 credit hours

Applications of mathematics to business transactions. Analysis and solution of the business problems in profit and loss, interest, installment transactions, percent discounts, taxes and payroll. **Prerequisite:** Mathematics 0460 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (3 lecture hours)

#### MATHEMATICS 1102

##### **Mathematics for Health Sciences**

3 credit hours

Designed for health science majors. Topics include systems of measurements, use of formulas, dimensional analysis, percents, decimals, fractions, ratio and proportion, direct and inverse variation, solutions, and dosage calculations. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (3 lecture hours)

#### MATHEMATICS 1104

##### **Mathematics for Horticulture**

3 credit hours

Designed for horticulture majors only. Topics include fractions, decimals, percents, systems of measurement, dimensional analysis, use of formulas, ratio and proportion, linear equations, perimeter, area, volume, and surface area as related to landscape, mixtures as related to seed, fertilizer and chemicals, estimation, scale drawings, sales, including discount and markup, construction as related to landscape, and estimates and bids on landscaping projects. (3 lecture hours)

#### MATHEMATICS 1108

##### **Perspectives of Mathematics**

3 credit hours

The course surveys some of the major ideas of mathematics and relationships to the arts, life sciences, physical sciences, social sciences, games, etc. Topics are selected from number systems, inductive and deductive reasoning, algebraic processes and methods, geometry, probability and statistics. **Prerequisite:** Demonstrated geometry competency (level 2) and Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (3 lecture hours)

#### MATHEMATICS 1115

##### **Technical Mathematics I**

3 credit hours

For technical/occupational programs. Emphasizes problem-solving skills using elementary algebra, right angle trigonometry, and ratio and proportion. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test (3 lecture hours)

#### MATHEMATICS 1116

##### **Technical Mathematics II**

5 credit hours

A continuation of Technical Mathematics I emphasizing problem-solving skills using trigonometry, common logarithms and natural logarithms. **Prerequisite:** Mathematics 1115 with a grade of "C" or better (5 lecture hours)

#### MATHEMATICS 1120

##### **Mathematical Foundations for Diagnostic Medical Imaging Sonographers**

3 credit hours

Designed for Diagnostic Medical Imaging Sonography (DMIS) majors only. Mathematical applications and problem solving in the field of sonography are emphasized. Topics include systems of measurement, dimensional analysis, application of formulas, probability and statistics. **Prerequisite:** Consent of Diagnostic Medical Imaging Sonography Coordinator and either Mathematics 0482 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (3 lecture hours)

#### MATHEMATICS 1218 (IAI M1 904)

##### **General Education Mathematics**

3 credit hours

Designed to fulfill general education requirements and not designed as a prerequisite for any other college mathematics course. Focuses on mathematical reasoning and the solving of real-life problems, rather than routine skills. Logic and set theory are studied. Two other topics from the following list are to be studied in depth: counting techniques and probability, game theory, geometry, graph theory, statistics and mathematics of finance. The regular use of calculators and/or computers are emphasized. **Prerequisite:** Demonstrated geometry competency (level 2) and Mathematics 0482 (or college equivalent) with a grade of "C" or better, or a qualifying score on the mathematics placement test, or a qualifying ACT math score (3 lecture hours)

MATHEMATICS 1220 (IAI M1 901)

**Quantitative Literacy**

3 credit hours

Designed to fulfill general education requirements, and not designed as a prerequisite for any other college mathematics course. Provides the basic numeracy needed by a college graduate to reason about quantities, their magnitudes, and their relationships between and among other quantities. Topics include linear systems, linear programming, analysis and interpretation of graphs, logic and reasoning, descriptive statistics, the normal distribution, statistical inference, estimation and approximation.

**Prerequisite:** Demonstrated geometry competency (level 2) and Mathematics 0482 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test, or a qualifying ACT math score (3 lecture hours)

MATHEMATICS 1321

**Mathematics for Elementary School Teachers I**

4 credit hours

Designed for elementary education majors. Sets, logic and mathematical reasoning, problem solving, numeration systems and elementary number theory. Properties, algorithms and computation with the sets of whole numbers, integers, rational and real numbers. One of the requirements for receiving credit in the course is an arithmetic proficiency test that must be passed with a score of at least 80 percent correct. **Prerequisite:** Demonstrated geometry competency (level 1) and Mathematics 0482 (or college equivalent) with a grade of "C" or better, or a qualifying score on the mathematics placement test, or a qualifying ACT math score (4 lecture hours)

MATHEMATICS 1322 (IAI M1 903)

**Mathematics for Elementary School Teachers II**

3 credit hours

A continuation of Mathematics 1321. Designed for elementary education majors. Introduction to probability and statistics, measurement, geometric constructions, coordinate geometry and geometric transformations. **Prerequisite:** Mathematics 1321 (or college equivalent) with a grade of "C" or better and demonstrated geometry competency (level 1) (3 lecture hours)

MATHEMATICS 1340

**History of Mathematics**

3 credit hours

The historical development of mathematics and certain mathematical concepts from ancient times to the present, with emphasis given to basic and intermediate mathematics concepts. The focus of this mathematics-driven course will be on the problems mathematicians have faced, and the theory and methodology that were developed to resolve these problems.

**Prerequisite:** Mathematics 1218 (or college equivalent) with a grade of "C" or better (3 lecture hours)

MATHEMATICS 1428

**College Algebra with Applications**

3 credit hours

The study of algebra with emphasis on applications. This course should not be taken by students planning to enroll in calculus. Topics include, but are not limited to, matrices, functions, conic sections, polynomials, exponential and logarithmic functions, and sequences and series. **Prerequisite:** Demonstrated geometry competency (level 2) and Mathematics 0482 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (3 lecture hours)

MATHEMATICS 1431

**Precalculus I**

5 credit hours

A formal study of algebra with emphasis on concepts needed for calculus. Topics include, but are not limited to, functions, conic sections, matrices and determinants, polynomial theory, rational functions, sequences and series, logarithmic and exponential functions, combinatorial mathematics, and mathematical induction.

**Prerequisite:** Demonstrated geometry competency (level 2), and Mathematics 0482 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (5 lecture hours)

MATHEMATICS 1432

**Precalculus II: Trigonometry**

3 credit hours

A formal study of trigonometry with emphasis on concepts needed for calculus. Topics include, but are not limited to, formal definition of trigonometric functions and circular functions, radian measure, inverse trigonometric functions, graphs of trigonometric functions and inverse trigonometric functions, trigonometric identities, trigonometric equations, DeMoivre's theorem, solution of triangles, polar coordinates and applications. **Prerequisite:** Mathematics 1431 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (3 lecture hours)

MATHEMATICS 1533 (IAI M1 906)

**Finite Mathematics**

4 credit hours

Designed primarily for students planning to major in business, or the behavioral, social or biological sciences. Topics include sets, counting techniques, probability, modeling, systems of linear equations and inequalities, matrix algebra, linear programming, Markov chains and game theory. Applications are presented from business and the above sciences. **Prerequisite:** Mathematics 1428 (or college equivalent) with a grade of "C" or better or Mathematics 1431 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (4 lecture hours)

MATHEMATICS 1635 (IAI M1 902)

**Statistics**

4 credit hours

Elementary statistics: elements of descriptive and inferential statistics. Communication with data descriptions and graphs. Probability principles and their use in developing probability distributions. Binomial, normal, student-t, chi-square and F distributions. Hypothesis testing, estimation, contingency tables, linear regression and correlation, and one-way ANOVA.

**Prerequisite:** Mathematics 1428 (or college equivalent) with a grade of "C" or better or Mathematics 1431 (or college equivalent) with a grade of "C" or better or Mathematics 1533 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (4 lecture hours)

MATHEMATICS 1820

**Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected mathematics topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. The precise prerequisites will vary according to the specific mathematical selected topic. (1 to 3 lecture hours)

## MATHEMATICS 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within Mathematics to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## MATHEMATICS 2115 (IAI M1 905)

**Discrete Mathematics**

3 credit hours

An introduction to the formal study of discrete structures in mathematics. Topics include set theory, combinatorial mathematics, logic, graph theory, Boolean algebra, formal languages. **Prerequisite:** Mathematics 1428 (or college equivalent) with a grade of “C” or better or Mathematics 1431 (or college equivalent) with a grade of “C” or better, or a qualifying score on the mathematics placement test, or a qualifying ACT math score (3 lecture hours)

## MATHEMATICS 2134 (IAI M1 900-B)

**Calculus for Business and Social Sciences**

4 credit hours

Designed primarily for students planning to major in business or behavioral, social or biological sciences. The basic concepts of differential and integral calculus are taught with emphasis on a wide variety of applications. **Prerequisite:** Mathematics 1431 (or college equivalent) with a grade of “C” or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (4 lecture hours)

## MATHEMATICS 2231 (IAI M1 900-1)

**Calculus and Analytic Geometry I**

5 credit hours

Lines, circles, functions, limits, continuity, the derivative, rules for differentiation of algebraic, trigonometric, and the transcendental functions, related rates, mean value theorem, optimization and curve sketching, differentials, Newton’s method, antiderivatives and integration, and the fundamental theorem of calculus. **Prerequisite:** Mathematics 1431 (or college equivalent) with a grade of “C” or better and Mathematics 1432 (or college equivalent) with a grade of “C” or better or a qualifying score on the mathematics placement test or a qualifying ACT math score (5 lecture hours)

## MATHEMATICS 2232 (IAI M1 900-2)

**Calculus and Analytic Geometry II**

5 credit hours

Applications of the definite integral, techniques of integration, indeterminate forms, improper integrals, sequences and series, Taylor and Maclaurin expansions, power series, conics, parametric equations, polar coordinates, introduction to vectors and operations on vectors. **Prerequisite:** Mathematics 2231 with a grade of “C” or better (5 lecture hours)

## MATHEMATICS 2233 (IAI M1 900-3)

**Calculus and Analytic Geometry III**

4 credit hours

Geometry of space, cylindrical and spherical coordinate systems, vector functions with physics applications, arc length, curvature, multivariate functions, partial derivatives, multiple integrals and their applications, vector fields and their applications, line integrals and their applications, and Green’s theorem in the plane. **Prerequisite:** Mathematics 2232 with a grade of “C” or better (4 lecture hours)

## MATHEMATICS 2235

**Additional Topics in Vector Calculus**

1 credit hour

An extension of Calculus III, covering the curl of a vector field, surface integrals, Stoke’s theorem and the divergence theorem. **Prerequisite:** Mathematics 2233 with a grade of “C” or better or college equivalent (1 lecture hour)

## MATHEMATICS 2245

**Linear Algebra**

4 credit hours

Geometric vectors and vector spaces, matrices and linear transformations, inner product spaces, eigenvalues and eigenvectors, the determinant function and formal methods of mathematical proof. **Prerequisite:** Mathematics 2232 with a grade of “C” or better (4 lecture hours)

## MATHEMATICS 2270

**Differential Equations**

4 credit hours

Equations of first order with applications, homogeneous linear equations of higher order with constant coefficients, non-homogeneous linear equations of higher order with constant coefficients, Laplace transform methods, applications of higher order differential equations, linear equations with variable coefficients, power series solutions, systems of linear equations, and numerical solutions of first order equations. **Prerequisite:** Mathematics 2233 with a grade of “C” or better (4 lecture hours)

## MATHEMATICS 2300

**Mathematical Proof**

3 credit hours

This course serves as a transition to upper-level mathematics with a focus on writing proofs. Topics include: propositional logic, predicate logic, set theory, mathematical induction, number theory, relations and functions. **Prerequisite:** Mathematics 2232 with a grade of “C” or better (3 lecture hours)

## MATHEMATICS 2820

**Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected mathematical topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. The precise prerequisites will vary according to the specific mathematical selected topic. (1 to 3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

**MICROBIOLOGY**

## MICROBIOLOGY 1420 (IAI L1 903L)

**Microbiology**

4 credit hours

The study of bacteria, viruses and other microbes. Included are identification techniques, microbial genetics, immunology, growth and control, an overview of those microbes important to man, and modern molecular issues. Intended for students in health, food and environmental fields as well as biology majors. Biology 1151 is strongly recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)



## MICROBIOLOGY 1840

### ***Independent Study – Individualized***

1 to 4 credit hours

Exploration and analysis of topics within microbiology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## MOTION PICTURE/TELEVISION

### MOTION PICTURE/TELEVISION 1011

#### ***Introduction to Motion Pictures and Television***

3 credit hours

Hands-on introduction to motion pictures and television, emphasizing basic pre-production, production and post-production in animation, audio, television commercials and digital film shorts. Cameras, microphones and basic non-linear editing systems are used. **Prerequisite:** Course requires Reading Placement Test Score-Category One (1 lecture hour, 4 lab hours)

### MOTION PICTURE/TELEVISION 1020

#### ***Editing for Motion Pictures and Television***

3 credit hours

Introduction to picture and sound editing for motion pictures and television. Explores editing aesthetics, theory and techniques using a non-linear editing system. Emphasis on creation and critique of pieces for in-class use. Material for editing is provided. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

### MOTION PICTURE/TELEVISION 1022

#### ***Audio for Motion Pictures and Television***

3 credit hours

Introduction to audio production and post-production for motion pictures and television. Explores audio aesthetics, theory and techniques. Includes field and studio recording, multi-track mixing and audio editing. **Prerequisite:** Motion Picture/Television 1011 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

### MOTION PICTURE/TELEVISION 1111

#### ***Film/Video Aesthetics***

3 credit hours

An introduction to film and video as an art form, including a study of the aesthetic and production elements of the medium. Emphasizes the use of visual and audio designs in cinematic storytelling. Screenings, lectures and production projects are used. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### MOTION PICTURE/TELEVISION 1113

#### ***Film History***

3 credit hours

An international survey of the historical development of film, emphasizing a study of films and innovations in film production that have had significant influence on film as an art form. Screenings, lectures, discussions and production projects are used. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### MOTION PICTURE/TELEVISION 1120

#### ***Cinematography***

3 credit hours

An introduction to camera and lighting techniques used in film and video productions. Emphasizes aesthetics, light placement, exposure, equipment, movement and crew roles. **Prerequisite:** Motion Picture/Television 1111 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

### MOTION PICTURE/TELEVISION 1122

#### ***Screenwriting for Short Film Production***

3 credit hours

An introduction to screenwriting for motion pictures, using the short film. Explores concepts and techniques relevant to screenwriting for features or shorts, including three-act structure, characters, dialogue, action and format. Screenwriting software are used.

**Prerequisite:** Motion Picture/Television 1111 or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

### MOTION PICTURE/TELEVISION 1220

#### ***Introduction to Television Production***

3 credit hours

Introduction to multi-camera studio production and location video recording. Explores directing, techniques, operation of studio and control room, conceptualization, basic script writing, audio board operations and lighting in a studio setting. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

### MOTION PICTURE/TELEVISION 1311

#### ***Introduction to Animation***

3 credit hours

An introduction to the animated story and character creation using traditional techniques of character animation. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

### MOTION PICTURE/TELEVISION 1313

#### ***History of Animation***

3 credit hours

Study the animated film from its origins through current times focusing on animation firsts, experimental animations, short subject, propaganda and features. The student explores animation as an art form and a means of self expression. **Prerequisite:** Course requires Reading Placement Test Score-Category One (1 lecture hour, 4 lab hours)

### MOTION PICTURE/TELEVISION 1320

#### ***Intermediate Animation***

3 credit hours

A continued exploration of two-dimensional computer animation, allowing for completion of more complex animation projects and incorporation of interactive elements. **Prerequisite:** Motion Picture/Television 1311 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

### MOTION PICTURE/TELEVISION 1324

#### ***Motion Graphics and Special Effects I***

3 credit hours

Explores basic and intermediate aspects of compositing, animating and creating special effects and motion graphics with compositing software. The student learns to add effects or enhance the look of existing footage or create entire animations from inception. Practical application and use of compositing software in the commercial world. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses in the discipline cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of the discipline concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). May be taken three times for credit as long as different titles are chosen. (3 lecture hours)

## MOTION PICTURE/TELEVISION 1820

**Selected Topics**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## MOTION PICTURE/TELEVISION 1822

**Selected Topics**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (1 lecture hour, 4 lab hours)

## MOTION PICTURE/TELEVISION 1823

**Selected Topics IV**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

## MOTION PICTURE/TELEVISION 2031

**Pre-Production for Motion Picture and Television**

3 credit hours

An introduction to the duties of the motion picture or television producer in commercials, news, documentaries or narrative films. The pre-production process is emphasized, including the areas of problem solving, prioritization, team building, budgeting and scheduling. **Prerequisite:** Motion Picture/Television 1011 or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## MOTION PICTURE/TELEVISION 2131

**Film/Video Production**

3 credit hours

An intermediate study in film and video production, integrating basic skills in screenwriting, producing and directing with further work in cinematography, sound and editing. Includes pre-production, production and post-production on short digital film or video projects for portfolio or festival use. **Prerequisite:** Motion Picture/Television 1020, 1120 and 1122 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 2133

**Directing for Film/Video**

3 credit hours

An introduction to concepts and techniques used in directing narrative motion pictures. Emphasizes script analysis, pre-visualization, casting, working with actors and working with crew.

**Prerequisite:** Motion Picture/Television 1020, 1120 and 1122 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 2140

**Advanced Film/Video Production**

3 credit hours

An advanced workshop in film and video production, emphasizing further work in producing and directing. Includes pre-production and production on one longer digital film, video project for portfolio, or festival use. **Prerequisite:** Motion Picture/Television 2031, 2131 and 2133 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 2231

**Photojournalism for Television**

3 credit hours

The study and practice of techniques employed in shooting and editing television news. Emphasis is placed on proper field shooting techniques and news story editing. **Prerequisite:** Motion Picture/Television 1011 or 1020 or equivalents or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 4 lab hours)

## MOTION PICTURE/TELEVISION 2233

**Documentary Production**

3 credit hours

Students are introduced to documentary filmmaking, emphasizing the technical and aesthetic aspects of documentary production. Production projects are geared toward the development of technical proficiency in small-format documentary pre-production, production and post-production. **Prerequisite:** Motion Picture/Television 1020 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 2240

**Advanced Television Production**

3 credit hours

An advanced production course that emphasizes producing and directing techniques for television news. This class builds television production skills, introduces the fundamentals of advanced script writing, and offers more in-depth, hands-on experiences with various television equipment. **Prerequisite:** Motion Picture/Television 2231 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## MOTION PICTURE/TELEVISION 2331

**3-D Animation I**

3 credit hours

An introduction to three-dimensional computer animation, including creating and modifying simple models, lights and camera placement, creating materials and rendering. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

MOTION PICTURE/TELEVISION 2333

**Motion Graphics and Special Effects II**

3 credit hours

Explores intermediate and advanced aspects of compositing, animating and creating special effects and motion graphics with compositing software. The student learns to add effects or enhance the look of existing footage or create entire animations from inception. Practical application and use of compositing software in the commercial world. **Prerequisite:** Motion Picture/Television 1324 with a grade of "C" or better, or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

MOTION PICTURE/TELEVISION 2335

**Sound and Lighting for Animation**

3 credit hours

Covers animation basics, project planning for animation, lighting, and sound for animation. Students create a stop-motion animation that will demonstrate proficiency in these areas. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

MOTION PICTURE/TELEVISION 2340

**Three-Dimensional Animation II**

3 credit hours

Advanced concepts in three-dimensional computer animation, allowing students to complete a portfolio-level animated project. **Prerequisite:** Motion Picture/Television 2331 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

MOTION PICTURE/TELEVISION 2342

**Animation Portfolio**

3 credit hours

Capstone course of the animation program assesses student competencies through problem-solving activities of the animation industry. Students focus on skill reinforcement and portfolio development. **Prerequisite:** Graphic Design 2211, Art 2201, Motion Picture/Television 1311 and 1313, all with a grade of "C" or better or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

MOTION PICTURE/TELEVISION 2820

**Advanced Selected Topics**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

MOTION PICTURE/TELEVISION 2822

**Advanced Selected Topics**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (1 lecture hour, 4 lab hours)

MOTION PICTURE/TELEVISION 2823

**Advanced Selected Topics IV**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of the instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

MOTION PICTURE/TELEVISION 2860

**Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

MOTION PICTURE/TELEVISION 2865

**Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

MOTION PICTURE/TELEVISION 2870

**Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

MOTION PICTURE/TELEVISION 2871

**Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## MUSIC

MUSIC 1100 (IAI F1 900)

**Music Appreciation**

3 credit hours

A general introductory course designed to enhance listening enjoyment and ability. Emphasis on the elements of music, the characteristic styles of major historical periods, and the lives and works of key composers within the Western musical tradition. Course includes in-class demonstrations and attendance at outside musical events. No previous musical study required.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

MUSIC 1101

**Music Theory I**

3 credit hours

Introductory studies in music, including fundamentals, figured bass realization, analysis of small structures and music writing. Emphasis on diatonic harmony. Concurrent enrollment in Music 1107 and 1171 is required or consent of instructor. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

MUSIC 1102

**Music Theory II**

3 credit hours

Continued studies in music, including figured bass realization, analysis of small forms and music writing. Emphasis on diatonic harmony. Concurrent enrollment in Music 1108 and 1172 is required. **Prerequisite:** Music 1101 with a grade of "C" or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

MUSIC 1104 (IAI F1 904)

**Introduction to American Music**

3 credit hours

A survey of various American contributions to the world's musical culture, with an emphasis on understanding musical terminology and developing the ability to listen intelligently. No previous musical experience is required. Musical examples will include 19th century classical compositions and subsequent gospel, blues, jazz and popular music, presented within a general overview of American culture of the time. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

MUSIC 1105

**Music Literature**

3 credit hours

Introduction to the characteristic styles of major historical periods and to representative composers. Provides exposure to different performing media and musical forms. Includes in-class demonstrations, extensive listening, and attendance at outside musical events. Assumes a fundamental knowledge of the elements of music. Designed to increase the understanding of music literature through emphasis on development of musical vocabulary. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

MUSIC 1107

**Aural Skills I**

1 credit hour

The study of ear training and sight singing utilizing diatonic materials. Course content includes the recognition of intervals, scales and modes, as well as dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 1101. Concurrent enrollment in Music 1101 and 1171 is required or consent of instructor. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lab hours)

MUSIC 1108

**Aural Skills II**

1 credit hour

The continued study of eartraining and sightsinging utilizing diatonic materials. Course content includes the recognition of chords and dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 1102. Student must be registered concurrently in Music 1102 and 1172. **Prerequisite:** Music 1107 with a grade of "C" or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lab hours)

MUSIC 1115 (IAI F1 903N)

**Introduction to World Music**

3 credit hours

An introduction to the great variety of musical styles from around the world. Examines representative music of the non-Western world, with an emphasis on its function within the culture of which it is a part. No previous musical experience is required. Emphasizes an understanding of basic musical terminology and the development of improved listening skills. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

MUSIC 1120

**College of DuPage Concert Choir**

1 credit hour

The Concert Choir is a non-auditioned ensemble that sings outstanding choral works of many styles, genres and eras. Repertoire includes short and medium-length works. May be taken three times for credit. (3 lab hours)

MUSIC 1125

**College of DuPage Jazz Choir**

1 credit hour

The Jazz Choir performs vocal jazz literature representing many styles, including swing, ballad, bebop, Latin and contemporary selections. Study includes improvisation, ensemble singing and microphone technique. May be taken three times for credit.

**Prerequisite:** Audition required (3 lab hours)

MUSIC 1130

**College of DuPage Chamber Singers**

1 credit hour

The Chamber Singers specialize in vocal chamber music of all periods with particular emphasis on Renaissance madrigal and motets, music of the 20th century and the music of many cultures. Contemporary music includes major composers, avant-garde music and arrangements of folk, ethnic and popular music. May be taken three times for credit. **Prerequisite:** Audition required (3 lab hours)

MUSIC 1140

**Symphony Orchestra**

1 credit hour

Preparation and performance of standard orchestral literature. Placement audition recommended. May be taken three times for credit. **Prerequisite:** Placement audition may be requested of new members (3 lab hours)

MUSIC 1141

**Chamber Orchestra**

1 credit hour

Preparation and performance of music for small orchestra. May be taken three times for credit. **Prerequisite:** Placement audition may be requested of new members (3 lab hours)

MUSIC 1150

**DuPage Chorale**

1 credit hour

A large community chorus that performs choral concerts, often in conjunction with a professional orchestra. Repertoire includes standard choral works by Bach, Handel, Mozart and Brahms, as well as modern masterpieces by Orff, Poulenc, Stravinsky and others. Also performs shorter choral works, sacred and secular, American and international, contemporary and historical. No audition necessary. May be taken three times for credit. (3 lab hours)



MUSIC 1153

**New Classic Singers**

1 credit hour

A highly select choral ensemble, for mature, experienced singers with the desire and capability of performing the most challenging choral music of all periods. Registration only by permission of instructor. May be taken three times for credit. **Prerequisite:** Audition required (3 lab hours)

MUSIC 1170

**Class Voice**

2 credit hours

A basic introduction to the art of singing and the techniques of voice production. Breathing, phrasing and interpretation. Participation in choral performance groups strongly recommended. (2 lecture hours)

MUSIC 1171

**Class Piano I**

1 credit hour

Introductory piano for the music major with little or no prior keyboard study. Emphasizes development of basic keyboard skills, music reading, and conceptual understanding pertinent to early level study. Includes introduction to transposition, harmonization, sight reading, improvisation, and basic keyboard repertoire. **Prerequisite:** Concurrent enrollment in Music 1101 and 1107 is required or consent of instructor (2 lab hours)

MUSIC 1172

**Class Piano II**

1 credit hour

Continued group piano study for the non-keyboard music major. Emphasizes major and minor scales, arpeggios, chord inversions, seventh chords, modes, and pedaling, as well as further exploration of transposition, harmonization, sight reading, improvisation, and later elementary-level repertoire. **Prerequisite:** Music 1171 with a grade of "C" or better or equivalent and concurrent enrollment in Music 1102 and Music 1108 or consent of instructor (2 lab hours)

MUSIC 1175

**Applied Music: Non-Major**

1 credit hour

Private instrumental or vocal instruction to develop musical skills primarily for personal enrichment. Concurrent enrollment in one of the college's instrumental or vocal groups is recommended. May be taken three times for credit. (0.5 lecture hour, 0.5 lab hour)

MUSIC 1178

**Voice Performance Workshop**

1 credit hour

A workshop for the development of the student's complete vocal performance. Class focuses on interpretation, dramatic presentation and musicianship of the singer. **Prerequisite:** Music 1170 or previous college-level private voice study (2 lab hours)

MUSIC 1180

**Community Band**

1 credit hour

A community band without audition, open to wind, brass and percussion players of all ages. Performances feature marches, orchestral transcriptions, popular works for band and solos by band members. Rehearsals include concert preparation, sight reading and sectional practice in a supportive atmosphere. May be taken three times for credit. (3 lab hours)

MUSIC 1181

**DuPage Community Jazz Ensemble**

1 credit hour

DuPage Community Jazz Ensemble is a big band with expanded traditional instrumentation that rehearses weekly and performs at least three times during the academic year. Placement audition is recommended. May be taken three times for credit. (3 lab hours)

MUSIC 1185

**Applied Music: Music Major**

2 credit hours

Private instrumental or vocal instruction for students planning to continue music studies at a baccalaureate-granting institution. Concurrent enrollment in one of the college's instrumental or vocal groups is recommended. May be taken three times for credit. Faculty assessment recommended to determine if student has technical skills necessary for baccalaureate study. (1 lab hour)

MUSIC 1190

**Small Group Jazz Ensemble**

1 credit hour

An ensemble designed to address the fundamental concepts of jazz performance. Includes reading a jazz lead sheet, improvising over various forms common in jazz, and constructing small-group arrangements. May be taken three times for credit. **Prerequisite:** Placement audition recommended (3 lab hours)

MUSIC 1191

**Jazz Ensemble**

1 credit hour

A performance group with audition required. A professional music ensemble in residence at the McAninch Arts Center. May be taken three times for credit. **Prerequisite:** Audition required (0.5 lecture hour, 2.5 to 3 lab hours)

MUSIC 1192

**Percussion Ensemble**

1 credit hour

A chamber ensemble that studies and performs repertoire written specifically for the percussion family as well as transcriptions adaptable to percussion. May be taken three times for credit. **Prerequisite:** Audition required (3 lab hours)

MUSIC 1193

**Guitar Ensemble**

1 credit hour

Guitar Ensemble is a large chamber ensemble that performs 20th century American music. May be taken three times for credit. (2 lab hours)

MUSIC 1195

**Opera Workshop**

1 credit hour

Study of opera and musical theater repertoire as developed through ensemble participation. Students will develop performances of solos and ensembles from musical theater and opera works with emphasis on text and character analysis, musical and dramatic decision-making, and presentation. **Prerequisite:** College-level private voice study or instructor's permission. May be taken three times for credit. (3 lab hours)

MUSIC 1200

**Group Piano for Non-Music Majors**

1 credit hour

An introduction to the basics of piano playing, including keyboard skills, musical notation, aural awareness, music theory fundamentals, and elementary repertoire. Designed to accommodate students with little or no prior musical training. Does not count toward the AFA degree in music. (2 lab hours)

## MUSIC 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

## MUSIC 2201

**Music Theory III**

3 credit hours

Continued studies in music, including figured bass realization, analysis of larger musical forms and music writing. Emphasis on chromatic harmony. Concurrent enrollment in Music 2207 and 2271 is required. **Prerequisite:** Music 1102 with a grade of “C” or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## MUSIC 2202

**Music Theory IV**

3 credit hours

Continued studies in music, including figured bass realization, music analysis and music writing. Emphasis on post-romantic and 20th century techniques and styles. Concurrent enrollment in Music 2208 and 2272 is required. **Prerequisite:** Music 2201 with a grade of “C” or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## MUSIC 2207

**Aural Skills III**

1 credit hour

Continued study of ear training and sight singing utilizing chromatic materials. Includes recognition of melodic and harmonic chromaticism, as well as dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 2201. Concurrent enrollment in Music 2201 and 2271 is required. **Prerequisite:** Music 1108 with a grade of “C” or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lab hours)

## MUSIC 2208

**Aural Skills IV**

1 credit hour

Continued study of ear training and sight singing. Includes the recognition of chromatic and 20th century melodic and harmonic techniques, and dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 2202. Concurrent enrollment in Music 2202 and 2271 is required. **Prerequisite:** Music 2207 with a grade of “C” or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lab hours)

## MUSIC 2211

**Recording Techniques I**

3 credit hours

An introduction to studio recording techniques. Examines the history of electro-acoustic music as well as the basics of physical acoustics. The audio production console, microphones and effect processing are examined in detail. Different methods of sound synthesis are explained with an emphasis on microcomputer applications and the MIDI (Musical Instrument Digital Interface) standard. Recommended: Music 1100 or 1101. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours, 3 lab hours)

## MUSIC 2212

**Recording Techniques II**

3 credit hours

Theory and techniques of digital recording and editing with an overview of analog tape recording. Studio construction, synchronization methods, CD production and magneto-optical media are studied. Formats of digital storage are presented with an emphasis on surround sound and high definition audio. **Prerequisite:** Music 2211 with a grade of “C” or better or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

## MUSIC 2271

**Class Piano III**

1 credit hour

Continued group piano study for the non-keyboard music major. Includes major and minor scales, major and minor triads, arpeggios, chord inversions, seventh chords, secondary chords, modulation, sonata, and variation form, as well as further exploration of transposition, harmonization, sight reading, score reading, accompaniment, ensemble pieces, and early intermediate-level repertoire. **Prerequisite:** Music 1172 with a grade of “C” or better and concurrent enrollment in Music 2201 and Music 2207 or consent of instructor (2 lab hours)

## MUSIC 2272

**Class Piano IV**

1 credit hour

Continued group piano study for the non-keyboard music major. Includes major and minor scales, major and minor triads, arpeggios, chord inversions, seventh chords, secondary chords, modulation, augmented sixth chords, the Neapolitan sixth chord, modes, sonata form, variation form, and rondo form, as well as further exploration of transposition, harmonization, sight reading, score reading, accompaniment and ensemble pieces, and intermediate-level repertoire. **Prerequisite:** Music 2272 with a grade of “C” or better or equivalent and concurrent enrollment in Music 2202 and Music 2208 or consent of instructor (2 lab hours)

## MUSIC 2275

**Introduction to Piano Pedagogy**

2 credit hours

A study in the art of teaching piano, with emphasis given to the teaching of beginning and elementary level students. Examines theoretical and practical concepts related to the teaching of piano. Open to those who have no previous teaching experience, as well as those who may already be teaching piano. **Prerequisite:** At least two years previous piano study. Course requires Reading Placement Test Score-Category One (2 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

**NURSING**

## NURSING 1100

**Introduction to Health Care**

3 credit hours

Concepts and principles related to health, health care delivery and nursing. Emphasis is placed on the communication process and the impact of culture, ethnicity and spirituality on health-seeking behaviors. Concepts of interdisciplinary health teams and theoretical foundation of beginning nursing skills are introduced. Strategies for success in the nursing program are introduced. **Prerequisite:** Admission to Associate Nursing Degree program or consent of instructor (3 lecture hours)

#### NURSING 1104

##### **Introduction to Physical Assessment**

1 credit hour

Theory and skills related to history taking, physical assessment and completing a head-to-toe assessment of the adult patient. Significant assessment differences in the pediatric patient are discussed. **Prerequisite:** Admission to ADN program and Nursing 1100 with a grade of "C" or better (1 lecture hour)

#### NURSING 1105

##### **Medical-Surgical I**

7 credit hours

Principles of nursing practice, including major concepts, basic knowledge and nursing skills related to the care of patients are introduced. Pharmacology, pain control, nursing process, care of the surgical patient, and care of patients with alterations in musculoskeletal system, skin integrity, fluid and electrolytes and shock states (hypovolemic and septic) are main foci. Lecture, discussion, college laboratories and clinical practice are used as learning experiences. Clinical experiences include acute and/or non-acute settings. **Prerequisite:** Admission to ADN program, Nursing 1100 with a grade of "C" or better, Anatomy and Physiology 1552 or 1572 with a grade of "C" or better and current CNA in Illinois (4 lecture hours, 1 lab hour, 6 clinical hours)

#### NURSING 1206

##### **Medical-Surgical II**

3 credit hours

Application of the nursing process in the care of patients with diabetes mellitus, gerontological, oncological, acid-base and male reproductive disorders. Lecture, discussion, laboratory and clinical practice are used as learning experiences. Clinical experiences include acute and/or non-acute settings. **Prerequisite:** Nursing 1104 and 1105, Psychology 2237 or concurrent enrollment (1 lecture hour, .5 lab hour, 4.5 clinical hours)

#### NURSING 1207

##### **Childbearing Family**

5 credit hours

Nursing care of the woman and family during the reproductive years. Focus on the childbearing process and wellness of the family in the childbearing years. Women's health and wellness is emphasized. Adverse outcomes of pregnancy are presented. Care of the well and hospitalized child and family are discussed. Clinical experiences include acute and ambulatory care settings, as well as community-based experiences. **Prerequisite:** Nursing 1104 and 1105, Psychology 2237 or concurrent enrollment (2.5 lecture hours, .5 lab hour, 6 clinical hours)

#### NURSING 1208

##### **Neuropsychiatric Nursing**

5 credit hours

Application of the nursing process to management of psychiatric and neuropsychiatric disorders. Mental health enhancement of diverse populations. Not the role of the professional nurse as partner in a multidisciplinary team. Lecture discussion, laboratory and clinical practice are used as learning experiences. **Prerequisite:** Nursing 1104 and 1105, Psychology 2237 or concurrent enrollment (2.5 lecture hours, .5 lab hour, 6 clinical hours)

#### NURSING 1210

##### **Transition Course for LPNs to the ADN Program**

4 credit hours

Advanced concepts and skills used by the Registered Nurse when caring for patients with normal and common health problems requiring perinatal, mental health, and general medical/surgical interventions. Application of the nursing process for health promotion, health maintenance, and disease prevention. Nursing skills and techniques are developed and demonstrated in the

nursing skills laboratory. Includes intravenous therapy and medications administered through central lines. **Prerequisite:** Students must be a licensed practical nurse and provisionally admitted to the ADN program. (2.5 lecture hours, 3 lab hours)

#### NURSING 1305

##### **Pharmacotherapeutics**

2 credit hours

Concepts necessary for the pharmacological management of common health problems. Includes dosage calculations. **Prerequisite:** Nursing 1105 or consent of instructor (2 lecture hours)

#### NURSING 1328

##### **Physical Assessment of the Adult Client**

2 credit hours

Theory and skills relevant to history taking and physical assessment of adult patients. Head-to-toe assessment of the adult and special populations are included. **Prerequisite:** Practicing RN or completion of Nursing 1205 or consent of instructor (0.5 lecture hour, 3 lab hours)

#### NURSING 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours, 0.5 to 1 lab hours)

#### NURSING 2100

##### **Review of Basic Nursing Skills**

0.5 credit hour

A laboratory course for ADN students that provides for the practice of nursing skills basic to the practice of nursing. **Prerequisite:** Nursing 1206 or equivalent or consent of instructor (0.5 lab hour)

#### NURSING 2109

##### **Medical-Surgical III**

5 credit hours

Application of the nursing process in the care of clients of all age groups with cardiovascular, respiratory and endocrine disorders. Clinical experiences include acute and/or non-acute settings. Lecture, discussion and clinical practice are used as learning experiences. **Prerequisite:** Nursing 1206 and Nursing 1207 or Nursing 1208 or Nursing 1210, all with a grade of "C" or better or equivalent (2.5 lecture hours, 7.5 clinical hours)

#### NURSING 2110

##### **Contemporary Issues in Nursing**

2 credit hours

Current issues and trends in professional nursing are explored. Career opportunities for professional registered nurses are discussed. Components of professional nurse practice act are explored. **Prerequisite:** Nursing 1206 and Nursing 1207 or Nursing 1208 or Nursing 1210 for ADN Bridge Students (2 lecture hours)

#### NURSING 2201

##### **Medical-Surgical IV**

10 credit hours

Application of the nursing process in the care of patients of all age groups with burns, gastrointestinal, hepatic, pancreatic, biliary, renal, hematological, immunological, neurological and sensory (eye/ear) disorders. Integration of theory for the management of acute and chronic conditions, including concepts of emergency care, basic first aid, sexually transmitted diseases and domestic violence. Concepts of community nursing, including home care

are introduced. Clinical experiences include acute and/or non-acute settings. **Prerequisite:** Nursing 2109 (5 lecture hours, 15 clinical hours)

#### NURSING 2202

##### **Clinical Decision Making**

1 credit hour

Cumulative integration of concepts learned throughout the nursing curriculum. Emphasis will be placed on analysis of critical-thinking skills and synthesis of clinical decision making through evaluation of case studies and clinical simulations. **Prerequisite:** Nursing 2109 (1 lecture hour)

#### NURSING 2350

##### **Nursing Update**

7 credit hours

Intended for the registered nurse who has been inactive in nursing for a period of time or whose license has lapsed. Theoretical and clinical foundations of nursing practice. Nursing knowledge and skills are applied in acute and/or non-acute settings. **Prerequisite:** Eligibility for registered nurse licensure in Illinois (4 lecture hours, 9 clinical hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## OFFICE TECHNOLOGY INFORMATION

#### OFFICE TECHNOLOGY INFORMATION 1100

##### **Introduction to Computer Keyboarding**

2 credit hours

Beginning keyboarding course designed for the student with no prior or limited keyboarding experience. Includes word processing functions and basic formatting of documents. (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1110

##### **Document Formatting**

4 credit hours

Develop speed and accuracy skills using a computer. Format and produce academic, business and personal documents using word processing software in mailable format. Knowledge of word processing is recommended. Completion of Office Technology Information 1100 with a grade of "C" or better or keyboarding speed of 25 words per minute recommended. (4 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1120

##### **Speed Development Keyboarding**

2 credit hours

Development of speed, accuracy and concentration in keyboarding using a computer keyboard and diagnostic software. May be taken two times for credit. Recommended completion of Office Technology Information 1100 with a grade of "C" or better or 25 words per minute keyboarding speed. (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1130

##### **Business Correspondence**

3 credit hours

Basic instruction and practice in developing the vital employment skills of planning, writing and formatting effective business communication, including sentences, paragraphs, memos, letters, e-mail, and formal and informal reports. Includes current business spelling, punctuation and grammar skills. Keyboarding skills and word processing knowledge are recommended for successful completion of this course. (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1200

##### **MS Office for Professional Staff**

3 credit hours

Introductory course in Microsoft Office utilizing the basic functions of Windows, Internet Explorer, Word, Excel, Access, PowerPoint and Outlook. Object linking between Word and Excel and PowerPoint. Designed for the office professional person or others wishing to learn and/or upgrade software skills. May not be substituted for Computer Information Systems 1205. Keyboarding skills recommended. (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1203

##### **E-mail and Electronic Communication**

2 credit hours

Introductory course using Microsoft Outlook emphasizing efficient use of e-mail, calendar, tasks and notes. Keyboarding skill and knowledge of Windows operating system are recommended. (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1210

##### **Word Processing I**

3 credit hours

Word processing functions using a specific word processing software package, which may include insert, delete, cut, paste, find, replace, document formatting, margins, tabs, spell checker, thesaurus, grammar checker, pagination, page numbering, indent, printing, line spacing, justification, centering, view modes, multiple windows, footnotes, endnotes, headers, footers, disk maintenance, folders and document formats. Introduces merge, tables, borders, images and drawing objects. Keyboarding skills required for successful completion. (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1215

##### **Word Processing II**

2 credit hours

Advanced word processing course for personal computers. Applications may include tables, charts, graphics, borders, Clip Art, drawing features, Web-enhanced forms, fill-in forms, columns, outlines, paragraph numbering, styles, macros sort, select, shared documents, table of contents and index. **Prerequisite:** Office Technology Information 1210 with a grade of "C" or better or equivalent (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1218

##### **MS Word Desktop Publishing**

2 credit hours

Advanced word processing course designed to integrate the enhanced graphic features used in desktop publishing applications, including promotional documents, newsletters, brochures, booklets, proposals, manuals, reports and flyers. **Prerequisite:** Office Technology Information 1215 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1250

##### **Electronic Presentations for Business Professionals**

2 credit hours

Design, prepare and present effective business presentations utilizing current electronic presentation software and design techniques. Techniques for assessing a business presentation situation and delivering a successful electronic presentation. Keyboarding skills recommended for successful completion of this course. (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1300

##### **Virtual Office Assistant**

3 credit hours

Explores fundamentals of providing administrative support remotely through technology. Virtual Office Assistant (VOA) topics include telecommuting, types of virtual offices, setup and



management of a virtual office, technologies and skills needed, effective communication and job opportunities. (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1820

##### **Selected Topics in Office Technology Information**

3 credit hours

Introductory discussion, review and analysis of a selected topic in Office Technology Information, which will be specified in the subtitle of the course as listed in the *Class Schedule*. Specifically designed to address topics that necessitate a broader scope, greater depth and fuller assimilation of the course materials. May be taken three times for credit if different topics are selected each time. (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1824

##### **Selected Topics in Office Technology Information**

2 credit hours

Introductory discussion, review and analysis of a selected topic in Office Technology Information, which will be specified in the subtitle of the course as listed in the *Class Schedule*. Specifically designed to address topics that necessitate a broader scope, greater depth and fuller assimilation of the course materials. May be taken three times for credit if different topics are selected each time. (2 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 1827

##### **Selected Topics in Office Technology Information**

1 credit hour

Introductory discussion, review and analysis of a selected topic in Office Technology Information, which will be specified in the subtitle of the course as listed in the *Class Schedule*. Specifically designed to address topics that necessitate a broader scope, greater depth and fuller assimilation of the course materials. May be taken three times for credit if different topics are selected each time. (1 lecture hour)

#### OFFICE TECHNOLOGY INFORMATION 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 2305

##### **Word Processing Transcription**

3 credit hours

Development of transcription skills with word processing, emphasizing mailable copy through the refinement of grammar, punctuation, proofreading, spelling and word usage. **Prerequisite:** Office Technology Information 1110, 1130 and 1210 with a grade of “C” or better or equivalents or consent of instructor (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 2600

##### **Professional Development**

3 credit hours

Capstone course designed to develop “people skills” essential in the working environment. For students who have completed at least 60 percent of the credits required for a certificate or degree program. Topics include human relations, professional presence, team building, ethics, stress management, diversity and communication skills relating to individuals, organizations and client relations. Emphasis is placed on employment opportunities, including job search skills, advancement opportunities, networking and interviewing. Keyboarding skills recommended for successful completion of this course. (3 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 2605

##### **Professional Office Procedures**

4 credit hours

Capstone course designed with an emphasis on the professional role of the office support staff. Focus is on technological advances, decision-making and problem-solving skills. Trends in electronic mail, calendaring and scheduling are presented. Includes collecting and presenting data, utilizing software applications, maintaining financial records, developing telephone techniques, arranging travel plans, organizing conferences, performing electronic file management, applying records management methods, managing long documents, and performing legal and medical office procedures. **Prerequisite:** Office Technology Information 1110, 1130 and 1200 with a grade of “C” or better or equivalent or consent of instructor (4 lecture hours)

#### OFFICE TECHNOLOGY INFORMATION 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### OFFICE TECHNOLOGY INFORMATION 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits.

**Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### OFFICE TECHNOLOGY INFORMATION 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### OFFICE TECHNOLOGY INFORMATION 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## PARALEGAL STUDIES

### PARALEGAL STUDIES 1100

#### **Introduction to Paralegal Studies**

3 credit hours

Designed to give students a basic understanding of the various functions of the paralegal/legal assistant's role in the American legal system. Builds a foundation of basic knowledge and skills necessary for someone seeking a career in the paralegal/legal assistant field. **Prerequisite:** English 1101 with a grade of "C" or better or equivalent or a score in the writing placement test to place into English 1101 or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 1125

#### **Law Office Technology**

3 credit hours

Introduction to software applications specific to law offices. Students will learn to format pleadings and use timekeeping, billing, litigation support and case management software. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor and Computer Information Systems 1150 or Office Technology 1200 with a grade of "C" or better or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 1150

#### **Drafting Legal Documents**

3 credit hours

Introduction to purposes and uses of various legal document drafting formats. Focus is on creation of basic legal documents that meet professional standards. **Prerequisite:** English 1101 with a grade of "C" or better or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 1200

#### **Civil Litigation**

3 credit hours

Designed to give paralegal students an understanding of the litigation process commencing from the initial fact-gathering stage through post-judgment proceedings. Builds a foundation of the procedural rules governing litigation as well as practice in comprehending and drafting litigation documents. Equal emphasis will be placed on practical application and theoretical knowledge. **Prerequisite:** Paralegal Studies 1100 with a grade of "C" or better or equivalent (3 lecture hours)

### PARALEGAL STUDIES 1250

#### **Legal Ethics/Law Office Organization**

3 credit hours

Covers the rules of legal ethics and the regulation of the legal profession. Law office organization and management are discussed. Hands-on exercises using law office technology are also included. **Prerequisite:** Paralegal Studies 1100 with a grade of "C" or better or equivalent (3 lecture hours)

### PARALEGAL STUDIES 1500

#### **Intro to Legal Research and Writing**

3 credit hours

Instruction in the basic techniques and skills necessary to conduct legal research and to summarize the results of that research in appropriate written form. Students learn to use legal research tools (both online and print) and develop legal reasoning skills to craft written documents such as legal correspondence, legal memoranda, and legal briefs. Practical skills are developed through sequential written assignments that build analytical, research, and writing skills throughout the semester. **Prerequisite:**

Paralegal Studies 1100 and Paralegal Studies 1150 with a grade of "C" or better or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 1820

#### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

### PARALEGAL STUDIES 2100

#### **Advanced Legal Research and Writing**

3 credit hours

Advanced techniques and skills in legal research and legal writing. Focus on analytical skills in the examination of case law and precedent to prepare a trial court memorandum of law and portions of an appellate court brief. **Prerequisite:** Paralegal Studies 1500 with a grade of "C" or better or equivalent (3 lecture hours)

### PARALEGAL STUDIES 2150

#### **Bankruptcy Law**

3 credit hours

Introduction to bankruptcy proceedings, including the initiation of a case, schedule preparation, and debtors' and creditors' rights under Chapters 7, 11 and 13 of the U.S. Bankruptcy Code. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 2200

#### **Criminal Law and Procedure**

3 credit hours

Overview of criminal law and court procedures including criminal investigations, witness interviews, pretrial procedures, drafting court documents, trial preparation and trial assistance. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 2250

#### **Corporations and Other Business Organizations**

3 credit hours

Law of corporations and other business organizations. Includes the laws and business practices involved in sole proprietorships, general and limited partnerships, limited liability partnerships, and limited liability companies, and the legal forms that are commonly used in this practice area. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 2275

#### **Environmental Law**

3 credit hours

Introduces concepts of environmental law, including the major federal and state statutes. The roles of administrative agencies, the court system and the paralegal are all explained. Ethical issues that may arise in the practice of environmental law are also explored. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

### PARALEGAL STUDIES 2280

#### **Elder Law**

3 credit hours

Introduction to legal, moral and ethical issues in elder law resulting from the increase in the elderly population. Topics of discussion include guardianship, housing, health care, estate planning, abuse and neglect, and discrimination. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2300

**Estate Planning and Probate Law**

3 credit hours

Overview of the laws of wills, trusts and estates, and the role of the paralegal in estate planning and administration. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2350

**Family Law**

3 credit hours

Overview of the basic concepts of family law, covering marriage, divorce, property division, spousal support, child custody, visitation and tax consequences of separation and divorce. Focus on preparation of related necessary court documents. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2380

**Immigration Law**

3 credit hours

Explores the immigration and naturalization process in the U.S. Introduces visa categories and their requirements, other legal paths to immigration and bars to immigration. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2400

**Intellectual Property Law**

3 credit hours

Overview of intellectual property law. Introduces concepts of ownership of intellectual property. Includes patents, copyrights, trademarks and trade secrets, and how to prepare applications for protection of these rights. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2410

**Labor and Employment Law**

3 credit hours

Introduction to legal issues that may arise as a result of the employer-employee relationship. Topics covered include history of employment law, federal and state laws regarding wage and hour issues, collective bargaining agreements, tort and contract law, discrimination in employment and workers' compensation. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2450

**Real Property Law**

3 credit hours

Focus on principles of residential and commercial real property law. Includes information concerning recording of documents, title protection, legal descriptions, deeds, leases, mortgages and closing papers. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2500

**Tort and Insurance Law**

3 credit hours

Focuses on basic elements of tort and insurance law. Includes intent, negligence and liability without fault, as well as issues in malpractice and products liability and related insurance issues. **Prerequisite:** Paralegal Studies 1100 or equivalent or consent of instructor (3 lecture hours)

PARALEGAL STUDIES 2550

**Paralegal Practicum**

3 credit hours

Capstone course integrating the application of all course work in the paralegal program. Students work in a law office under the

supervision of an attorney and faculty advisor. Required seminars provide a forum for discussing issues related to working in the paralegal field, guidance in searching for jobs, and instruction about how to create a professional portfolio. **Prerequisite:** Paralegal Studies 1200, Paralegal Studies 1250 and Paralegal Studies 1500 or equivalent and consent of instructor. Students must have been accepted into the program pursuant to the program admission requirements or obtain written consent of the instructor before enrolling in class (3 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## PHILOSOPHY

PHILOSOPHY 1100 (IAI H4 900)

**Introduction to Philosophy**

3 credit hours

Introduces the student, through the study of knowledge, reality and human conduct, to the discipline that inquires into human nature and the world. Designed to increase the students' self-awareness and ability to think. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1110 (IAI H4 904)

**Ethics**

3 credit hours

Study of the elements of ethics, including principle ethical theories, principles, concepts and meanings, and their practical application to moral problems, dilemmas and decisions. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1112

**Biomedical Ethics**

3 credit hours

Study of the theories and principles of ethics as applied to the major areas of biomedical ethical concern: moral problems in the professional/patient relationship, in life and death, in allocation of scarce medical resources, and in medical and health care on a social scale. Current issues such as abortion, euthanasia and genetic research are considered. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1114

**Business Ethics**

3 credit hours

A study of moral issues in business and the broader issues of economic justice through a study of ethical theories and their application to actual case studies. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1116 (IAI H4 904)

**Environmental Ethics**

3 credit hours

Study of the theories and principles of ethics as applied to major areas of environmental and ecological concern: pollution, land use, animal rights, population, consumption and waste disposal. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1117 (IAI H4 901)

**Ancient Philosophy**

3 credit hours

Surveys philosophy as it developed from the classical period in Greece to the early advocates of scientific method, examining major philosophical figures in their historical contexts with an attention to how philosophy developed in response to historical,

social and political events. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1118 (IAI H4 902)

**Modern Philosophy**

3 credit hours

Surveys philosophy as it developed from the modern period to the current era, examining major philosophical figures in their historical contexts with an attention to how philosophy developed in response to historical, social and political events. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1120 (IAI H4 906)

**Logic**

3 credit hours

Introduces the student to the art and science of reasoning. Skills developed include analyzing formal and informal reasoning; identifying errors in reasoning and learning to avoid them; distinguishing different species of reasoning, including deductive and inductive styles of argumentation; and analyzing language for both logical and rhetorical force. Experience in non-remedial, college-level mathematics is strongly recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category On. (3 lecture hours)

PHILOSOPHY 1125 (IAI H4 906)

**Critical Thinking**

3 credit hours

An investigation into and application of the principles of effective thinking in order to develop and enhance one's ability to consciously direct focused mental activity to solve problems, achieve desired goals, evaluate beliefs and guide actions. **Prerequisite:** Course requires Reading Placement Test Score-Category On. (3 lecture hours)

PHILOSOPHY 1130

**Social and Political Philosophy**

3 credit hours

Philosophical inquiry into the basis of social and political authority and practices, as well as the proper relationships between individual and society and government. The nature of society, the state, rights, law and justice are considered with reference to contemporary social and political issues. Philosophy 1100 is strongly recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category On. (3 lecture hours)

PHILOSOPHY 1145 (IAI H4 905)

**Philosophy of Religion**

3 credit hours

Introduces the student to the philosophical analysis and examination of basic religious concepts and beliefs, such as the nature of Ultimate Reality (e.g., God, Tao) and arguments for the existence of the Ultimate Reality. Other topics include religious experience, reason and faith, religion and morality, immortality and others. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1150 (IAI H5 904N)

**World Religions**

3 credit hours

An introductory investigation of the main ideas from the world's major living religions, including Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, Shintoism and primal religions. Credit cannot be given for both Philosophy 1150 and Religious Studies 1150. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1160

**History and Philosophy of Education**

3 credit hours

Development of Western educational philosophy in historical context. Significant philosophical theories and their influence on modern education. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One

PHILOSOPHY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

PHILOSOPHY 2200

**Introduction to Philosophy of Science**

3 credit hours

The foundations of scientific theory and methodology approached by means of philosophical analysis of the fundamental concepts in science, such as cause, prediction, function, motion, event, inductive generalization, statistical probability and the space/time continuum. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 2250

**Introduction to Philosophy of Art**

3 credit hours

Philosophical theories of the creative process in art. Emphasis on form, significance, emotion, reality, association, and chance in the realm of aesthetic judgment and criticism. Credit cannot be given for both Philosophy 2250 and Art 2216. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

PHILOSOPHY 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline, while building upon academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an



interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of the instructor. Course requires Reading Placement Test Score-Category One

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## PHOTOGRAPHY

### PHOTOGRAPHY 1100

#### ***Fundamentals of Photography***

3 credit hours

An exploration of the fundamental principles, techniques and application of camera-based image making. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### PHOTOGRAPHY 1101

#### ***Foundations of Digital Photography***

3 credit hours

Explores the techniques and applications of acquiring, manipulating and outputting digitized photographic images utilizing Adobe Photoshop. **Prerequisite:** Photography 1100 or equivalent or concurrent enrollment in Photography 1100 or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1102

#### ***Foundations of Film Photography***

3 credit hours

Explores the techniques and applications for developing and projection printing of film camera images in the chemical darkroom. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1105

#### ***History of Photography***

3 credit hours

A visually oriented history of the development of photography in both its commercial and creative aspects. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

### PHOTOGRAPHY 1200

#### ***Intermediate Photography***

3 credit hours

An exploration of various expressive devices contributing to aesthetic interpretation of a photograph. Emphasis is on the development of the student's self-expression. **Prerequisite:** Photography 1101 or equivalent. Course requires Reading Placement Test Score-Category One (3 lecture hours)

### PHOTOGRAPHY 1201

#### ***Tools and Techniques for Digital Photography***

3 credit hours

Technical skills for digital photography are covered, including refinement of exposure, post-image capture processing, and manipulation. Issues addressing controlled output of digital images are also covered. **Prerequisite:** Photography 1200 or equivalent, or concurrent enrollment in Photography 1200 or

consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1202

#### ***Tools and Techniques for Film Photography***

3 credit hours

Technical skills for film photography are covered, including refinement of exposure, development and printing of black-and-white images. Criteria for selection of appropriate equipment and materials are also covered. **Prerequisite:** Photography 1102 or equivalent and prior or concurrent enrollment in Photography 1200. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1250

#### ***Advanced Digital Imaging***

3 credit hours

An advanced seminar in digital image-making concepts and techniques, allowing in-depth exploration of extended computer-based photo projects. **Prerequisite:** Photography 1201 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1260

#### ***Alternative Photographic Processes***

3 credit hours

Designed to meet the needs of the creative photographer. Allows experimentation with a variety of camera and darkroom options for producing photographic images. **Prerequisite:** Photography 1102 with a grade of "C" or better or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1300

#### ***Studio Photography I***

3 credit hours

Introduction to making photographs in the studio. Techniques of using light as a creative tool are explored by using tungsten light and electronic flash. **Prerequisite:** Photography 1101 and 1102 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1400

#### ***Color Photography II***

3 credit hours

An introduction to color photographic theory and aesthetics emphasizing the use of transparency and negative film materials. Color applications for digital photography are also addressed. **Prerequisite:** Photography 1101 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1450

#### ***Nature Photography***

3 credit hours

Introduces specialized techniques for photographing the natural environment. Emphasizes application of techniques in field situations. **Prerequisite:** Photography 1400 or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

### PHOTOGRAPHY 1500

#### ***Photojournalism***

3 credit hours

The application of camera, lenses, film and digital media in the production of newsworthy photographs suitable for publication in newspapers, magazines and other visual communications media. **Prerequisite:** Photography 1201 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 1820

**Selected Topics I**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Photography 1100, 1101 and 1102 or equivalents or consent of instructor. Course requires Reading Placement Test Score-Category One (2 lab hours)

## PHOTOGRAPHY 1821

**Selected Topics II**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Photography 1100, 1101 and 1102 or equivalents, or consent of instructor. Course requires Reading Placement Test Score-Category One (4 lab hours)

## PHOTOGRAPHY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** 32 semester credits in Photography and consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

## PHOTOGRAPHY 2100

**Extended Photographic Project**

3 credit hours

A continued exploration of photography as a creative medium, allowing students time to pursue individual and/or commercial photographic interests while stressing critical-thinking skills. **Prerequisite:** Photography 1201, 1202 and 1400 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 2200

**Portrait Photography**

3 credit hours

Explores all genres of portrait photography, including commercial portraits, formal and informal studio portraits, and environmental portraiture with film and digital media. **Prerequisite:** Photography 1201 or 1202 and 1300 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 2300

**Studio Photography II**

3 credit hours

Advanced concepts for solving complex visual communication problems in the studio. Emphasis is on the aesthetic aspects of creating studio photographs. **Prerequisite:** Photography 1300, 1400 and 1201 or 1202 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 2350

**Studio Photography III**

3 credit hours

Advanced concepts in studio photography with an emphasis on creative solutions to complex photographic problems. **Prerequisite:** Photography 2300 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 2375

**Studio Digital Capture**

3 credit hours

Advanced concepts in studio photography using digital camera and digital imaging techniques with an emphasis on creative solutions. **Prerequisite:** Photography 2300 with a grade of “A” or better or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 2400

**Color Photography II**

3 credit hours

Advanced concepts in color photographic theory and aesthetics using transparency film, negative film and/or digital materials. **Prerequisite:** Photography 1201 and 1400 or equivalent. Course requires Reading Placement Test Score-Category One (6 lab hours)

## PHOTOGRAPHY 2700

**Professional Photographic Practices**

3 credit hours

Capstone photography course that provides basic information for conducting business, with emphasis on the financial, legal, organizational, promotional, interpersonal and ethical strategies specific to the practice of photography as an occupation or a fine art. Development and creation of marketing materials and plans are also covered. **Prerequisite:** Student must have completed 20 semester hours of photography course credit or equivalent prior to taking this course. Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

## PHOTOGRAPHY 2750

**Portfolio Presentation**

3 credit hours

Preparation and presentation of work in portfolio form as required by most employers, galleries and transfer schools. Each student assembles a portfolio of images appropriate to their professional, educational or personal goals. **Prerequisite:** Minimum of 33 semester credits in Photography. Course requires Reading Placement Test Score-Category One (6 lab hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

**PHYSICAL EDUCATION**

## PHYSICAL EDUCATION 1101

**Aerobic Fitness Lab I**

1 credit hour

Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. (2 lab hours)

## PHYSICAL EDUCATION 1102

**Aerobic Fitness Lab II**

1 credit hour

Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. **Prerequisite:** Physical Education 1101 (2 lab hours)

PHYSICAL EDUCATION 1103

**Aerobic Fitness Lab III**

1 credit hour

Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. **Prerequisite:** Physical Education 1102 (2 lab hours)

PHYSICAL EDUCATION 1104

**Aerobic Fitness Lab IV**

1 credit hour

Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. **Prerequisite:** Physical Education 1103 (2 lab hours)

PHYSICAL EDUCATION 1106

**Aerobics I**

1 credit hour

Aerobic fitness choreographed to music. Performance of basic exercise movements, patterns and dance steps to improve cardiovascular endurance, muscular endurance, muscle tone, flexibility and rhythmic coordination. (2 lab hours)

PHYSICAL EDUCATION 1107

**Aerobics II**

1 credit hour

A continuation of Aerobics I. Further improvement in cardiovascular endurance, muscular endurance, muscle tone, flexibility and rhythmic coordination. Increasing intensity of workouts and improving performance are main goals. **Prerequisite:** Physical Education 1106 or equivalent experience (2 lab hours)

PHYSICAL EDUCATION 1108

**Sit and Stand-Chair Aerobics I**

.5 to 1 credit hour

Balance, agility, flexibility, cardiovascular and muscular endurance are all enhanced as students exercise while sitting and standing. Participants are encouraged to work at their own level. Special populations and those who desire some portion of the class in non-weight bearing positions are targeted. (1 to 2 lab hours)

PHYSICAL EDUCATION 1109

**Sit and Stand-Chair Aerobics II**

.5 to 1 credit hour

A continuation of Physical Education 1108. Exercises to increase balance, agility, flexibility, cardiovascular and muscular endurance are done while sitting and standing. More standing exercises (with or without support) are included. Participants are encouraged to work at their own level. **Prerequisite:** Physical 1108 or equivalent (1 to 2 lab hours)

PHYSICAL EDUCATION 1111

**Bench Step Aerobics I**

1 credit hour

A high-intensity, low-impact exercise program that involves stepping up and down a step platform while simultaneously performing upper body strength training movements to the accompaniment of music. (2 lab hours)

PHYSICAL EDUCATION 1112

**Bench Step Aerobics II**

1 credit hour

A continuation of Bench Step Aerobics I. Involves stepping up and down a step platform while simultaneously performing upper body

strength training movements. Higher-intensity bench step moves and combinations are taught. **Prerequisite:** Physical Education 1111 or equivalent experience (2 lab hours)

PHYSICAL EDUCATION 1113

**Power Step Aerobics**

1 credit hour

A high-intensity, low-impact exercise program designed for the advanced step participant. Designed to further challenge the cardiovascular and muscle endurance systems with a variety of high-intensity propulsion movements, combined with basic and advanced step movement combinations. **Prerequisite:** Physical Education 1112 or equivalent or bench step experience (2 lab hours)

PHYSICAL EDUCATION 1115

**Wheelchair Aerobics**

1 credit hour

Exercise class designed for those with limited mobility or confined to wheelchairs. (2 lab hours)

PHYSICAL EDUCATION 1123

**Boot Camp Fitness I**

1 credit hour

A total body conditioning class with a "back to basics" non-choreographed approach. Traditional calisthenics and exercises, current training techniques and drills are used to improve all components of fitness. (2 lab hours)

PHYSICAL EDUCATION 1124

**Boot Camp Fitness II**

1 credit hour

A continuation of Boot Camp Fitness I. Fitness workouts with a "back to basics" approach. Higher intensity exercises and workouts. **Prerequisite:** Physical Education 1123 with a grade of "S" or better or equivalent (2 lab hours)

PHYSICAL EDUCATION 1125

**BOSU Training I**

1 credit hour

A total body conditioning class that utilizes the BOSU training device to improve all components of fitness. (2 lab hours)

PHYSICAL EDUCATION 1126

**BOSU Training II**

1 credit hour

A continuation of BOSU Training I. Workouts designed to further improve fitness levels. **Prerequisite:** Physical Education 1125 with a grade of "S" or better or equivalent or consent of instructor (2 lab hours)

PHYSICAL EDUCATION 1131

**Cardio Kickboxing I**

1 credit hour

An exercise course that combines boxing, kickboxing, martial arts, aerobics and physical conditioning exercises to enhance cardiovascular and muscular endurance. All done to music. (2 lab hours)

PHYSICAL EDUCATION 1132

**Cardio Kickboxing II**

1 credit hour

An intermediate cardiovascular endurance activity that combines boxing, kickboxing, martial arts, aerobics and physical conditioning exercises to further increase skill and endurance. **Prerequisite:** Physical Education 1131 or equivalent experience (2 lab hours)

## PHYSICAL EDUCATION 1135

**Cardio Mixer I**

0.5 credit hours

A challenging aerobic workout is provided using a mix of cardio training methods such as kickboxing, step and basic aerobic dance moves. (1 lab hour)

## PHYSICAL EDUCATION 1136

**Cardio Mixer II**

0.5 credit hour

A continuation of Cardio Mixer I. **Prerequisite:** Physical Education 1135 with a grade of "S" or better or equivalent (1 lab hour)

## PHYSICAL EDUCATION 1141

**Cross Training I**

1 credit hour

A personal fitness program that aims to develop cardiovascular endurance, muscle strength, flexibility and skills using the following facilities: (1) the Aerobic Fitness Lab, (2) the Al Zamsky Natatorium, and (3) the Strength Complex. Target heart rate and training zone techniques are emphasized. (2 lab hours)

## PHYSICAL EDUCATION 1142

**Cross Training II**

1 credit hour

A personal fitness program that aims to develop cardiovascular endurance, muscle strength, flexibility and skills using the following facilities: (1) the Aerobic Fitness Lab, (2) the Al Zamsky Natatorium, and (3) the Strength Complex. Target heart rate and training zone techniques are emphasized. **Prerequisite:** Physical Education 1141 or consent of instructor (2 lab hours)

## PHYSICAL EDUCATION 1143

**Aerobic Fitness Combo I**

1 credit hour

An aerobic conditioning course that combines methods and styles of a variety of fitness courses. May include bench step, calisthenics, aerobic dance, cardio kickboxing, circuit training, body sculpting and walking/jogging. (2 lab hours)

## PHYSICAL EDUCATION 1144

**Aerobic Fitness Combo II**

1 credit hour

A continuation of Aerobic Fitness Combo I. Methods and styles of a variety of fitness classes with emphasis on a high intensity workout. **Prerequisite:** Physical Education 1143 with a grade of "S" or better or equivalent (2 lab hours)

## PHYSICAL EDUCATION 1151

**Fitness Walking I**

1 credit hour

Fitness walking, power walking and cross country walking techniques. Students assess personal fitness levels and work to improve cardiovascular fitness and set personal goals. (2 lab hours)

## PHYSICAL EDUCATION 1152

**Fitness Walking II**

1 credit hour

A continuation of Fitness Walking I. Improvement of cardiovascular fitness through increased intensity and/or distance. **Prerequisite:** Physical Education 1151 or equivalent experience (2 lab hours)

## PHYSICAL EDUCATION 1153

**Jogging I**

1 credit hour

A graduated program of jogging and running geared to each individual's fitness level and goals. Various jogging techniques, practices and safety procedures. (2 lab hours)

## PHYSICAL EDUCATION 1154

**Jogging II**

1 credit hour

A continuation of Jogging I. A graduated program of running geared to each individual's fitness level and goals. Further improvement or maintenance of cardiovascular fitness is a main goal. **Prerequisite:** Physical Education 1153 or equivalent experience (2 lab hours)

## PHYSICAL EDUCATION 1161

**Physical Fitness I**

1 credit hour

A personal fitness program that includes progressive conditioning methods. Training exercises include: stretching, core training, jogging, sprinting, weight lifting and weight training. Also included: calisthenics, isometric and isotonic exercises, plyometrics, footwork agility drills and sport-specific exercises. **Prerequisite:** Consent of instructor (2 lab hours)

## PHYSICAL EDUCATION 1162

**Physical Fitness II**

1 credit hour

An advanced personal fitness program that includes progressive conditioning methods. Training exercises include: stretching, core training, jogging, sprinting, weight lifting and weight training. Also included: calisthenics, isometric and isotonic exercises, plyometrics, footwork agility drills and sport-specific exercises. **Prerequisite:** Physical Education 1161 or consent of instructor (2 lab hours)

## PHYSICAL EDUCATION 1171

**Weight Training I**

1 credit hour

An introduction to weight training. Application of the fundamentals of strength training through the use of machine and free weights. Basic anatomy and physiology associated with weight training and safe lifting procedures. (2 lab hours)

## PHYSICAL EDUCATION 1172

**Weight Training II**

1 credit hour

Fundamentals of an advanced weight training program. Application of strength training using weight machines and free weights. Anatomy and physiology associated with weight training and safe lifting procedures, along with the design of an individualized strength training program. **Prerequisite:** Physical Education 1171 or previous weight lifting experience (2 lab hours)

## PHYSICAL EDUCATION 1181

**Spinning I**

1 credit hour

A 50-minute fitness class using "spinning" (stationary) bicycles. Cardiovascular endurance (aerobic and anaerobic) and muscular strength and endurance are developed. Music is used as a tool to motivate and inspire, as well as establish the pace, rhythm and energy level of the class. (2 lab hours)

## PHYSICAL EDUCATION 1182

**Spinning II**

1 credit hour

A 50-minute fitness class using "spinning" (stationary) bicycles. Advanced spinning techniques are implemented to further improve fitness level. Aerobic and anaerobic training are used. Music is used to motivate and inspire, as well as to establish the pace, rhythm and energy level of the class. **Prerequisite:** Physical Education 1181 or previous cycling experience (2 lab hours)



PHYSICAL EDUCATION 1183

**Step/Slide/Sculpt**

1 credit hour

Utilizing cross-training principles with the guidance of an instructor, this conditioning program uses the bench step, slide, high-low aerobics moves, resistance tubing and hand weights to improve overall fitness. Achieving improved muscular strength, endurance, cardiovascular endurance and body composition with a variety of exercise formats are the main goals. (2 lab hours)

PHYSICAL EDUCATION 1184

**Body Sculpting I**

1 credit hour

A toning and conditioning course that utilizes a variety of resistance tools to firm and strengthen the entire body. (2 lab hours)

PHYSICAL EDUCATION 1185

**Body Sculpting II**

1 credit hour

A continuation of Body Sculpting I. Workouts designed to further improve muscle endurance and tone. **Prerequisite:** Physical Education 1184 or equivalent, with a grade of "S," or equivalent experience (2 lab hours)

PHYSICAL EDUCATION 1190

**SAQSP Training**

1 credit hour

Physical conditioning theories and drills for improvement in speed, agility, quickness, strength and power (SAQSP). Applications to individual and team sports, plyometrics and other high intensity fitness activities are covered. (2 lab hours)

PHYSICAL EDUCATION 1191

**Power Lifting I**

1 credit hour

An introductory course in power lifting and training. Basic mechanics of major lifting techniques in the overall Olympic lifts. **Prerequisite:** Physical Education 1171 or previous weight lifting experience (2 lab hours)

PHYSICAL EDUCATION 1192

**Power Lifting II**

1 credit hour

A continuation of Power Lifting I. The course advances and builds on the techniques and intensity of the work performed in power lifting. **Prerequisite:** Physical Education 1191 or previous power lifting skills (2 lab hours)

PHYSICAL EDUCATION 1300

**Baseball**

1 credit hour

An introduction to the development of proper baseball fundamental skills, techniques and strategies. (2 lab hours)

PHYSICAL EDUCATION 1301

**Basketball I**

1 credit hour

Beginning basketball emphasizing offensive and defensive fundamentals through team play. The following offensive fundamental skills are included: shooting, passing, ball handling, dribbling and player spacing. The following defensive fundamental skills are also included: body position, footwork, arm movements and court position. Team play is emphasized. (2 lab hours)

PHYSICAL EDUCATION 1302

**Basketball II**

1 credit hour

Intermediate basketball emphasizing offensive and defensive fundamentals through team play. Offensive skills included are: jump shooting, movement passing, dribbling with both hands

and ball handling with faking. Defensive skills included are: body position, advanced footwork, advanced arm movements and court awareness. Team play concepts and strategies are introduced.

**Prerequisite:** Physical Education 1301 or equivalent (2 lab hours)

PHYSICAL EDUCATION 1311

**Golf I**

1 credit hour

Beginning golf. Topics include: grips, stances, chips, putts, full swings, sand shots and club selection. Irons and woods are both used to develop the rhythm and timing of the swing. Also included are terminology, etiquette, scoring, pace of play and golf safety. (2 lab hours)

PHYSICAL EDUCATION 1312

**Golf II**

1 credit hour

Intermediate golf. Progressive development in the fundamental grips, stances and strokes using irons and woods. Swing thoughts, ball flight laws, principles of contact and course management are emphasized. **Prerequisite:** Physical Education 1311 (2 lab hours)

PHYSICAL EDUCATION 1313

**Golf III**

1 credit hour

The mental aspects of golf are emphasized. Topics include methods to better golf, various thought processes, statistical analysis and time management. **Prerequisite:** Physical Education 1312 or consent of instructor (2 lab hours)

PHYSICAL EDUCATION 1321

**Pickleball I**

1 credit hour

Introduction to the skills and practice of pickleball. Serving, forehand drives, volleys, strategies, rules and scoring. (2 lab hours)

PHYSICAL EDUCATION 1322

**Pickleball II**

1 credit hour

Advanced skills, knowledge and strategies of pickleball. Emphasis on volleying, lobbing, net control, and advanced singles and doubles strategies. **Prerequisite:** Physical Education 1321 or equivalent skill (2 lab hours)

PHYSICAL EDUCATION 1331

**Racquetball I**

1 credit hour

Fundamentals of racquetball with emphasis on basic strokes, serves and the rules of the game. (2 lab hours)

PHYSICAL EDUCATION 1332

**Racquetball II**

1 credit hour

Competitive racquetball with emphasis on advanced skills, strategies and tournament play. **Prerequisite:** Physical Education 1331 (2 lab hours)

PHYSICAL EDUCATION 1334

**Racquet Sports**

2 credit hours

Tennis, badminton, pickleball and racquetball. Skills, rules, competitive strategies and basic teaching methods are covered. (1 lecture hour, 2 lab hours)

PHYSICAL EDUCATION 1335

**Selected Team Sports**

3 credit hours

Soccer, softball/baseball, volleyball and basketball. Skills, rules, competitive strategies and basic teaching methods. Prepares for

teaching, coaching or personal performance. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION 1341

**Soccer I**

1 credit hour

Introduction to the fundamental skills and techniques of kicking, heading, passing and trapping. Team play, strategy and review of the rules. (2 lab hours)

PHYSICAL EDUCATION 1342

**Soccer II**

1 credit hour

A continuation of Soccer I. Soccer II is designed for students with skill and knowledge of the sport. Emphasis placed on intermediate skills, strategies and team play. **Prerequisite:** Physical Education 1341 or equivalent or consent of instructor (2 lab hours)

PHYSICAL EDUCATION 1351

**Softball**

1 credit hour

Fundamentals of softball: history, rules, strategy, basic skills of fielding, throwing, batting, pitching, base running, and team offensive and defensive philosophies. (2 lab hours)

PHYSICAL EDUCATION 1361

**Tennis I**

1 credit hour

Beginning tennis. Topics covered include grips, stances, hitting positions, racquet-face control, forehand, backhand, serve and serve return. Basic tennis rules, scoring and etiquette are also emphasized. (2 lab hours)

PHYSICAL EDUCATION 1362

**Tennis II**

1 credit hour

Intermediate tennis. Topics covered include forehand, backhand, serve, serve return, volley, overhead shots, approach shots and dump volley skills. Instruction in singles and doubles is strategy-based and emphasizes high-percentage shot-making. Rules, etiquette and doubles communication are also included.

**Prerequisite:** Physical Education 1361 (2 lab hours)

PHYSICAL EDUCATION 1370

**Track and Field**

1 credit hour

Overview of basic techniques used in track and field events. Training principles and methodology for competitive track and field. (2 lab hours)

PHYSICAL EDUCATION 1381

**Volleyball I**

1 credit hour

Introduction to the basic rules, skills, techniques and strategies of volleyball and their application to game play. Team play and intersquad competition. (2 lab hours)

PHYSICAL EDUCATION 1382

**Volleyball II**

1 credit hour

Advanced skills, techniques and strategies of volleyball and their application to competitive game play. Designed for players with advanced skill and knowledge. Emphasis on team strategies and intersquad competition. **Prerequisite:** Physical Education 1381 or previous competitive volleyball skill (2 lab hours)

PHYSICAL EDUCATION 1400

**Aqua Step**

1 credit hour

Introduction to water fitness using bench stepping techniques for cardiovascular and muscle conditioning. (2 lab hours)

PHYSICAL EDUCATION 1401

**Swimming I**

1 credit hour

Beginning and advanced beginning swimming skills (based on American Red Cross). Water acclimation, floats, glides, kicks, front crawl, combined back stroke, breath control, rhythmic breathing, elementary back stroke, deep water comfort and safety skills. (2 lab hours)

PHYSICAL EDUCATION 1402

**Swimming II**

1 credit hour

A continuation of Swimming I. Further refinement of front crawl and elementary back stroke. Intermediate and advanced swimming strokes and skills: turns, back stroke, breast stroke, side stroke, butterfly and lap swimming for fitness. **Prerequisite:** Physical Education 1401 or equivalent skill (2 lab hours)

PHYSICAL EDUCATION 1411

**Swim Fitness I**

1 credit hour

An introductory lap swimming conditioning course emphasizing cardiovascular and muscular endurance. Various types of swimming training methods and techniques. **Prerequisite:** Swimming skills at intermediate level or permission of instructor (2 lab hours)

PHYSICAL EDUCATION 1412

**Swim Fitness II**

1 credit hour

A continuation of Swim Fitness I. This conditioning course further emphasizes cardiovascular and muscular endurance. Various types of swimming skills, techniques and training methods. **Prerequisite:** Physical Education 1411 or equivalent experience (2 lab hours)

PHYSICAL EDUCATION 1420

**Deep Water Fitness**

1 credit hour

Introduction to low-impact, deep-water aerobic conditioning, emphasizing cardiovascular fitness, strength, flexibility and endurance conditioning. This form of exercise uses the natural buoyancy of the body in the water, allowing for a decrease in the stress and strain on muscles, joints and ligaments. (2 lab hours)

PHYSICAL EDUCATION 1421

**Water Aerobics I**

1 credit hour

Introduction to low-impact aquatic aerobic conditioning, emphasizing cardiovascular fitness, strength, flexibility and endurance conditioning. (2 lab hours)

PHYSICAL EDUCATION 1422

**Water Aerobics II**

1 credit hour

A continuation of Water Aerobics I. A variety of aquatic exercises to further develop strength, flexibility and cardiovascular fitness in the water. **Prerequisite:** Physical Education 1421 or equivalent (2 lab hours)

PHYSICAL EDUCATION 1425

**Aquasize I**

0.5 credit hours

A water aerobic workout that improves cardiovascular and endurance in a challenging yet low-impact style. Swimming ability is not needed. Bench step and muscle toning exercises are included. (1 lab hour)

PHYSICAL EDUCATION 1426

**Aquasize II**

0.5 credit hours

A continuation of Aquasize I. **Prerequisite:** Physical Education 1425 with a grade of "S" or better or equivalent (1 lab hour)

PHYSICAL EDUCATION 1551

**Anatomy Tuneup**

1 credit hour

An overview of basic anatomy designed for those who are preparing for certification in fitness, yoga or massage. (2 lecture hour)

PHYSICAL EDUCATION 1554

**Healthy Eating**

1 credit hour

Basic and practical nutrition information that addresses misconceptions about the nature of food and nutrition in terms of overall wellness. Designed to provide personal appreciation, understanding and awareness of good nutrition and healthy eating. (1 lecture hour)

PHYSICAL EDUCATION 1555

**Personal Fitness Program**

1 credit hour

Assessments of components of physical fitness are covered. These components include cardiovascular fitness, muscular strength, muscular endurance, flexibility, body composition, stress and nutrition. Students then use the information ascertained from the assessments to design a personalized exercise prescription. (2 lab hours)

PHYSICAL EDUCATION 1556

**Stress Management**

1 credit hour

Exploration of the dimensions, sources and physiological responses to stress. Emphasis is on the development of skills and techniques for managing stress. (2 lab hours)

PHYSICAL EDUCATION 1557

**Women's Health Issues**

1 credit hour

Wellness topics specific to the needs, concerns and issues impacting women's health. (1 lecture hour)

PHYSICAL EDUCATION 1558

**Men's Health Issues**

1 credit hour

Wellness topics specific to the needs, concerns and issues impacting men's health. (1 lecture hour)

PHYSICAL EDUCATION 1559

**Senior Health Issues**

1 credit hour

Wellness topics specific to the needs, concerns and issues impacting senior health. (1 lecture hour)

PHYSICAL EDUCATION 1601

**Dancercise I**

1 credit hour

An aerobic fitness class choreographed to music using ballet, jazz and other dance styles. (2 lab hours)

PHYSICAL EDUCATION 1602

**Dancercise II**

1 credit hour

A continuation of Dancercise I. **Prerequisite:** Physical Education 1601 with a grade of "S" or better or equivalent (2 lab hours)

PHYSICAL EDUCATION 1603

**Zumba I**

.5 to 1 credit hour

A dance exercise class that is a fusion of Latin and International music and dance moves that creates a dynamic, exciting and effective workout. Zumba uses a simple dance style borrowing moves from such dances as the merengue, salsa, tango and flamenco. This is combined with aerobic fitness interval training and resistance training to maximize both cardiovascular fitness and body toning benefits. (1 to 2 lab hours)

PHYSICAL EDUCATION 1604

**Zumba II**

.5 to 1 credit hour

A continuation of the Latin-infused dance exercise class Zumba I. Increased level of intensity and choreography. **Prerequisite:** Physical Education 1603 or equivalent or consent of instructor (1 to 2 lab hours)

PHYSICAL EDUCATION 1611

**Ballet I**

1 credit hour

Beginning ballet skills. Introduction to the movements and dance skills of classical and contemporary ballet, including basic positions, barre work, center floor work and simple dances. (2 lab hours)

PHYSICAL EDUCATION 1612

**Ballet II**

1 credit hour

A continuation of Ballet I. Further work on the movements and dance skills of classical and contemporary ballet with emphasis on intermediate and advanced skills. **Prerequisite:** Physical Education 1611 or equivalent skill level (2 lab hours)

PHYSICAL EDUCATION 1621

**Modern Jazz I**

1 credit hour

An introduction to the movements and dance skills characteristic of jazz dance. This course provides an opportunity to condition the body in the areas of muscle and cardiovascular endurance, coordination, rhythm and balance. Class consists of isolated body movements, technique work, basic steps, step combinations and traveling movements across the floor. (2 lab hours)

PHYSICAL EDUCATION 1622

**Modern Jazz II**

1 credit hour

A continuation of the movements and dance skills of Modern Jazz I. This course gradually adds advanced dance movements and step combinations. Increased opportunity for creative exploration and performance of jazz dance. **Prerequisite:** Physical Education 1621 or equivalent experience (2 lab hours)

PHYSICAL EDUCATION 1623

**Tap Dancing I**

.5 to 1 credit hour

An introduction to tap techniques and styles, (including rhythm tap and Broadway tap, as well as historical origins and current trends. Emphasis on fundamental skills and rhythms, time steps, footwork, short combinations and styling. (1 to 2 lab hours)

## PHYSICAL EDUCATION 1624

**Modern Dance I**

1 credit hour

Introduction to body awareness, and movement in space. Technique, placement, and creative experiences are included in this course. Concepts of dance composition are studied through improvisation, vocabulary, and spatial awareness. (2 lab hours)

## PHYSICAL EDUCATION 1625

**Modern Dance II**

1 credit hour

A continuation of Modern Dance I. Further work on body awareness, and movement in space. Technique, placement, and creative experiences are included in this course. Concepts of dance composition are studied through improvisation, vocabulary, and spatial awareness. **Prerequisite:** Physical Education 1624 with a grade of "C" or better, or equivalent or consent of instructor (2 lab hours)

## PHYSICAL EDUCATION 1631

**Social Dance**

1 credit hour

Traditional and modern ballroom dancing for those who desire to learn techniques of leading and following in a social dance setting. Waltz, foxtrot, swing and polka, as well as contemporary and/or novelty dances. (2 lab hours)

## PHYSICAL EDUCATION 1641

**Recreational Dance**

1 credit hour

Fundamental techniques of folk and square dancing. Etiquette, history, culture and music appreciation for specific dances are also covered. (2 lab hours)

## PHYSICAL EDUCATION 1642

**Choreography and Composition of Dance**

2 credit hours

Explores the process of using movement to give outward expression of inner sensations and feelings. Includes techniques for releasing tensions, developing imagery, improvisation, and discussion of aesthetic concepts. **Prerequisite:** Physical Education 1611, 1621, 1623, 1624 or 1644 or equivalent, or consent of instructor (1 lecture hour, 2 lab hours)

## PHYSICAL EDUCATION 1643

**Dance Appreciation**

3 credit hours

Various aspects of dance as a concert theater art form and as entertainment with an emphasis on history, dancers, choreographers, trends, and major works of dance in the tradition of western civilization. (3 lecture hours)

## PHYSICAL EDUCATION 1644

**Dance Production and Performance**

1 to 3 credit hours

Performance experiences as a dance company and practicum experience in production areas of theater, dance, design technology, and theater management. Students audition, rehearse, and perform dance in a college dance production. May be taken three times for credit. **Prerequisite:** Consent of instructor (2 to 6 lab hours)

## PHYSICAL EDUCATION 1645

**Dance Pedagogy**

3 credit hours

Exploration of the key approaches to teaching dance. Provides practicum experience in the dance teaching process including study of instructional modes, dance learning styles, and factors affecting dance teaching and learning. (2 lecture hours, 2 lab hours)

## PHYSICAL EDUCATION 1701

**Aikido I**

1 credit hour

A Japanese martial art based on harmony and non-aggression. The learning and performance of basic skills of the activity are stressed. Knowledge and techniques with special emphasis on safety, attitude and etiquette. (2 lab hours)

## PHYSICAL EDUCATION 1702

**Aikido II**

1 credit hour

A continuation of Aikido I. A Japanese martial art based on harmony and non-aggression. The learning and performance of basic skills of the activity are stressed. Knowledge and techniques with special emphasis on safety, attitude and etiquette. **Prerequisite:** Physical Education 1701 or equivalent experience (2 lab hours)

## PHYSICAL EDUCATION 1711

**Hapkido I**

1 credit hour

Hapkido is Korean martial art that emphasizes defensive techniques and Ki (inner power) through the coordination of mind and body. Hapkido teaches blocks, kicks and strikes, but emphasizes joint-locking and pressure points. (2 lab hours)

## PHYSICAL EDUCATION 1712

**Hapkido II**

1 credit hour

A continuation of Hapkido I. Hapkido is a Korean martial art that emphasizes defensive techniques and Ki (inner power) through the coordination of mind and body. Hapkido teaches blocks, kicks and strikes, but emphasizes joint-locking and pressure points. These skills allow for effective control of an opponent. **Prerequisite:** Physical Education 1711 or equivalent (2 lab hours)

## PHYSICAL EDUCATION 1721

**Judo I**

1 credit hour

The learning performance of fundamental psycho-motor skills and techniques of judo, individually and/or as part of a team, with special emphasis on safety and sportsmanship. (2 lab hours)

## PHYSICAL EDUCATION 1722

**Judo II**

1 credit hour

A continuation of Judo I. Competition is encouraged when available, and more advanced techniques and strategies are explored. **Prerequisite:** Physical Education 1721 or equivalent or consent of instructor (2 lab hours)

## PHYSICAL EDUCATION 1731

**JuJutsu I**

1 credit hour

(Miyama Ryu) The art of Japanese Samurai from which judo and aikido were derived. JuJutsu is based on mechanical principles and is used only for defensive purposes. Benefits are improved fitness, coordination and defensive skill training. (2 lab hours)

## PHYSICAL EDUCATION 1732

**JuJutsu II**

1 credit hour

A continuation of JuJutsu I. Advanced techniques and applications. **Prerequisite:** Physical Education 1731 (2 lab hours)

## PHYSICAL EDUCATION 1741

**Karate I**

1 credit hour

An introduction to karate and the basics of the martial arts called Tang Soo Do. Stance, blocks, punches, kicks, elbow strikes,



techniques of self-defenses, and physical and mental conditioning. (2 lab hours)

#### PHYSICAL EDUCATION 1742

##### **Karate II**

1 credit hour

Continued practice of Tang Soo Do skills and techniques with emphasis on intermediate to advanced level self defense skills.

**Prerequisite:** Physical Education 1741 or equivalent (2 lab hours)

#### PHYSICAL EDUCATION 1751

##### **Personal Defense**

1 credit hour

Introduction to personal defense skills. (2 lab hours)

#### PHYSICAL EDUCATION 1761

##### **Personal Safety for Women**

1 credit hour

Emphasizes non-violent options (beyond traditional self-defense) to offset assault on women. Safety awareness, de-escalation techniques and physical techniques are included. Social conditioning that creates the "victim" profile, the differences between passive, assertive and aggressive behavior, and the most common ways women are assaulted are also included. (2 lab hours)

#### PHYSICAL EDUCATION 1771

##### **Malay Silat I**

1 credit hour

Malaysian martial art form that involves defensive principles, self-awareness, skill and sensitivity training. Encompassing both soft and hard styles, the main emphasis is on self-preservation, deception skills and keeping a low profile. Music and a form of dance are also a part of this practice. (2 lab hours)

#### PHYSICAL EDUCATION 1772

##### **Malay Silat II**

1 credit hour

A continuation of Malay Silat I. Malay Silat techniques with emphasis on intermediate to advanced level self defense skills. Also includes the philosophy of the art. **Prerequisite:** Physical Education 1771 or equivalent or consent of instructor (2 lab hours)

#### PHYSICAL EDUCATION 1774

##### **Flow Yoga I**

.5 to 1 credit hour

A subset of hatha yoga, vinyasa flow is series of poses (asanas) joined together to create a smooth flow. Each asana or movement is synchronized with the breath and each movement is connected to the next. A slower, moderate pace differentiates this from power yoga. (1 to 2 lab hours)

#### PHYSICAL EDUCATION 1775

##### **Flow Yoga II**

.5 to 1 credit hour

A continuation of Flow Yoga I, with additional sequences incorporating intermediate level skills or longer duration of poses. Continued emphasis on the connection of breath and movement.

**Prerequisite:** Physical Education 1774 or equivalent (1 to 2 lab hours)

#### PHYSICAL EDUCATION 1778

##### **Relaxation and Meditation Techniques**

.5 to 1 credit hour

A variety of relaxation and meditation techniques are used to enable students to decrease stress, improve focus and develop an everyday peace of mind in the face of today's busy lifestyle. (1 to 2 lab hours)

#### PHYSICAL EDUCATION 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses in Physical Education cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the Physical Education discipline. These courses require direct experience and focused reflection in an in-depth study of a specific Physical Education topic and/or the critical analysis of contemporary issues in physical education. They are targeted to self-selected students with an interest in the subject matter and involve active participation: The course delivery incorporates an experiential component of no less than 50 percent but not to exceed 75 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of physical education concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics etc.)

#### PHYSICAL EDUCATION 1801

##### **Bowling I**

1 credit hour

Introduction to the fundamental skills and techniques of bowling. Etiquette, scoring, game procedure and rules are covered. (2 lab hours)

#### PHYSICAL EDUCATION 1802

##### **Bowling II**

1 credit hour

Prepares students to advance from the level of a recreational bowler to competitive league bowler. Etiquette, scoring, advanced bowling technique, strategy and a review of the rules.

**Prerequisite:** Physical Education 1801 or consent of instructor (2 lab hours)

#### PHYSICAL EDUCATION 1804

##### **Bicycle Touring**

1 credit hour

Outdoor cycling for recreation and fitness. Riding skills, equipment, training techniques, nutrition and planning for bike trips and/or touring. (2 lab hours)

#### PHYSICAL EDUCATION 1805

##### **Angling**

1 credit hour

Bait, spin-casting, still-fishing techniques, equipment care, and general fishing skills and practices. (2 lab hours)

#### PHYSICAL EDUCATION 1810

##### **Canoeing**

1 credit hour

Fundamental skills of canoeing, including basic strokes, safety and canoe camping. (2 lab hours)

#### PHYSICAL EDUCATION 1811

##### **Backpacking**

1 credit hour

Basics of backpacking, including wilderness survival skills, equipment, conditioning, first aid, environmental issues and etiquette. (2 lab hours)

#### PHYSICAL EDUCATION 1813

##### **Outdoor Environment Skills**

1 credit hour

Weekend and/or weeklong outdoors trip allow for development of wilderness survival and safety skills primarily through experiences in camping. Rock climbing, backpacking, hiking and canoeing experiences, depending on trip. (2 lab hours)

## PHYSICAL EDUCATION 1820

**Selected Topics I**

.5 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (.5 to 3 lecture hours, .5 to 3 lab hours)

## PHYSICAL EDUCATION 1821

**Fencing I**

1 credit hour

Beginning fencing. Topics include the grip, the lunge, parry, riposte, body positions, footwork, and movements for advance and retreat. Rules, etiquette, fencing equipment, scoring, safety, playing courtesies and open bouts are also included. (2 lab hours)

## PHYSICAL EDUCATION 1822

**Fencing II**

1 credit hour

Builds on the skill of Fencing I by adding more advanced strategies of attack and defend. Footwork and speed drills are done with emphasis on good alignment. Time is divided equally between skill-building drills and practice bouts. Advanced strategies, rules, safety and etiquette are also emphasized. **Prerequisite:** Physical Education 1821 or equivalent (2 lab hours)

## PHYSICAL EDUCATION 1831

**Marksmanship**

1 credit hour

Marksmanship skills for police academy trainees. (2 lab hours)

## PHYSICAL EDUCATION 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within physical education to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## PHYSICAL EDUCATION 1841

**Rock Climbing**

1 credit hour

An introduction to rock climbing, emphasizing basic skills and techniques. Also included: equipment usage, care of equipment, terminology and safety. (2 lab hours)

## PHYSICAL EDUCATION 1851

**Downhill Skiing I**

1 credit hour

Downhill skiing emphasizing the development of basic skills and an understanding of safety procedures. (2 lab hours)

## PHYSICAL EDUCATION 1852

**Downhill Skiing II**

1 credit hour

Downhill skiing emphasizing the practice and development of intermediate skiing techniques. Safety procedures and practices are also stressed. **Prerequisite:** Physical Education 1851 (2 lab hours)

## PHYSICAL EDUCATION 1854

**Cross Country Skiing I**

1 credit hour

Introduction to cross country skiing skills. Skiing techniques, safety methods, winter survival techniques, care of equipment, orienteering and physical conditioning. (2 lab hours)

## PHYSICAL EDUCATION 1855

**Cross Country Skiing II**

1 credit hour

A continuation of Cross Country Skiing I skills. Advanced cross country skiing techniques, increased physical conditioning, orienteering and leadership skills. **Prerequisite:** Physical Education 1854 or equivalent (2 lab hours)

## PHYSICAL EDUCATION 1901

**Hatha Yoga I**

1 credit hour

Exploration and practice of the yogic system of mind/body awareness and fitness. Students improve muscular strength, endurance, flexibility and concentration. Release of stress and tension through yoga asanas (postures), pranayama (breath control) and meditation. (2 lab hours)

## PHYSICAL EDUCATION 1902

**Hatha Yoga II**

1 credit hour

A continuation of Hatha Yoga I. Further exploration of the yogic system of mind/body awareness and fitness. Challenging asanas that require higher levels of strength and balance, as well as increased practice of inversions, twists and backbends are covered. The chakra system of energy flow studied with the asana movements. **Prerequisite:** Physical Education 1901 or equivalent experience (2 lab hours)

## PHYSICAL EDUCATION 1904

**Gentle Yoga I**

1 credit hour

A hatha yoga class designed to be less stressful on the joints. Asanas (poses) are chosen to emphasize flexibility and relaxation. Meditation techniques and restorative poses are emphasized. (2 lab hours)

## PHYSICAL EDUCATION 1905

**Gentle Yoga II**

1 credit hour

A continuation of Gentle Yoga I. **Prerequisite:** Physical Education 1904 with a grade of "S" or better or equivalent (2 lab hours)

## PHYSICAL EDUCATION 1908

**Vinyasa Flow Yoga I**

0.5 credit hours

A type of hatha yoga that links the breath with each movement to create a seamless and easy transition from one pose to the next. (1 lab hour)

## PHYSICAL EDUCATION 1909

**Vinyasa Flow Yoga II**

0.5 credit hours

A continuation of Vinyasa Flow Yoga I. **Prerequisite:** Physical Education 1908 with a grade of "S" or better or equivalent (1 lab hour)

## PHYSICAL EDUCATION 1911

**Pilates I (Mat)**

1 credit hour

Students participate in a series of stretching and strengthening exercises based on the Joseph Pilates (pil-LAH-teez) method of body conditioning. Designed to develop muscle strength and tone. This is a mat course; machines are not used. (2 lab hours)

## PHYSICAL EDUCATION 1912

**Pilates II (Mat)**

1 credit hour

A continuation of Pilates I. Stretching and strengthening exercises based on the Joseph Pilates method of body conditioning. This

is a mat course; machines are not used. **Prerequisite:** Physical Education 1911 with a grade of "S" or better or equivalent (2 lab hours)

#### PHYSICAL EDUCATION 1921

##### **Power Yoga I**

1 credit hour

Yoga postures (asanas) are coordinated specifically to the breath and in a continuous flow to not only enhance flexibility, muscular strength and endurance, but also to improve cardiovascular fitness to a further degree than basic yoga. Release of stress through yoga postures, pranayama (breathing) and meditative techniques are also covered. (2 lab hours)

#### PHYSICAL EDUCATION 1922

##### **Power Yoga II**

1 credit hour

A continuation of Power Yoga I. Increasingly advanced yoga moves (asanas) are coordinated specifically to the breath and in a continuous flow so as to further the components of physical fitness and overall wellness. Emphasis is on a more challenging workout. Release of stress through yoga postures, pranayama (breathing) and meditative techniques. **Prerequisite:** Physical Education 1921 or equivalent experience (2 lab hours)

#### PHYSICAL EDUCATION 1931

##### **NIA Aerobics I**

1 credit hour

An introduction to neuromuscular integrative action (NIA) aerobics. A holistic exercise course that combines martial arts, yoga, dance, physical, mental, emotional and spiritual exercises, and conditioning techniques. (2 lab hours)

#### PHYSICAL EDUCATION 1932

##### **NIA Aerobics II**

1 credit hour

A continuation of NIA aerobics. Further neuromuscular integrative action (NIA) activities provide a unique workout that combines basic conditioning techniques, martial arts, yoga and dance, as well as emotional and spiritual exercises. **Prerequisite:** Physical Education 1931 or equivalent experience (2 lab hours)

#### PHYSICAL EDUCATION 2200

##### **Introduction to Physical Education**

3 credit hours

A study of the history and development of physical education and the related areas of recreation, health, safety and athletics. Special emphasis is devoted to the aims and objectives of physical education. (3 lecture hours)

#### PHYSICAL EDUCATION 2201

##### **Introduction to Coaching**

3 credit hours

Principles, practices and philosophy of sports coaching for students interested in pursuing a coaching career at the youth, interscholastic or intercollegiate level. (3 lecture hours)

#### PHYSICAL EDUCATION 2202

##### **Introduction to Athletic Programs**

3 credit hours

A study of the organizational management and administration of athletic programs at the elementary, secondary, collegiate and professional levels. Emphasis is on both philosophical and practical aspects of athletics. (3 lecture hours)

#### PHYSICAL EDUCATION 2204

##### **Theory and Practice of Baseball**

3 credit hours

An introduction to baseball skills in the classroom and on the field covering skill progressions, strategies and teaching pedagogy of all nine positions of the game. (2 lecture hours, 2 lab hours)

#### PHYSICAL EDUCATION 2205

##### **Theory and Practice of Soccer**

3 credit hours

Knowledge, progressions and skills are emphasized in this fundamental approach to soccer. Offensive progressions include: fundamental skills, offensive moves, position breakdown, team formations and special plays. Defensive progressions include: team concepts, individual concepts, man-to-man defenses, zone defenses and special defensive formations. Team play and rules of the game are emphasized. (2 lecture hours, 2 lab hours)

#### PHYSICAL EDUCATION 2206

##### **Theory and Practice of Basketball**

3 credit hours

Knowledge, progressions and skills are emphasized in this fundamental approach to basketball. Offensive progressions include: fundamental skills, offensive moves, position breakdown, team offenses and special offenses. Defensive progressions include: team concepts, individual concepts, neutralization of offensive skills, man-to-man defenses, zone defenses and special defenses. Team play and rules of the game are emphasized. (2 lecture hours, 2 lab hours)

#### PHYSICAL EDUCATION 2208

##### **Theory and Practice of Football**

3 credit hours

Analysis, instruction and demonstration of the fundamental skills in football. A study of the various systems of play and the strengths and weaknesses of each. (2 lecture hours, 2 lab hours)

#### PHYSICAL EDUCATION 2210

##### **Sports in Society**

3 credit hours

This course will provide students with a basic understanding of the theories and principles related to sociocultural issues, ethics, and morality in the sports industry. Students will be exposed to the current issues and trends that are prevalent in the sports industry. Topics may include legal issues, amateur vs. professional athletes, technology and the media, issues related to gender, race, and or sexual orientation, and the globalization of the sports industry. (3 lecture hours)

#### PHYSICAL EDUCATION 2224

##### **Theory and Practice of Track and Field**

3 credit hours

Track and field coaching and teaching theories, including skill technique for each event, season and daily practice preparation, and coaching methodology. Sprints, relays, hurdles, middle distance, shot put, discus, javelin, hammer, long jump, triple jump, high jump, pole vault and the multi-events are covered. (2 lecture hours, 2 lab hours)

#### PHYSICAL EDUCATION 2230

##### **Theory and Practice of Volleyball**

3 credit hours

Analysis, instruction, demonstration and teaching progression of the fundamentals of volleyball for the physical education major, player and/or future coach. Teaching and coaching methods, offensive and defensive systems and strategies, history and rule interpretations are included. (2 lecture hours, 2 lab hours)

#### PHYSICAL EDUCATION 2233

##### **Theory and Practice of Fastpitch Softball**

3 credit hours

An introduction to fastpitch softball skills in the classroom and on the field covering skill progressions, strategies and teaching pedagogy of all nine positions of the game. (2 lecture hours, 2 lab hours)

## PHYSICAL EDUCATION 2238

**Skin and Scuba Diving**

3 credit hours

Development of skills for floating weightless in the campus' 15-foot deep pool. Safety and survival underwater skills are achieved in classroom and pool sessions. Stresses understanding the environment, diving equipment and limitation of the individual. Successful completion of this course prepares the student for open water scuba diving. Scuba equipment is provided. **Prerequisite:** Demonstrate comfort in the water with reasonable swimming proficiency. (2 lecture hours, 2 lab hours)

## PHYSICAL EDUCATION 2239

**Skin and Scuba Diving II**

3 credit hours

A continuation of Physical Education 2238. Refinement of previously learned skills and introduction to advanced skills. **Prerequisite:** Physical Education 2238 with a grade of "S" or better and/or certification and/or consent of instructor (2 lecture hours, 2 lab hours)

## PHYSICAL EDUCATION 2240

**Introduction to Sport Psychology**

3 credit hours

An examination of the psychological reasons for people participating in various types of competitive and non-competitive sports. Application of psychological concepts to improve the athlete's personal growth and development with attention to the coach's role in accomplishing these objectives. Topics covered include: attainment of optimal arousal level, improvement of concentration, mental rehearsal for events, positive reinforcement, goal setting, relaxation techniques, and self fulfillment through non-competitive sports. (3 lecture hours)

## PHYSICAL EDUCATION 2244

**Lifeguard Training**

2 credit hours

Students are trained and prepared to fulfill the requirements of the American Red Cross Life Guard Training certification. Topics include water safety, accident prevention, assist and rescue techniques, and the job requirements of a lifeguard. American Red Cross cards will be issued to those who qualify. Must be able to pass a swimming skills test at the beginning of class. **Prerequisite:** Swimming test at the discretion of the instructor. (Swimming skills at the level of "Swimmer" of the American Red Cross program recommended) (1 lecture hour, 2 lab hours)

## PHYSICAL EDUCATION 2251

**Living with Health**

3 credit hours

Personal and community health issues. Achieving overall wellness and implementing behavior changes through knowledge of current health research. Major topics may include: stress management, anxiety and mood disorders, relationships, nutrition, physical fitness and exercise, weight management, drug use and abuse, cancer, cardiovascular diseases, AIDS and other sexually transmitted diseases. (3 lecture hours)

## PHYSICAL EDUCATION 2253

**CPR Training**

1 credit hour

Cardiopulmonary resuscitation (CPR) for adult, child and infant. Automatic external defibrillator (AED) training. (2 lab hours)

## PHYSICAL EDUCATION 2254

**First Aid and CPR**

3 credit hours

The value and need for training in emergency first aid, cardiopulmonary resuscitation and automatic external defibrillators

are emphasized with certification granted upon successful completion of the course. (3 lecture hours)

## PHYSICAL EDUCATION 2255

**Care and Prevention of Athletic Injuries**

3 credit hours

Introduction to the responsibilities and duties of an athletic trainer, including basic fundamentals and techniques, injury care and prevention, injury recognition, emergency care, supportive strapping and wrapping techniques, ordering of supplies, budgeting and the general operation of a training room facility. (3 lecture hours)

## PHYSICAL EDUCATION 2256

**Applied Procedures and Techniques**

3 credit hours

Training room techniques and procedures. Applications to both hands-on practice and competitive field experience under the supervision of certified athletic trainers. (3 lecture hours)

## PHYSICAL EDUCATION 2257

**Athletic Taping Techniques**

1 credit hour

Study and practice of supportive strapping, wrapping and taping techniques. Emphasis on proper techniques and appropriate injury situations requiring added support. (2 lab hours)

## PHYSICAL EDUCATION 2260

**The Science of Physical Fitness**

2 credit hours

An introduction to basic exercise physiology principles as applied in the training and development of personal and professional fitness programs. Major topics include: muscle cell physiology, energy metabolism during exercise, nutrition for fitness, cardiovascular training and muscular conditioning. (2 lecture hours)

## PHYSICAL EDUCATION 2261

**Applied Kinesiology**

3 credit hours

Functional anatomy and physiology essential to those in fitness and physical education professions. Special emphasis on the musculoskeletal system. Includes basic biomechanics and movement analysis for exercise and sport applications. (3 lecture hours)

## PHYSICAL EDUCATION 2262

**Fitness Instructor Training I – Group**

2 credit hours

Application of exercise and teaching principles for leading group exercise classes. Practical experience in leading a variety of fitness classes in preparation for teaching and/or certification. (1 lecture hour, 2 lab hours)

## PHYSICAL EDUCATION 2263

**Fitness Instructor Training II – Personal**

2 credit hours

Application of exercise and teaching principles for personal fitness instruction. Practical experience in leading a variety of exercise methods and techniques in preparation for teaching and/or certification. (1 lecture hour, 2 lab hours)

## PHYSICAL EDUCATION 2270

**Introduction to Sports Marketing**

3 credit hours

This course covers the basic theories and principles of sports marketing and communications from sports and recreational facilities to professional and amateur sports. Reveals how to study and understand the market, develop a marketing strategy, clarify a



sports organization's needs and goals, and implement marketing plans through sponsorship, fundraising, licensing, pricing, promotions, advertising, broadcasting and sales. (3 lecture hours)

#### PHYSICAL EDUCATION 2800

##### **Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses in physical education cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the Physical Education discipline, while building upon academic knowledge and skills acquired in introductory-level Physical Education classes. These courses require direct experience and focused reflection in an in-depth study of a specific physical education topic and/or the critical analysis of contemporary issues in physical education. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 50 percent but not to exceed 75 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex physical education concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in Physical Education or consent of instructor

#### PHYSICAL EDUCATION 2840

##### **Experimental/Pilot Class**

1 to 6 credit hours

Exploration and analysis of topics within Physical Education. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (6 lecture hours, 12 lab hours)

For additional information, please contact the Physical Education Office at (630) 942-2364 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## PHYSICAL THERAPIST ASSISTANT

#### PHYSICAL THERAPIST ASSISTANT 1100

##### **Introduction to Physical Therapy**

2 credit hours

Overview of the physical therapy profession within the health care delivery system from a historical, philosophical and organizational context. Explores the physical therapy frame of reference in various practice and treatment areas. Personal and professional qualities of the health care provider, professional ethics and the psychological aspects of treatment are discussed. **Prerequisite:** Admission to the Physical Therapist Assistant program or consent of instructor (2 lecture hours)

#### PHYSICAL THERAPIST ASSISTANT 1107

##### **PTA Pathophysiology**

2 credit hours

Pathophysiology includes the study of diseases and disorders commonly seen in physical therapy practice. An overview of etiology, manifestations and treatment of significant diseases with emphasis on musculoskeletal, nervous and cardiopulmonary systems. **Prerequisite:** Admission to PTA program or consent of instructor (2 lecture hours)

#### PHYSICAL THERAPIST ASSISTANT 1109

##### **Basic Health Care Skills and Principles of Soft Tissue Techniques**

3 credit hours

Instruction in basic health care skills used in physical therapy, including practice in wheelchair management, body mechanics,

transfers, gait training and first aid skills. Study and practical application of basic massage techniques and their variations. Includes identification of anatomical structures, therapeutic intervention using soft tissue manipulation, stretches, joint range of motion, postural drainage and chest physical therapy techniques. **Prerequisite:** Admission to PTA program or consent of instructor (2 lecture hours, 2 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 1110

##### **PTA Documentation**

1.5 credit hours

Observation, interviewing and medical note-writing techniques. Subject matter to include various assessment, treatment plan, progress note and discharge summary formats. Emphasis on writing style, reimbursement guidelines and legal aspects of note writing. **Prerequisite:** Admission to PTA program or consent of instructor (1.5 lecture hours)

#### PHYSICAL THERAPIST ASSISTANT 1111

##### **PTA Kinesiology I**

2 credit hours

The study of human movement utilizing principles of biomechanics, musculoskeletal anatomy and neuromuscular physiology. Analysis of human movement performed through the application of biomechanical principles, including but not limited to force, resistance, osteokinematics, arthrokinematics and planes of motion. Emphasis on basic biomechanics, the articular system, the skeletal system, the muscular system, the nervous system, the shoulder girdle and the shoulder joint. **Prerequisite:** Admission to PTA program or consent of instructor (2 lecture hours)

#### PHYSICAL THERAPIST ASSISTANT 1112

##### **PTA Kinesiology II**

3 credit hours

Continuation of application of biomechanical principles and analysis of human movement. Explores in detail the relationship of these principles to the elbow, forearm, wrist, hand, lower extremity, head, neck, trunk, and to gait and posture. **Prerequisite:** Physical Therapist Assistant 1111 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 1114

##### **PTA Total Patient Care**

1 credit hour

Discussion of topics related to the physical therapy profession, including psycho-emotional aspects of caring for the patient, psycho-social problems of the ill and disabled, aging, medical ethics and professional ethics. **Prerequisite:** Admission to PTA program or consent of instructor (1 lecture hour)

#### PHYSICAL THERAPIST ASSISTANT 1201

##### **PTA Therapeutic Modalities**

4 credit hours

Therapeutic intervention utilizing physical agents, including heat, cold, light, sound, water, electricity and electromagnetic waves in the treatment of acute and chronic diseases and injuries. Introduction to wound care, burn care and infection control. Emphasis on the application and the safe appropriate use of treatment modalities. **Prerequisite:** Physical Therapist Assistant 1109 with a grade of "C" or better or consent of instructor (2 lecture hours, 4 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 1202

##### **PTA Therapeutic Exercise**

2 credit hours

Continuation of therapeutic exercise for all ages, including stretching exercise. Emphasis is on the development of exercise programs for correction of postural dysfunction and gait abnormalities, including the use of orthotic devices relevant to mobility and daily function. Focus on therapeutic intervention for the patient following an

amputation, including the use of prosthetic devices relevant to mobility and daily function. Assessment and intervention of Activities of Daily Living (ADL) issues are also emphasized. **Prerequisite:** Physical Therapist Assistant 1211 with a grade of "C" or better or consent of instructor (1 lecture hour, 2 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 1211

##### **PTA Therapeutic Assessment and Basic Intervention**

4 credit hours

Therapeutic exercise, including basic principles of exercise and basic evaluation skills pertaining to joint and muscle function. Emphasis is on the development of exercise programs for correction of specific conditions, muscle weakness and joint limitations as well as goniometric and manual muscle testing assessment.

**Prerequisite:** Physical Therapist Assistant 1109 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 1221

##### **PTA Clinical Practicum I**

1 credit hour

Provides initial opportunity to implement a variety of physical therapy treatment plans. Students will be oriented to the roles and responsibilities of the physical therapist assistant (PTA) and will have their initial supervised contact with clients having physical dysfunction. **Prerequisite:** Physical Therapist Assistant 1201 with a grade of "C" or better or consent of instructor (.5 lecture hour, 4.5 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### PHYSICAL THERAPIST ASSISTANT 2203

##### **PTA Neuromuscular and Cardiopulmonary Rehabilitation**

3 credit hours

Continuation of physical therapy techniques used in the assessment and intervention of patients with cerebrovascular accident (CVA), spinal cord injury (SCI), traumatic brain injury (TBI) and other neurological disorders. Also includes rehabilitation of patients with cardiovascular and pulmonary disorders. **Prerequisite:** Physical Therapist Assistant 1202 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 2204

##### **PTA Special Patient Populations**

2 credit hours

Overview of physical therapy for special patient populations, including but not limited to pediatrics, geriatrics, bariatrics, lymphedema, women's health and incontinence. **Prerequisite:** Physical Therapist Assistant 2203 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours)

#### PHYSICAL THERAPIST ASSISTANT 2212

##### **PTA Advanced Orthopedic Rehabilitation**

4 credit hours

Continuation of the study of therapeutic exercise. Focus is on principles and application of progressive-resistive exercise, upper and lower extremity joint mobilization and exercise progression. Emphasis is on orthopedic disorders and appropriate therapeutic intervention. **Prerequisite:** Physical Therapist Assistant 1202 with a grade of "C" or better or equivalent or consent of instructor (2 lecture hours, 4 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 2214

##### **PTA Professional Issues**

1 credit hour

Discussion of topics related to the physical therapy (PT) profession, including Medicare Prospective Payment System (PPS), pharmacology, cultural diversity, research, licensure, and other legal and ethical aspects that influence current Physical Therapist Assistant practice. Discussion also focuses on current trends in physical therapy practice. **Prerequisite:** Physical Therapist Assistant 2203 with a grade of "C" or better or equivalent or consent of instructor (1 lecture hour)

#### PHYSICAL THERAPIST ASSISTANT 2222

##### **PTA Clinical Practicum II**

1.5 credit hours

Provides initial opportunity to implement a variety of physical therapy treatment plans. Students will be oriented to the roles and responsibilities of the physical therapist assistant (PTA) and will have their initial supervised contact with clients having physical dysfunction. This course can only be taken on a pass/fail basis.

**Prerequisite:** Physical Therapist Assistant 1221 with a grade of "S" or better or consent of instructor (.5 lecture hour, 8 clinical hours)

#### PHYSICAL THERAPIST ASSISTANT 2223

##### **PTA Clinical Practicum III**

2.5 credit hours

Clinical experience that provides students with opportunities to further improve their intervention skills, reinforce their intervention techniques, and reinforce concepts of proper body mechanics, therapist safety and client safety. Further improve communication skills, including documentation of goals, intervention plans and patient progress. This course can only be taken on a pass/fail basis. **Prerequisite:** Physical Therapist Assistant 2222 with a grade of "S" or consent of instructor (.5 lecture hour, 16 lab hours)

#### PHYSICAL THERAPIST ASSISTANT 2224

##### **PTA Clinical Practicum IV**

3 credit hours

Conclusion of supervised clinical experiences with opportunity to build upon knowledge and skills developed in prior clinical experiences. Focus is on entry-level competencies in providing comprehensive and consecutive interventions within the larger framework of departmental operations. This course can only be taken on a pass/fail basis. **Prerequisite:** Physical Therapist Assistant 2223 with a grade of "S" or consent of instructor (.5 lecture hour, 20 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## PHYSICS

### **PHYSICS 1100 (IAI P1 900L)**

Physics

4 credit hours

Conceptual study of laws of motion, forces, energy and momentum, properties and states of matter, heat and thermodynamics, wave motion, sound, light, electricity and magnetism, and atomic and nuclear physics. **Prerequisite:** Mathematics 0481 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

PHYSICS 1150

**Physics and Society**

3 credit hours

Study of applications of physics to society. This may specifically include the study of energy, thermodynamics, electrical power generation, electric circuits, nuclear power, nuclear weapons and modern particle physics. **Prerequisite:** Mathematics 0481 with a grade of "C" or better or a qualifying score on the mathematics placement test (3 lecture hours)

PHYSICS 1161

**Technical Physics I**

4 credit hours

Conceptual and algebra-based study of classical mechanics, electricity and magnetism, including laws of motions, forces, momentum, work, energy, rotational motion, electric charges, electric currents, circuits, magnetism, magnetic effects and electromagnetic induction. Emphasis is on physical concepts as applied to industrial/technical fields through completion of team projects. **Prerequisite:** Mathematics 0481 with a grade of "C" or better or equivalent and concurrent enrollment in Mathematics 1115 or 1432 or equivalent (3 lecture hours, 3 lab hours)

PHYSICS 1162

**Technical Physics II**

4 credit hours

Conceptual and algebra-based study of matter properties, temperature and heat, ideal gases, wave motion, sound, light, AC electricity, and select topics of modern physics. Emphasis is on physical concepts as applied to industrial/technical fields in a series of team projects. **Prerequisite:** Physics 1161 with a grade of "C" or better or equivalent (3 lecture hours, 3 lab hours)

PHYSICS 1201 (IAI P1 900L)

**General Physics I**

5 credit hours

Algebra and trigonometry-based study of classical linear and rotational kinematics and dynamics, including work, energy, impulse, momentum, and collisions, fluids, heat, thermodynamics, periodic motion, and wave motion. Course is intended for students who have taken high school physics and have experience with right-angle trigonometry. (Students without high school physics are encouraged to complete Physics 1100 before enrolling in this course.) **Prerequisite:** Mathematics 1115 (or college equivalent) or Mathematics 1431 (or college equivalent) with a grade of "C" or better or a qualifying score on the mathematics placement test or a qualifying ACT math score. Course requires Reading Placement Test Score-Category One (4 lecture hours, 2 lab hours)

PHYSICS 1202

**General Physics II**

5 credit hours

Algebra-based study of electrostatics, electric fields, Gauss' law, capacitance, current, resistance, magnetic forces and fields, electromagnetic induction, DC and AC circuits, electromagnetic waves, mirrors, lenses, optics, and modern physics. Note: The standard prerequisite is Physics 1201. While Physics 2111 may serve as an alternative prerequisite for taking this COD course, students are advised to check with their intended transfer institution(s) to ensure that the thermodynamics covered in Physics 1201 is not a requirement prior to embracing this alternative. **Prerequisite:** Physics 1201 or Physics 2111 with a grade of "C" or better (4 lecture hours, 2 lab hours)

PHYSICS 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the

discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

PHYSICS 1820

**Selected Topics**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

PHYSICS 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

PHYSICS 2111 (IAI P2 900L)

**Physics for Science and Engineering I**

5 credit hours

Calculus-based study of classical linear and rotational kinematics and dynamics, including work, energy, impulse, momentum, collisions, gravitation, periodic motion, and wave motion. (Students without a strong high school physics background are encouraged to complete Physics 1201 before enrolling in this course.)

**Prerequisite:** Mathematics 2231 or college equivalent with a grade of "C" or better (4 lecture hours, 3 lab hours)

PHYSICS 2112

**Physics for Science and Engineering II**

5 credit hours

Calculus-based study of electrostatics, electric fields, Gauss' Law, capacitance, current, resistance, magnetic forces and fields, electromagnetic induction, AC circuits, Maxwell's equations, electromagnetic waves, geometric optics and physical optics.

**Prerequisite:** Physics 2111 with a "C" or better (4 lecture hours, 3 lab hours)

PHYSICS 2115

**Physics for Science and Engineering III**

4 credit hours

Calculus-based study of fluids, thermodynamics, special relativity, introductory quantum mechanics, nuclear physics and particle physics. **Prerequisite:** Physics 2112 with a grade of "C" or better (3 lecture hours, 3 lab hours)

PHYSICS 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific topic

and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex geographic concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor

#### PHYSICS 2820

##### **Advanced Selected Topics**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 to 3 lecture hours)

#### PHYSICS 2827

##### **Advanced Selected Topics VII**

1 credit hour

Advanced exploration and analysis of selected topics with a specific theme indicated by the course title listed in the college course schedule. May be taken three times for credit as long as different topics are selected. At least one course in Physics or consent of instructor (1 lecture hour)

#### PHYSICS 2840

##### **Experimental/Pilot Class**

1 to 6 credit hours

Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (6 lecture hours, 12 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## POLITICAL SCIENCE

#### POLITICAL SCIENCE 1100 (IAI S5 903)

##### **Introduction to Political Science**

3 credit hours

An introduction to the study of political behavior, processes and institutions. Course includes a discussion and comparison of political ideas, theories, systems and policies. Focus on analysis of political problems on a national and global level, as well as a definition of central concepts. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### POLITICAL SCIENCE 1101 (IAI S5 900)

##### **American Politics**

3 credit hours

Analysis of the dynamics and processes of the evolving American constitutional democracy: its origins, structure and problems. Areas of study include an in-depth discussion of the U.S. Constitution, federalism, civil liberties, interest groups, political parties, campaigns, elections, mass media, Congress, the courts and the presidency. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### POLITICAL SCIENCE 1160

##### **Modern Political Ideologies**

3 credit hours

Introduction to major political philosophies and ideologies from John Locke to present-day political ideas. Topics may include Communism, Fascism, Liberalism, Conservatism, Utilitarianism, Capitalism, post-modernism, social contract theory and Libertarianism. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### POLITICAL SCIENCE 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). The experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

#### POLITICAL SCIENCE 1820

##### **Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

#### POLITICAL SCIENCE 1821

##### **Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

#### POLITICAL SCIENCE 1822

##### **Selected Topics III**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour, 4 lab hours)

#### POLITICAL SCIENCE 1823

##### **Selected Topics IV**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (6 lab hours)

#### POLITICAL SCIENCE 1824

##### **Selected Topics V**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours)



POLITICAL SCIENCE 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

POLITICAL SCIENCE 2203 (IAI S5 905)

**Comparative Politics**

3 credit hours

Introduction to the comparative study of developed and developing political systems. The politics and governments of selected countries are analyzed in their appropriate historical, social, economic and political settings. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

POLITICAL SCIENCE 2220 (IAI S5 904N)

**World Politics**

3 credit hours

Introduction to international relations and global politics. Discussion of different ideological perspectives such as Idealism and Realism, structure and function of international organizations, foreign policy and the role of diplomacy. Analysis of causes and consequences of war, poverty, international trade, international law, treaties, increase in population and global environmental destruction. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

POLITICAL SCIENCE 2221

**Politics of the Middle East**

3 credit hours

Acquaints students with one of the key contemporary political problems in today's international arena. Few regions of the world provoke more interest, controversy or international crises than the Middle East. This course surveys the geography, history, politics and social development of this dynamic and volatile region for those with no previous knowledge or study of the Middle East. **Prerequisite:** Political Science 1100 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

POLITICAL SCIENCE 2230

**Introduction to Peace and Conflict Studies**

3 credit hours

An overview of a broad spectrum of factors that prevent a peaceful solution to human conflicts. Define and analyze different conceptions of peace, explore various forms of violence and examine its conditions. Evaluate strategies that lead to peaceful methods of conflict resolution and management of existing conflict. (3 lecture hours)

POLITICAL SCIENCE 2240

**Introduction to U.S. Foreign Policy**

3 credit hours

An overview of U.S. foreign policy with emphasis on the events of the past six decades. The course provides a theoretical and historical overview of the major perspectives of the field as well as an evaluation of the actors and institutions that formulate foreign policy. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

POLITICAL SCIENCE 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for

the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor

POLITICAL SCIENCE 2820

**Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

POLITICAL SCIENCE 2821

**Advanced Selected Topics II**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (2 lecture hours, 2 lab hours)

POLITICAL SCIENCE 2822

**Advanced Selected Topics III**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 lecture hour, 4 lab hours)

POLITICAL SCIENCE 2823

**Advanced Selected Topics IV**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (6 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## PRACTICAL NURSING

PRACTICAL NURSING 1101

**Practical Nursing Concepts and Skills I**

10 credit hours

Fundamental concepts and skills used by the practical nurse when caring for adult and elderly patients with normal and common health problems requiring medical/surgical interventions in a variety of health care settings. Application of the nursing process for health promotion and maintenance, disease prevention and supporting a dignified death. Skills and techniques developed and demonstrated in nursing skills laboratory and clinical setting.

Includes the administration of medications and intravenous therapy in the clinical setting. **Prerequisite:** Admission into the Practical Nursing program and Psychology 2237 with a grade of "C" or better or equivalent (4 lecture hours, 4 lab hours)

#### PRACTICAL NURSING 1102

##### **Pharmacology for the Practical Nurse**

4 credit hours

Concepts and skills related to the role of the practical nurse in the administration of medications and intravenous therapy to patients across the life span. Includes content about medications necessary for safe and effective patient care. Emphasis is placed on special considerations for the geriatric patient. **Prerequisite:** Admission into the Practical Nursing Program and Psychology 2237 with a grade of "C" or better or equivalent (3 lecture hours, 2 lab hours)

#### PRACTICAL NURSING 1103

##### **Practical Nursing Concepts and Skills II**

5 credit hours

Concepts and skills required of the practical nurse when caring for adults and elderly patients requiring mental health interventions and for the childbearing family and children in a variety of health care settings. Application of the nursing process for health promotion and maintenance, and disease prevention. Skills and techniques developed and demonstrated in the clinical setting. Includes administration of medications and intravenous therapy. **Prerequisite:** Practical Nursing 1101 and 1102 with a grade of "C" or better or equivalent (3 lecture hours, 6 clinical hours)

#### PRACTICAL NURSING 1104

##### **Practical Nursing Concepts and Skills III**

7 credit hours

Advanced concepts and skills involved in the role of the practical nurse when caring for patients across the lifespan with normal and common health care problems in a variety of health care settings. Skills and techniques developed and demonstrated in the nursing skills laboratory and clinical setting. Includes the administration of medications and intravenous therapy in the clinical setting. **Prerequisite:** Practical Nursing 1103 with a grade of "C" or better or equivalent and concurrent enrollment in Practical Nursing 1105 and 1106 (4 lecture hours, 2 lab hours, 6 clinical hours)

#### PRACTICAL NURSING 1105

##### **Practical Nurse Role Transition**

5 credit hours

Integration of all concepts and skills taught in the previous nursing courses looking at more complex patient situations and nursing care. Skills and techniques are perfected in the clinical setting. Includes the administration of medications and intravenous therapy. Issues related to transition from student to practicing nurse. Includes a review for National Council Licensure Examination - Practical Nurse (NCLEX-PN) and strategies for success. **Prerequisite:** Practical Nursing 1103 with a grade of "C" or better or equivalent and concurrent enrollment in Practical Nursing 1104 and 1106 (2 lecture hours, 9 clinical hours)

#### PRACTICAL NURSING 1106

##### **Issues and Trends in Practical Nursing**

3 credit hours

Current nursing and health care issues and trends affecting Practical Nursing. Covers ethics and legal aspects of Practical Nursing practice. Comprehensive review of the Illinois Nurse Practice Act. **Prerequisite:** Practical Nursing 1103 with a grade of "C" or better or equivalent and concurrent enrollment in Practical Nursing 1104 and 1105 (3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## PSYCHOLOGY

#### PSYCHOLOGY 0485

##### **Personal Biofeedback and Stress Management**

1 credit hour

An introduction to behavioral, cognitive and physiological correlates of stress and stress management, including an individualized practicum in thermal and surface electromyography biofeedback. This course fulfills BCIA certification requirements for 10 hours of personal biofeedback training, as well as providing for internships in direct clinical biofeedback with clients/patients. (0.5 lecture hour, 1 lab hour)

#### PSYCHOLOGY 1100 (IAI S6 900)

##### **General Psychology**

3 credit hours

A survey of the study of behavior and mental processes with emphasis on the scientific nature of contemporary psychological investigation. Topics discussed included research methods, the biology of behavior, sensation and perception, stress and adjustment, learning, memory, cognition, motivation, emotion, life-span development of behavior, personality, abnormal behavior and its therapies, social behavior and individual differences.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### PSYCHOLOGY 1140

##### **Human Sexuality**

3 credit hours

An examination of human sexuality from a variety of psychosocial perspectives, with an emphasis on biological, psychological and cultural aspects. **Prerequisite:** Psychology 1100 (3 lecture hours)

#### PSYCHOLOGY 1150

##### **Adjustment**

3 credit hours

A survey of the theories of personality as they relate to dealing effectively with the adjustive demands of everyday life. The course includes coverage of the dynamics of stress and coping, interpersonal relationships, including ethnic, racial and gender issues, and approaches to personal growth. Not IAI approved for psychology major credit. (3 lecture hours)

#### PSYCHOLOGY 1180

##### **Introduction to Behavioral Research**

4 credit hours

An introduction to descriptive and experimental designs used in the study of behavior. Course content emphasizes methodology, procedures, ethics in research, psychological measurement, basic data analysis and research report writing. **Prerequisite:** Psychology 1100 (3 lecture hours, 2 lab hours)

#### PSYCHOLOGY 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

PSYCHOLOGY 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

PSYCHOLOGY 2205

**Physiological Psychology**

3 credit hours

Examines physiology as it relates to behavior, including the influence of the nervous system, the endocrine system, genetics and the body's chemistry on sensation, motivation, learning and other behavioral processes. **Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2210

**Industrial and Organizational Psychology**

3 credit hours

Introduces the student to the wide variety of psychological applications in business and industry. Topics covered include research methods, personnel psychology, performance evaluation, motivation and job satisfaction, organizational behavior, leadership and management, human factors and consumer psychology.

**Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2220

**Educational Psychology**

3 credit hours

Coverage of the application of learning principles and psychological theories to the process of education. Topics include physical growth and development, learning theories, cognitive theories, concept formation, intelligence, creativity, multicultural education, motivation, assessment, evaluation, and the impact of culture on learning styles. May include observational experiences.

**Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2230 (IAI S6 903)

**Developmental Psychology: Childhood**

3 credit hours

Developmental study of the child from conception through adolescence with emphasis on the influence of genetic, physical, cognitive, emotional and social factors. **Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2233 (IAI S6 904)

**Developmental Psychology: Adolescence**

3 credit hours

The integration of theory and research as they apply to the basic concepts and themes in adolescent development. Includes discussion of the physical, emotional, social, familial, moral, educational and cultural aspects of adolescent development and behavior. **Prerequisite:** Psychology 1100 or equivalent (3 lecture hours)

PSYCHOLOGY 2235 (IAI S6 905)

**Developmental Psychology: Adulthood**

3 credit hours

Study of development of the normal adult from young through late adulthood concluding with the topics of death and dying. Includes the discussion of major theories of life span and adult development, as well as the development of self; cognitive, social and career development; physical health and aging; and coping, adaptation and mental health. **Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2237 (IAI S6 902)

**Developmental Psychology: The Life Span**

3 credit hours

Study of development of humans from conception to death with emphasis on the scientific analysis of developmental patterns. Reviews research and major theoretical viewpoints on physical, cognitive, social, emotional, personality, career and moral development. **Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2240 (IAI S8 900)

**Social Psychology**

3 credit hours

A systematic introduction to theory and research on the ways social factors influence individual and group behavior. Examines research methods, attitudes, social perception, conformity, leadership, group dynamics and the establishment of norms, emphasizing their effects on the individual. **Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2255

**Personality**

3 credit hours

The scientific study of the origins of individual differences in thought, emotion and behavior. Topics covered include basic theoretical perspectives, assessment techniques, research methodologies and current topics in personality research.

**Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2260

**Abnormal Psychology**

3 credit hours

An introduction to the theoretical approaches and empirical research in psychology used to define, assess, categorize, prevent and treat psychological disorders. **Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2270

**Health Psychology**

3 credit hours

Examines theory and research on the reciprocal relationship between physical health, behavior and cognitive processes. Biopsychosocial factors related to the maintenance of health and the prevention and treatment of illness are explored. Attention is devoted to the impact of personal lifestyle on physical health, the interpersonal processes involved in the provision of medical care, and the emerging role of behavioral medicine in modern care.

**Prerequisite:** Psychology 1100 (3 lecture hours)

PSYCHOLOGY 2280 (IAI M1 902)

**Statistics for the Social and Behavioral Sciences**

3 credit hours

Mathematical reasoning and the solving of real-life problems through an examination of the application of statistical methods in the analysis of quantitative data in academic and applied research. Topics include descriptive methods, basic probability theory, probability distributions, statistical inference, correlation, regression, f-test, t-test, and analysis of variance. **Prerequisite:** Demonstrated geometry competency (level 2) and Math 0482 (or college equivalent) with a grade of "C" or better or qualifying score on the mathematics placement test or qualifying ACT math score and at least one course in the social/behavioral sciences or consent of instructor (3 lecture hours)

PSYCHOLOGY 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and

focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor

#### PSYCHOLOGY 2820

##### **Advanced Selected Topics I**

1 to 3 credit hours

Advanced exploration and analysis of selected Psychology topics with a specific theme indicated by course title listed in the college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## READING

#### READING 0410

##### **Reading Readiness**

1 credit hour

Reading fundamentals course designed to help students who have beginning reading skills learn about reading process. Students learn components of this process: understanding letter-sound correspondence (phonics); breaking words down into separate sounds (phonemic awareness); understanding that words in text are related and convey a message (comprehension); pronouncing and defining words (vocabulary); and developing ability to automatically recognize and pronounce words (fluency). Students learn that reading is foremost an active, meaning-making activity. Learning techniques include visual tracking; improving short term visual memory; building a beginning reading vocabulary; and engaging in before, during and after reading activities. May be paired effectively with a word recognition course. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

#### READING 0411

##### **Word Recognition I: Phonetic Analysis**

1 credit hour

Reading fundamentals course in which students who have beginning reading skills learn to associate sounds with consonants, including consonant blends, consonant digraphs and silent consonants; with vowels, including long and short vowels, r-controlled vowels, diphthongs, vowel digraphs and y; and with the schwa sound. Using a multi-sensory approach, students learn basic sight words, practice decoding individual words, and read words in sustained text. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

#### READING 0412

##### **Word Recognition II: Structural Analysis**

1 credit hour

Reading fundamentals course in which students who have beginning reading skills learn to recognize and pronounce words through recognizing their structure: roots, affixes and compounds. Students learn basic syllabic patterns and how to apply patterns to decode words; how to use graphic, verbal and visual contextual

clues to aid in decoding words; and how to use phonics principles and information in the dictionary to pronounce words. Using a multi-sensory approach, students practice reading individual words as well as reading words in sustained text. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

#### READING 0413

##### **Pronunciation**

1 credit hour

Reading fundamentals course in pronunciation for students who have beginning reading skills or for ESL students. Students learn to pronounce words using phonic/phonetic principles, the International Phonetic Alphabet, dictionary diacritical marks and accent indicators. Emphasis is on personal pronunciation problems, including stress, rhythm and intonation. ESL students may take Speech Communication 0495 (a course that prepares non-native speakers to take Speech Communication 1100) or an ESL conversation class concurrently. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

#### READING 0418

##### **Basic Reading I**

2 credit hours

Basic course designed to teach reading skills to students with limited proficiency in reading. Major emphasis is placed on developing word recognition and word attack skills. Vocabulary development and reading comprehension are included. Course may require visits to the Reading Assistance Area for additional individualized instruction. Course may be taken three times for credit. This course can only be taken on a pass/fail basis.

**Prerequisite:** Appropriate score on the Reading Placement Test or self-placement (2 lecture hours)

#### READING 0419

##### **Basic Reading II**

2 credit hours

Basic course that reviews word recognition and word attack skills, structural analysis skills, dictionary skills and use of context clues. Emphasizes literal, inferential and evaluative comprehension skills. Course introduces speed and efficiency of reading and continues to develop vocabulary. Course may require visits to the Reading Assistance Area for additional individualized instruction. Course may be taken three times for credit. **Prerequisite:** Appropriate score on the Reading Placement Test or self-placement (2 lecture hours)

#### READING 0430

##### **Assessment of Language Development**

1 credit hour

Evaluates the language development of native speakers of English in order to ensure a knowledge/skill/strategy base for appropriate placement for reading and writing instruction. **Prerequisite:** Appropriate score on the Reading Pre-Course placement test. This course can only be taken on a pass/fail basis. (1 lecture hour)

#### READING 0451

##### **Reading for College**

1 credit hour

Allows students and instructor to identify one or more areas of reading development that will prepare them for college-level reading assignments. Students and instructor will agree on the reading goals and then create and execute a plan that will result in improvement in the targeted areas. May be taken three times for credit. **Prerequisite:** Appropriate score on the Reading Pre-Course placement test. (1 lecture hour)



READING 0453

**Comprehension I: Main Idea and Inferences**

1 credit hour

Basic course in which students learn that reading is an active process that requires thinking before, during and after reading. Students determine their strengths and needs in reading through formal and informal testing procedures, including how attitudes toward reading affect reading performance. Students practice basic reading skills: locating the main idea in a variety of textual material; distinguishing between the main idea and important details; identifying the stated or implied topic sentence in a paragraph; evaluating comprehension of the text; interpreting directions and graphic material; and identifying rhetorical modes and how they aid comprehension. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

READING 0455

**Comprehension II: Abstract Concepts and Critical Reading**

1 credit hour

Basic course in which students learn to apply reading process to interpret what is read at a higher level of abstraction. Students learn to make generalizations, draw conclusions and follow a sequence of events; to become aware of how emotional reactions affect comprehension; to evaluate critically what is read and to analyze a variety of textual material for its quality, accuracy and truthfulness; and to apply what is read to real-life situations. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

READING 0457

**Reading Efficiency**

1 credit hour

Basic course in which students learn theories of reading fluency and practice various techniques to improve automaticity and reading rate. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

READING 0461

**Vocabulary: Context and Word Structure**

1 credit hour

Basic course in which students learn methods for expanding and enriching their vocabularies using context clues, word structure, etymology and word lists. Emphasis is on learning word concepts, not just definitions, and reading text to develop and practice vocabulary. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

READING 0471

**Study Skills I**

1 credit hour

Basic course in which students learn and practice study skills: textbook reading, concentration and memorization, listening and notetaking, test-taking and time management. Students' strengths and areas of need are assessed through diagnostic inventories. Emphasis is on improving student performance by completing exercises and reading assignments that are discipline-related. Course may be taken three times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

READING 0475

**Study Skills: Math Anxiety**

1 credit hour

Basic course designed for students who want to reduce or manage math anxiety. Students examine underlying issues that contribute to math anxiety; discuss various learning styles; assess own learning style; learn ways to accommodate an instructor's teaching style; and learn strategies and techniques to effectively cope with math anxiety. Course may be taken three times for credit. (1 lecture hour)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## REAL ESTATE

REAL ESTATE 1130

**Real Estate Broker Pre-License Topics**

5 credit hours

Introduction to real estate topics including license law, real property, agency, seller and buyer relationships, state and federal laws, marketing and advertising, market analysis and appraisal, financing, contracts, employment agreements, and career paths. A required course to take the Illinois Real Estate Broker License Examination. (5 lecture hours)

REAL ESTATE 1131

**Real Estate Broker Pre-License Applied Real Estate Principles**

1 credit hour

Application of real estate broker pre-license topics to the practice of real estate brokerage. Includes situational and case studies, role playing, and demonstration of real estate activities. A required course to take the Illinois Real Estate Broker License Examination. **Prerequisite:** Real Estate 1130 with a grade of "C" or better, or equivalent (1 lecture hour)

REAL ESTATE 1134

**Real Estate Broker Post-License Topics**

1 credit hour

Study of real estate topics including license law, state and federal laws, agency and real estate transactions. A required course to maintain an Illinois Real Estate Broker License. **Prerequisite:** An Illinois Real Estate Broker License (1 lecture hour)

REAL ESTATE 1135

**Real Estate Broker Post-License Applied Real Estate Practices**

1 credit hour

Application of real estate broker post-license topics to the practice of real estate brokerage. Includes situational and case studies, role playing, and demonstration of real estate activities. A required course to maintain an Illinois Real Estate Broker License. **Prerequisite:** Real Estate 1134 with a grade of "C" or better, or equivalent. An Illinois Real Estate Broker License (1 lecture hour)

REAL ESTATE 1138

**Real Estate Managing Broker Pre-License Topics**

2 credit hours

Study of real estate topics including licensing, operations, escrow, and management. A required course to take the Illinois Real Estate Managing Broker License Examination. **Prerequisite:** An Illinois Real Estate Broker License (2 lecture hours)

REAL ESTATE 1139

**Real Estate Managing Broker Pre-License Applied Management and Supervision**

1 credit hour

Application of real estate managing broker pre-license topics to the practice of real estate brokerage. Includes situational and case studies, dispute resolution simulations, supervision situations, escrow, and discipline case studies. A required course to take the Illinois Real Estate Managing Broker License Examination. **Prerequisite:** Real Estate 1138 with a grade of "C" or better, or equivalent. An Illinois Real Estate Broker License (1 lecture hour)

REAL ESTATE 1152

**Basic Appraisal Principles**

2 credit hours

Introduction to basic appraisal principles including real property concepts and characteristics, legal considerations, influences on real estate values, types of value, economic principles, and

overview of real estate markets and analysis. One of the required courses to take the Illinois Associate Real Estate Trainee Appraiser License Examination. This course meets Appraiser Qualifications Board (AQB) criteria. (2 lecture hours)

#### REAL ESTATE 1153

##### **Basic Appraisal Procedures**

2 credit hours

Introduction to basic appraisal procedures including overview of approaches to value, valuation procedures, property description, and residential applications. One of the required courses to take the Illinois Associate Real Estate Trainee Appraiser License Examination. This course meets Appraiser Qualifications Board (AQB) criteria. **Prerequisite:** Real Estate 1152 with a grade of "C" or better, or equivalent (2 lecture hours)

#### REAL ESTATE 1154

##### **Uniform Standards of Professional Appraisal Practice**

1 credit hour

Examines the 10 Uniform Standards of Professional Appraisal Practice, ethics rules, and advisory opinions. One of the required courses to take the Illinois Associate Real Estate Trainee Appraiser License Examination. This course meets Appraiser Qualifications Board (AQB) criteria. (1 lecture hour)

#### REAL ESTATE 1170

##### **Home Inspection**

5 credit hours

Examination and evaluation of the exterior and interior components of residential real property, which includes plumbing, electrical, Heating, Ventilation, Air Conditioning (HVAC), structural, foundation, roof, masonry or any other real property components. Illinois Home Inspector Law/Administrative Rules and Standards of Practice are covered. Satisfies the education requirements set forth by the Office of Banks and Real Estate for Home Inspector licensing. **Prerequisite:** Minimum age of 21 with high school diploma or GED certificate (5 lecture hours)

#### REAL ESTATE 1820

##### **Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

#### REAL ESTATE 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within real estate to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## RELIGIOUS STUDIES

#### RELIGIOUS STUDIES 1100 (IAI H5 900)

##### **Introduction to Religion**

3 credit hours

This course provides a study of religion by examining representative cultural religious phenomena in a global world. In analyzing commonalities and differences among religious traditions and contexts, students develop an understanding of

personal, communal and universal dimensions of religion as characterized through various religious phenomena, including philosophical formulations, sacred writings, religious experiences, ethics, rituals and art. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### RELIGIOUS STUDIES 1110 (IAI H5 901)

##### **Introduction to the Bible (Old Testament)**

3 credit hours

This course offers an overview of the Hebrew Bible (in the Christian tradition known as the Old Testament) and selected writings from the Apocrypha as well as the Dead Sea Scrolls, introducing students to various academic methods of critical and creative ways of studying, analyzing and interpreting these ancient texts. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### RELIGIOUS STUDIES 1120 (IAI H5 901)

##### **Introduction to the Bible (New Testament)**

3 credit hours

This course offers an overview of the Christian Bible (in the Christian tradition known as the New Testament) and selected Early Christian Writings, introducing students to various academic methods of critical study, analysis and interpretation of these ancient texts. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### RELIGIOUS STUDIES 1150 (IAI H5 904N)

##### **World Religions**

3 credit hours

An introductory investigation of the main ideas from the world's major living religions, including Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, Shintoism and primal religions. Credit cannot be given for both Religious Studies 1150 and Philosophy 1150. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### RELIGIOUS STUDIES 1155 (IAI H4 903N)

##### **Asian Thought**

3 credit hours

Introductory overview of selected philosophical and religious systems of Asia. Emphasizes the conceptual and intellectual foundations of a variety of Asian traditions, and includes consideration of the historical and cultural contexts that shape them. Philosophy 1100 and/or Religious Studies 1100 is strongly recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### RELIGIOUS STUDIES 1824

##### **Selected Topics in Religion**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours)

#### RELIGIOUS STUDIES 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

RELIGIOUS STUDIES 2160 (IAI H5 901)

**Judaism, Christianity and Islam**

3 credit hours

This course presents an overview of the historical development of Judaism, Christianity and Islam, as well as roles of scripture, ritual, theology, and ethics. These religions' social relevance and their current inter-relations are also considered. Religious Studies 1100 or comparable course is recommended. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or www.cod.edu/larts

## RESPIRATORY CARE

RESPIRATORY CARE 1101

**Basic Respiratory Care**

3 credit hours

Role of the respiratory care practitioner. Basic management and maintenance of common respiratory Care equipment to include applied therapeutic modalities. Major emphasis on oxygen and aerosol administration, arterial blood gas procedures, and pharmacologic administration. **Prerequisite:** Admission to the Respiratory Care Program or consent of instructor (2 lecture hours, 3 lab hours)

RESPIRATORY CARE 1102

**Intermediate Respiratory Care**

3 credit hours

Intermediate procedures for the respiratory care practitioner. Theory and practice for cardiac and pulmonary pathology, positive pressure breathing, chest physical therapy, airway care and introductory mechanical ventilation. **Prerequisite:** Respiratory Care 1101 or consent of instructor (2 lecture hours, 3 lab hours)

RESPIRATORY CARE 1103

**Advanced Respiratory Care**

3 credit hours

Advanced study in respiratory intensive care principles. Theory and practice to include management of life-support systems as applied in the emergency and intensive care units. Adult volume and pressure ventilation, monitoring and non-invasive positive pressure procedures. **Prerequisite:** Respiratory Care 1102 or consent of instructor (2 lecture hours, 3 lab hours)

RESPIRATORY CARE 1105

**Respiratory Assessment and Procedures**

4 credit hours

Respiratory care assessment to include vital sign and breath sound monitoring, oxygen monitoring and administration, universal/standard precautions and isolation procedures, patient and equipment safety standards, patient charting and communication, cardiopulmonary resuscitation (CPR), and concepts in transcultural patient care. **Prerequisite:** Admission to the Respiratory Care Program or consent of instructor (3 lecture hours, 3 lab hours)

RESPIRATORY CARE 1111

**Clinical Practice I**

4 credit hours

Clinical practice in the application of oxygen administration, aerosol and humidity therapy, incentive spirometry, chest physiotherapy, pharmacologic agents, therapeutic evaluation, arterial puncture, and communication skills with patient and staff. **Prerequisite:** Respiratory Care 1101, 1120 and 1121 or consent of instructor

RESPIRATORY CARE 1112

**Clinical Practice II**

4 credit hours

Clinical practice in the application of non-invasive positive pressure ventilation, including continuous and bi-level airway pressure therapy, airway care procedures, and the application of cardiopulmonary life-support. Previous clinical skill procedures included. **Prerequisite:** Respiratory Care 1111 or equivalent or consent of instructor

RESPIRATORY CARE 1113

**Intensive Respiratory Care Clinical Practice**

3 credit hours

Clinical practice of intensive care procedures within hospital emergency rooms, surgical intensive, cardiac care and respiratory intensive care units. Life support systems, ventilator initiation, weaning, diagnostic monitoring and spirometry included.

**Prerequisite:** Respiratory Care 1112 or equivalent or consent of instructor

RESPIRATORY CARE 1120

**Applied Cardiopulmonary Anatomy and Physiology**

4 credit hours

Applied cardiopulmonary anatomy and physiology as related to respiratory care procedures and clinical practice. Major emphasis on the pulmonary and circulatory systems, ventilation and perfusion, diffusion and transport, pulmonary function and hemodynamic measurements, central nervous system control and fetal respiratory development. **Prerequisite:** Admission to the Respiratory Care program or consent of instructor (3 lecture hours, 2 lab hours)

RESPIRATORY CARE 1121

**Applied Science for Respiratory Care**

4 credit hours

Applied science concepts as related to Respiratory Care procedures and clinical practice. Concepts to include metabolic and respiratory acid-base balance, respiratory and cardiac formulas, blood gas data as applied to patient care, and case study interpretation and assessment. **Prerequisite:** Admission to Respiratory Care program or consent of instructor (3 lecture hours, 2 lab hours)

RESPIRATORY CARE 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

RESPIRATORY CARE 2201

**Advanced Life Support, Monitoring, and Trends**

3 credit hours

Advanced concepts in life support and patient monitoring to include current ventilator modes and management, hemodynamic monitoring, ventilator graphics and polysomnography.

**Prerequisite:** Respiratory Care 1103 or consent of instructor (2 lecture hours, 2 lab hours)

RESPIRATORY CARE 2202

**Pulmonary Function Testing**

3 credit hours

Simple and advanced spirometry to include forced vital capacity measurements, maximum voluntary ventilation, flow-volume loop procedures, before and after bronchodilator studies, carbon monoxide diffusion, nitrogen washout, exercise testing and other

pulmonary diagnostic tests. **Prerequisite:** Respiratory Care 1103 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

#### RESPIRATORY CARE 2205

##### **Neonatal and Pediatric Intensive Respiratory Care**

3 credit hours

Advanced study in neonatal and pediatric respiratory intensive care principles. Theory and practice to include airway care, ventilator system management, and physiologic monitoring as applied to infants and children in the emergency and specialty intensive care units. Neonatal and pediatric advanced life-support included.

**Prerequisite:** Respiratory Care 1103 or consent of instructor (2 lecture hours, 2 lab hours)

#### RESPIRATORY CARE 2206

##### **Advanced Intensive Respiratory Care – Adult**

4 credit hours

Advanced clinical practice in emergency and adult intensive care units. Procedures to include clinical data evaluation, mechanical ventilation, hemodynamic monitoring, airway and chest X-ray interpretation, pharmacologic administration and advanced cardiac life-support. Pulmonary function diagnostics included.

**Prerequisite:** Respiratory Care 1113 or consent of instructor

#### RESPIRATORY CARE 2207

##### **Advanced Intensive Respiratory Care – Neonatal-Pediatric**

3 credit hours

Advanced clinical practice in emergency, neonatal and pediatric intensive care units. Procedures to include data evaluation, ventilatory support, high-risk transport, hemodynamic monitoring, airway and chest X-ray interpretation, and pharmacologic administration. Neonatal and pediatric advanced life-support included. **Prerequisite:** Respiratory Care 2205 or consent of instructor

#### RESPIRATORY CARE 2250

##### **Respiratory Care Board Review**

3 credit hours

Comprehensive review and update of Respiratory Care to include theory and procedures, as well as preparation for the Certified and Registered Respiratory Therapist exams through the National Board for Respiratory Care. (3 lecture hours)

#### RESPIRATORY CARE 2280

##### **Advanced Clinical Assessment and Protocol**

4 credit hours

Advanced clinical assessment of respiratory care patients to include airway and chest X-ray interpretation, the effects of pharmacologic agents in critical care, and the initiation of protocols and clinical practice guidelines. **Prerequisite:** Respiratory Care 1113 or consent of instructor (3 lecture hours, 2 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## RUSSIAN

#### RUSSIAN 1101

##### **Elementary Russian I**

4 credit hours

Develops the ability to speak, understand, read and write Russian in a cultural context. For the beginning student. (4 lecture hours)

#### RUSSIAN 1102

##### **Elementary Russian II**

4 credit hours

Continues to develop the ability to speak, understand, read and write Russian in a cultural context. For students who have

successfully completed Russian 1101 or equivalent or one year of high school Russian. (4 lecture hours)

#### RUSSIAN 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### RUSSIAN 2201

##### **Intermediate Russian I**

4 credit hours

Develops the ability to read and discuss modern texts: conversation, composition, grammar, and a brief introduction to Russian literary history. For students who have successfully completed Russian 1102 or equivalent or two years of high school Russian. (4 lecture hours)

#### RUSSIAN 2202 (IAI H1 900)

##### **Intermediate Russian II**

4 credit hours

Further develops the ability to read and discuss modern texts: conversation, composition, grammar, and an introduction to Russian literary history. For students who have successfully completed Russian 2201 or equivalent or three years of high school Russian. (4 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## SOCIAL SCIENCE

#### SOCIAL SCIENCE 1100

##### **Introduction to Social Science**

3 credit hours

This is an interdisciplinary course combining the perspectives of two or more of the social and behavioral sciences (anthropology, economics, geography, history, political science, psychology and sociology) on the central issues in social science studies. This course explores the relationship between the social and behavioral sciences being studied. It reviews the application of the scientific method, compares theory and concepts, and reviews the different perspectives of the discipline being studied. This course is broad in nature and scope. It provides the basis for further study in the various social and behavioral sciences. (3 lecture hours)

#### SOCIAL SCIENCE 1110

##### **Introduction to Globalization**

3 credit hours

Introduction to the cultural, economic, political and social dimensions of globalization through major social-scientific theories. Addresses historical context in which globalization emerged, the rise of global institutions, the impact on labor and financial markets, the new social movements, the rise of global terrorism and the aggravation of global poverty. The course also addresses alternative forms of social organizations and the question of development. (3 lecture hours)

#### SOCIAL SCIENCE 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Social science course integrates two or more disciplines in the social and behavioral sciences. Experiential social science course covers topics not otherwise covered by general education and social behavioral sciences individual courses and other courses in the *Catalog* for the disciplines. These courses require direct



experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

#### SOCIAL SCIENCE 1820

##### **Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

#### SOCIAL SCIENCE 1821

##### **Selected Topics II**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. (2 lecture hours, 2 lab hours)

#### SOCIAL SCIENCE 1822

##### **Selected Topics III**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. (1 lecture hour, 4 lab hours)

#### SOCIAL SCIENCE 1823

##### **Selected Topics IV**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. (6 lab hours)

#### SOCIAL SCIENCE 2800

##### **Advanced Experiential Special Topics**

1 to 3 credit hours

Social science courses integrate two or more disciplines in the social and behavioral sciences. Advanced experiential social science course covers topics not otherwise covered by general education courses and social behavioral sciences individual courses while building on academic knowledge and skills required in introductory-based courses. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the physical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the social and behavioral sciences or consent of instructor

For additional information, please contact the Health and Sciences Division Office at (630) 942-2010 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## SOCIOLOGY

#### SOCIOLOGY 1100 (IAI S7 900)

##### **Introduction to Sociology**

3 credit hours

Students explore the concepts and theories necessary to systematic understanding of our social worlds. Topics may include considering sociology as science, the nature of large- and small-scale groups, social stratification, historical eras and social change, and race, ethnic and gender relations. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### SOCIOLOGY 1120 (IAI S7 904D)

##### **Sociology of Sex, Gender and Power**

3 credit hours

Examines the difference between behavior based on biology and behavior based on what society says is appropriate in order to be masculine or feminine. Examines the question of what forces in society are most influential in determining the "place" of men and women with special emphasis on power. Examines how this influence works through the process of socialization and core social institutions, including marriage and family, education, religion, the economy and politics. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### SOCIOLOGY 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Social science courses integrate two or more disciplines in the social and behavioral sciences. Experiential social science courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

#### SOCIOLOGY 1820

##### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected sociology topics with a specific theme indicated by course title listed in college course schedule. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

#### SOCIOLOGY 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### SOCIOLOGY 2200

##### **Introduction to Research Methods**

3 credit hours

Examination of social science research methods from theoretical, applied and ethical points of view. Acquaints students with qualitative and quantitative techniques and procedures used to measure

human behavior, gather and analyze data, and evaluate and report on the findings. **Prerequisite:** At least one course in the social and behavioral sciences. Course requires Reading Placement Test Score-Category One

SOCIOLOGY 2205 (IAI M1 902)

**Statistics for the Social and Behavioral Sciences**

3 credit hours

A basic examination of the application of statistical methods in the analysis of quantitative data. Use of computer technology and application software in academic and applied research. An understanding of frequently used statistical methods, including selection based on scale characteristics and theoretical relationships, quantitative methods, appropriate use and inherent weaknesses. **Prerequisite:** Demonstrated geometry competency (level 2) and Math 0482 (or college equivalent) with a grade of "C" or better or qualifying score on the mathematics placement test or qualifying ACT math score and at least one course in the social/behavioral sciences, or consent of instructor. Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

SOCIOLOGY 2210 (IAI S7 901)

**Social Problems**

3 credit hours

Comparatively examines the linkages among social structures, culture and human experience in the context of the globalization process. Students examine a variety of topics, which may include the unequal distribution of power and wealth; issues of sex, gender and social class; hunger; the role of multi-national corporations; war and international conflict; oppression of various kinds; crime; poverty; the media; other social institutions; resource/environmental use and depletion; and population. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2215 (IAI S7 903D)

**Racial and Ethnic Relations**

3 credit hours

Provides a unique perspective to help understand how groups of people from different races, ethnic groups or other cultures interact. Examines differential power between groups and analyzes the social structures that are used to maintain these power differences. Focuses on cultural diversity and various dimensions of discrimination and prejudice, including an analysis of inequality and its origins, conditions under which inequality occurs and persists, changing inequality, and ways to deal with minority group problems. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2220 (IAI S7 902)

**Sexual Relationships, Marriage and Family**

3 credit hours

A cross-societal focus on sex-roles, dating, mate selection and sexuality. Traditional and emerging marriage, family and child-rearing patterns are explored from multi-national and global perspectives. Marital dynamics, including expressiveness, marital power, conflict, family violence, divorce and the later years of marriage are featured. **Prerequisite:** Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY 2225

**Sociology of Violence**

3 credit hours

Examines the nature and causes of violence in the context of contemporary society and how the structure of society itself, as well as various social factors, contribute to violence. Explores types of violent behavior, including interpersonal, collective and organizational. (3 lecture hours)

SOCIOLOGY 2230

**Criminology**

3 credit hours

Examines characteristics and theoretical explanations of patterns of criminality and society's response to crime. Includes patterns of various types of crime, how these are measured, and how these observations impact research, theory and public policy. Issues include social response to crime, including interaction among system, victim and offender; issues of the criminal justice system, social control and public opinion. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2251

**Health and Illness in Contemporary Society**

3 credit hours

This course examines illness as a phenomenon, which both influences and is influenced by society. As such, it can be viewed as a form of social deviance, which patients, healers and the larger society attempt to reduce. Perspectives provided by theory and research in the sociology of deviance, occupations and complex organizations are employed to gain an understanding of health and illness behavior, health practitioners and health institutions. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2252

**Social Gerontology: Aging and Society**

3 credit hours

This course focuses on aging with emphasis on demographic trends, individual aspects of aging, such as family and social support networks, retirement and adaptation to aging. Particular emphasis is given to issues surrounding aging and society, including the economy, politics, health and social services, and public policy — both nationally and at the local level. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2253

**Dying, Death and Bereavement**

3 credit hours

Examines the social meanings of dying and death, as well as grief and bereavement processes. Topics include the funeral, ethical issues, children and dying, hospice, suicide and bereavement history in America. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2290

**Sociology of Communication and Media**

3 credit hours

Increase self-understanding, interpersonal effectiveness, and the ability to work in and understand the network of communications in group, family and organizational situations. The social relationships, processes and structures that exist in group life become apparent to students as they use an experience-based model of communications. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

SOCIOLOGY 2800

**Advanced Experiential Special Topics**

1 to 3 credit hours

Social science courses integrate two or more disciplines in the social and behavioral sciences. Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and

involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

#### SOCIOLOGY 2820

##### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

#### SOCIOLOGY 2821

##### **Advanced Selected Topics II**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (2 lecture hours, 2 lab hours)

#### SOCIOLOGY 2822

##### **Advanced Selected Topics III**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (1 lecture hour, 4 lab hours)

#### SOCIOLOGY 2823

##### **Advanced Selected Topics IV**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (6 lab hours)

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## SPANISH

#### SPANISH 1100

##### **Civilization and Culture of Spain**

3 credit hours

Introduction in English to the culture, geography, history, economics, political institutions, psychology, literature, music, art and architecture of Spain. **Prerequisite:** Course requires Reading Placement Test Score-Category One. (3 lecture hours)

#### SPANISH 1101

##### **Elementary Spanish I**

4 credit hours

Develops the ability to speak, understand, read and write Spanish in a cultural context. For the beginning student. (4 lecture hours)

#### SPANISH 1102

##### **Elementary Spanish II**

4 credit hours

Continues the development of the ability to speak, understand, read, and write Spanish in a cultural context. For students who have successfully completed Spanish 1101 or equivalent or one year of high school Spanish. (4 lecture hours)

#### SPANISH 1110

##### **Latin American Culture and Civilization**

3 credit hours

Introduction to the culture, geography, history, economics, political institutions, sociology, literature, music and arts of present-day Latin America. Conducted in English. (3 lecture hours)

#### SPANISH 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

#### SPANISH 2201

##### **Intermediate Spanish I**

4 credit hours

Continues to develop the ability to speak, understand, read and write Spanish in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review and cultural activities. For students who have successfully completed Spanish 1102 or equivalent or two years of high school Spanish. (4 lecture hours)

#### SPANISH 2202 (IAI H1 900)

##### **Intermediate Spanish II**

4 credit hours

Continues to develop the ability to speak, understand, read and write Spanish in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review and cultural activities. For students who have successfully completed Spanish 2201 or equivalent or three years of high school Spanish. (4 lecture hours)

#### SPANISH 2206 (IAI H1 900)

##### **Spanish for Heritage Speakers I**

4 credit hours

Develops understanding, speaking, reading, and writing skills in Spanish for students who comprehend spoken Spanish and may have some degree of skill in speaking, reading and writing ability. Focuses on reading development, orthography, lexical expansion, formal grammar, and facility in writing and composition. Fosters appreciation of Hispanic cultural-linguistic heritage. (4 lecture hours)

#### SPANISH 2208 (IAI H1 900)

##### **Spanish for Heritage Speakers II**

4 credit hours

Continues to develop understanding, speaking, reading and writing skills in Spanish for students who comprehend spoken Spanish and may have same degree of speaking, reading and writing ability or have successfully completed Spanish 2206 or equivalent. Focuses on reading development, orthography, lexical expansion, formal grammar, facility in writing and composition. Fosters appreciation of Hispanic cultural-linguistic heritage. (4 lecture hours)

SPANISH 2251 (IAI H1 900)

**Conversation and Composition I**

3 credit hours

Develops students' listening and comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Spanish-speaking countries. For students who have successfully completed Spanish 2202 or equivalent or four years of high school Spanish. (3 lecture hours)

SPANISH 2252 (IAI H1 900)

**Conversation and Composition II**

3 credit hours

Develops students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Spanish-speaking countries. For students who have successfully completed Spanish 2251 or equivalent or five years of high school Spanish. (3 lecture hours)

SPANISH 2820

**Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor (3 lecture hours)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## SPEECH COMMUNICATION

SPEECH COMMUNICATION 0495

**Preparation for College Speech for Non-Native Speakers**

3 credit hours

This course is designed primarily to prepare students, whose first language is not English, for college-level speech courses. Introductory speaking exercises and speeches are included in the coursework. This course is intended for students who are high school graduates and whose spoken English is most likely comprehensible to native speakers. May be repeated up to nine total credit hours. **Prerequisite:** English as a Second Language 0958 or equivalent or consent of instructor recommended (3 lecture hours)

SPEECH COMMUNICATION 1100 (IAI C2 900)

**Fundamentals of Speech Communication**

3 credit hours

A variety of experiences that develop basic concepts of the oral communication process. The class includes communication theory as well as speech preparation and delivery. Highly recommended: Prior to enrollment, student should have A) a satisfactory score, as determined by the English faculty, on an English Composition entrance test, and B) evidence of having met the Reading Competency Requirement. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION 1110

**Oral Interpretation**

3 credit hours

Basic techniques of the oral performance of literature with emphasis on content analysis and performance. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION 1120

**Small-Group Communication**

3 credit hours

Study of leadership, group process and interpersonal relations in the small-group, conference and public forum. **Prerequisite:**

Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION 1140

**Public Relations**

3 credit hours

This course is designed to introduce students to the public relations field. Covers topics from the nature of the work done by public relations practitioners to the description and use of the tools involved. Also, the various functions of public relations are examined, including the overall process of research, planning and decision making, action and communication, and evaluation.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION 1150

**Introduction to Business Communication**

3 credit hours

This course is designed to help students understand communication behaviors and concepts in order to develop effective communication skills in the business environment. It covers topics related to communication between employees and their supervisors, communication within work groups and public communication. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION 1190

**Applied Forensics**

1 credit hour

Participation in forensics program. Application of public speaking, oral interpretation and debate skills to competitive situations. May be repeated three times for credit. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lab hours)

SPEECH COMMUNICATION 1800

**Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One.

SPEECH COMMUNICATION 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within Speech Communication to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

SPEECH COMMUNICATION 2130

**Advanced Public Speaking**

3 credit hours

An interactive course exploring persuasive and informative speech preparation and delivery. Students learn to use visual aids effectively,



handle questions and answers, analyze communication events and understand the media. **Prerequisite:** Speech 1100 or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### SPEECH COMMUNICATION 2160

##### **Argumentation and Debate**

3 credit hours

Develops and improves argumentative and critical-thinking skills in communication settings. Topics include analysis of discourse, development of sound oral reasoning, proper methods of refutation, and the facilitation of argumentation in group situations. Through participation in various types of in-class debates and forums on current topics, students research topics, discover issues and formulate propositions as they apply to social and personal decision-making. **Prerequisite:** Speech 1100 or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### SPEECH COMMUNICATION 2190

##### **Forensics Theory and Practice**

3 credit hours

Explores the pedagogy of competitive forensics (speech, debate and performance of literature). Topics include the history of forensics, event analysis and rule interpretation, topic invention, instruction techniques for each event, rehearsal and performance methodologies, and critical methodologies. Intended for the communications major, potential or current competitor, future judge and/or future coach. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### SPEECH COMMUNICATION 2210

##### **Readers' Theater (Group Performance of Literature)**

3 credit hours

This interactive course offers techniques in the oral presentation of literature by groups of two or more. Covers writing, adapting, acting and directing skills, and the use of readers' theater in elementary schools, counseling seminars, religious services and traditional entertainment. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### SPEECH COMMUNICATION 2800

##### **Advanced Experiential Special Topics**

1 to 3 credit hours

Advanced experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one other Speech course or consent of instructor. Course requires Reading Placement Test Score-Category One

#### SPEECH COMMUNICATION 2860

##### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of study work experience under supervision of both college and employer. Internship/cooperative

education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

#### SPEECH COMMUNICATION 2865

##### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours  
Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits.

**Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

#### SPEECH COMMUNICATION 2870

##### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

#### SPEECH COMMUNICATION 2871

##### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Transfer). Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## **SPEECH-LANGUAGE PATHOLOGY ASSISTANT**

#### SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1101

##### **Introduction to Speech Language Pathology**

4 credit hours

Overview of normal and disordered communication. Explores speech, language, cognitive development and disorders, and hearing disorders across the age continuum according to etiology, clinical manifestations and intervention. Includes anatomy and physiology of speech, language and hearing. Addresses the psychosocial impact of communicative disorders on clients and their families. Includes observations of speech-language therapy in local therapy settings. (4 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1105

**Phonetics**

3 credit hours

Overview of the science of phonetics. Explores the anatomy and physiology of the speech mechanism and the mechanics of speech sound production. Includes an introduction to International Phonetic Alphabet (IPA) and commonly used diacritics with an emphasis on transcription in clinical settings. **Prerequisite:** Prior completion or concurrent enrollment in Speech-Language Pathology Assistant 1101 or consent of instructor (3 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1106

**Speech Disorders and Intervention Across the Lifespan I**

4 credit hours

Overview of the etiologies and characteristics of a variety of speech disorders across the lifespan with an emphasis on intervention strategies. Includes an exploration of motor speech disorders, tracheostomies, laryngectomies, organic and functional voice disorders, orofacial anomalies and fluency disorders. Includes a review of neuroanatomy and physiology as it pertains to motor speech disorders and anatomy and physiology of the speech mechanism. **Prerequisite:** Speech-Language Pathology Assistant 1101 and 1105 or consent of instructor (4 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1107

**Speech Disorders and Intervention Across the Lifespan II**

2 credit hours

Examination of the potential etiologies and characteristics of articulation and phonological disorders with an emphasis on intervention strategies. Explores sequence and timing of speech sound acquisition. Addresses differences between articulation and phonological disorders in terms of nature and treatment. Includes an introduction to oral motor exercises. **Prerequisite:** Speech-Language Pathology Assistant 1101 and 1105 or consent of instructor (2 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1109

**Language Development**

3 credit hours

Exploration of the components of language and theories of language development. Emphasis placed on the typical sequence and timing of acquisition of language skills from infancy to adolescence. Includes typical changes in language during various stages of adulthood. Addresses issues of dialects and bilingualism. Explores the impact of environment and play on language development and the use of developmentally appropriate toys to encourage language development. **Prerequisite:** Speech-Language Pathology Assistant 1101 or consent of instructor (3 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1110

**Language Disorders and Intervention Across the Lifespan**

4 credit hours

Examination of the potential etiologies and characteristics of language disorders across the lifespan with an emphasis on intervention strategies. Addresses delayed/disordered language development in the pediatric population (infancy through adolescence) as well as aphasia, right hemisphere syndrome, traumatic brain injury, and dementia in the adult population. Includes exploration of language-based learning disabilities and language enrichment and literacy programs. Includes a review of neuroanatomy and physiology as it pertains to neurogenic language disorders. **Prerequisite:** Speech-Language Pathology Assistant 1109 or consent of instructor (4 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1112

**Introduction to Audiology**

2 credit hours

Overview of the study of audiology. Includes anatomy and physiology of the auditory system, review of audiological screening

and assessment, aural pathologies and intervention strategies. Emphasis placed on impact of aural pathologies on communicative development and education as well as identification with hearing impaired/deaf culture. **Prerequisite:** Speech-Language Pathology Assistant 1101 or consent of instructor (2 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1301

**Sign Language I**

3 credit hours

Overview of the manual alphabet, numbers and basic sign vocabulary used in American Sign Language (ASL). Emphasis on development of both expressive and receptive signing skills. Explores Deaf history and culture and provides an understanding of the Deaf community. (3 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1821

**Selected Topics I**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Acceptance into program or coordinator approval (1 lecture hour)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1822

**Selected Topics II**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Acceptance into program or coordinator approval (2 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 2101

**Clinical Methods and Documentation**

4 credit hours

Exploration of the components of treatment goals, behavior modification, data collection and documentation. Includes instruction in planning a therapy session based upon a written therapy plan, with an emphasis on identifying appropriate and effective activities and materials to elicit target behaviors. Explores commonly utilized screening and assessment tools as appropriate in the SLPA scope of service. **Prerequisite:** Speech-Language Pathology Assistant 1106, 1107 and prior completion or concurrent enrollment in Speech-Language Pathology Assistant 1110 or consent of instructor (4 lecture hours)

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT 2102

**Professional Issues and the SLPA**

4 credit hours

Addresses a wide variety of issues pertinent to the professional life of the SLPA. Explores SLPA scope of service, licensure and registration, workplace skills, ethics, employment settings, team membership and conflict resolution, universal precautions, culturally sensitive practice, and the psychosocial impact of communication disorders. Includes resume writing and interviewing skills. **Prerequisite:** Speech-Language Pathology Assistant 1106, 1107 and 1110 or consent of instructor (4 lecture hours)

#### SPEECH-LANGUAGE PATHOLOGY ASSISTANT 2104

##### **Augmentative and Alternative Communication**

3 credit hours

Overview of augmentative and alternative communication (AAC) terminology, symbols, application of low versus high tech devices, and intervention. Includes overview of populations using AAC and issues of motor and sensory impairments. **Prerequisite:** Speech-Language Pathology Assistant 1106, 1107 and 1110 or consent of instructor (3 lecture hours)

#### SPEECH-LANGUAGE PATHOLOGY ASSISTANT 2112

##### **Clinical Practicum**

6 credit hours

Supervised clinical experience in two clinical placements, such as health care, clinic or school settings. Addresses development of clinical skills, including professionalism, implementation of prescribed therapy plans, data recording and documentation. Emphasis on developing competencies for ethical and effective SLPA practice. Requires attendance at assigned clinical sites three days per week. **Prerequisite:** Speech-Language Pathology Assistant 2101 or concurrent enrollment in Speech-Language Pathology Assistant 2102 or consent of instructor

#### SPEECH-LANGUAGE PATHOLOGY ASSISTANT 2301

##### **Sign Language II**

3 credit hours

Expansion of American Sign Language (ASL) skills learned in Speech-Language Pathology Assistant 1301. Emphasis on development of both expressive and receptive conversational skills. Development of syntax skills and enhancement of vocabulary. Addresses Deaf history, culture and community in greater depth. **Prerequisite:** Speech-Language Pathology Assistant 1301 (3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## SURGICAL TECHNOLOGY

#### SURGICAL TECHNOLOGY 1101

##### **Surgical Technology Concepts I**

16 credit hours

Exploration of perioperative fundamentals, including surgical sciences, patient care concepts, surgical technology responsibilities, and surgical intervention, including application and practice. The concepts of surgical terminology and pharmacology/anesthesia will also be included. Anatomy and Physiology along with Medical Terminology are strongly recommended. **Prerequisite:** Admission to the Surgical Technology program (12 lecture hours, 9 lab hours/12 clinical hours)

#### SURGICAL TECHNOLOGY 1102

##### **Surgical Technology Concepts II**

8 credit hours

Continuation of Surgical Technology Concepts I with emphasis on acquiring proficiency in the clinical setting. The student will continue to gain expanded knowledge of areas of the perioperative environment. **Prerequisite:** Surgical Technology 1101 with a grade of "C" or better or equivalent (7 lecture hours, 3 lab hours/12 clinical hours)

#### SURGICAL TECHNOLOGY 1103

##### **Surgical Technology Concepts III**

14 credit hours

Continuation of Surgical Technology Concepts II with emphasis on acquiring continued proficiency in the clinical setting. This course includes advanced theory into surgical technology and surgical

practices. **Prerequisite:** Surgical Technology 1102 with a grade of "C" or better (13 lecture hours, 1 lab hour/12 clinical hours)

#### SURGICAL TECHNOLOGY 1820

##### **Selected Topics I**

1 to 3 credit hours

Introductory exploration and analysis of selected surgical technology topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 3 lecture hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)

## THEATER

#### THEATER 1100 (IAI F1 907)

##### **Theater Appreciation**

3 credit hours

Enhances appreciation and understanding of the theatrical experience: reading and analysis of scripts, theater attendance followed by exercises in written and oral critiques, discussion of the elements of play production and the business of theater. Intended for the general student to enhance his/her ability to become an appreciative and discerning theater audience member. No previous theater experience is required. Play attendance required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### THEATER 1105

##### **Improvisational Acting**

3 credit hours

Emphasizes helping the beginning actor and non-theater student create believable characters using subtext through concentration, imagination and observation in non-scripted scenes. Exercises provide a foundation for using subtext, playing in the moment, and creating truthful relationships in scripted and non-scripted scenes, and the use of the body and voice as communicative agents. Play attendance required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### THEATER 1108

##### **Voice and Diction**

2 credit hours

Studies of voice sound production. Designed to teach actors relaxation, breathing and an understanding of the actor's vocal life and demands. No previous theater experience is required. Play attendance required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours)

#### THEATER 1109

##### **Stage Movement**

2 credit hours

Introduces principles and techniques of theatrical stage movement. Designed to help actors make their bodies more flexible and efficient instruments of expression. No previous theater experience is required. Play attendance required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours)

#### THEATER 1111

##### **Acting I**

3 credit hours

Introduces actors to the principles and techniques of creating believable characters through action, improvisation, analysis, movement, business, physicalization, vocal control, audition workshop, scene study and interpretation. Major contemporary

playwrights used for scene study. No previous theater experience is required. Play attendance required. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### THEATER 1112

##### **Acting II**

3 credit hours

Continues development of skills acquired in Acting I. Helps students develop believable characters while working on acting exercises and duet scenes from contemporary dramatic literature. Actors are also introduced to acting in period plays. Play attendance required.

**Prerequisite:** Theater 1111. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### THEATER 1120

##### **Rehearsal and Performance**

1 to 3 credit hours

Participation in play production. After auditions and assignments, the class is composed of the students in the college-produced play. May be taken three times for credit. **Prerequisite:** Consent of instructor (1 to 6 lab hours)

#### THEATER 1140

##### **Summer Repertory Theater**

6 credit hours

A performance course that offers the student an opportunity to perform or be on a crew for two or three productions. The repertory may include musicals, plays for children, contemporary and/or classical dramas and comedies. Non-acting opportunities include costuming, set construction, lights, sound, wardrobe, stage make-up, properties, box office work and assistant directing or management, and stage management. **Prerequisite:** Audition and/or interview. Course requires Reading Placement Test Score-Category One (1 lecture hour, 10 lab hours)

#### THEATER 1151

##### **Dance Theater I**

2 credit hours

Emphasizes the principles and practical demands of dance within the musical theater. Primarily jazz-dance based movement, with ballet basics included. Integrates an extensive dance warm-up into movement vocabulary and works on various combinations inspired by classic Broadway musicals from the 1920s through the 1980s. Includes techniques for exercise, audition requirements, various performance styles and choreographic projects. Field trips and master classes utilized whenever possible. Designed for beginning to intermediate levels of dance students. **Prerequisite:** Course requires Reading Placement Test Score-Category One (4 lab hours)

#### THEATER 1152

##### **Dance Theater II**

2 credit hours

Primarily jazz-dance based course with some ballet combinations included. Integrates an extensive dance warm-up into movement vocabulary and builds on principles learned in Dance Theater I. Includes advanced studies of classic Broadway musical choreography styles from the 1920s through the 1980s, dance techniques, audition requirements, performance styles and choreographic projects. The final includes choreography and/or public performance. Field trips and master classes used whenever possible. Designed for intermediate-to advanced-level dance students. Some previous training is necessary. **Prerequisite:** Theater 1151 with a grade of "C" or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One (4 lab hours)

#### THEATER 1800

##### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** Course requires Reading Placement Test Score-Category One

#### THEATER 1820

##### **Selected Topics I**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### THEATER 1823

##### **Selected Topics IV**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. **Prerequisite:** Course requires Reading Placement Test Score-Category One (6 lab hours)

#### THEATER 1840

##### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor. Course requires Reading Placement Test Score-Category One (1 to 4 lecture hours)

#### THEATER 2211

##### **Repertory Acting**

3 credit hours

Helps the actor create roles and work in an ensemble. Selections include children's theater, comedy, drama, musicals, and/or rehearsed improvisational works. Rehearsal and performance are required. **Prerequisite:** Consent of instructor based on audition. Course requires Reading Placement Test Score-Category One (3 lecture hours)

#### THEATER 2221

##### **Stagecraft**

3 credit hours

Introduction to stage equipment, tools, materials and traditional methods of set construction and scene painting. **Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)



## THEATER 2222

### **Technical Production**

3 credit hours

Introduction to the new materials and techniques of technical production, including special effects, lighting, and sound.

**Prerequisite:** Course requires Reading Placement Test Score-Category One (2 lecture hours, 2 lab hours)

## THEATER 2230

### **Play Directing**

3 credit hours

Helps the inexperienced director make choices about scripts, script analysis, casting, focus of scenes, and the mood, rhythm, pace and main idea of productions. A participatory course that includes readings and attendance at plays, exercise work and scene direction. **Prerequisite:** Course requires Reading Placement Test Score-Category One (3 lecture hours)

## THEATER 2800

### **Advanced Experiential Special Topics**

1 to 3 credit hours

Experiential courses cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline.

They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One

## THEATER 2820

### **Advanced Selected Topics I**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. **Prerequisite:** At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

## THEATER 2860

### **Cooperative Education/Internship (Occupational)**

1 to 4 credit hours

Participation in occupational area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit, up to four credits. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits of related study

## THEATER 2865

### **Cooperative Education/Internship Advanced (Occupational)**

1 to 4 credit hours

Continuation of Cooperative Education/Internship (Occupational). Participation in occupational work experience under supervision. Learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning

experience. Minimum of 75 clock hours per semester credit, up to a minimum of 300 clock hours for four semester credits.

**Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester credits in a related field of study

## THEATER 2870

### **Cooperative Education/Internship (Transfer)**

1 to 4 credit hours

Participation in transfer area of work study experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum of 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, 2.0 cumulative grade point average, and 12 semester hours of related study

## THEATER 2871

### **Cooperative Education/Internship Advanced (Transfer)**

1 to 4 credit hours

Participation in transfer area of study work experience under supervision of both college and employer. Internship/cooperative education learning objectives developed by student and faculty adviser, with approval of employer, to provide appropriate work-based learning experience. Minimum 75 clock hours per semester credit. **Prerequisite:** Consent of instructor or written permission of the Cooperative Education/Internship program staff and faculty adviser, successful completion of Cooperative Education/Internship I (Transfer), cumulative grade point average of 2.0, and 12 semester credits in related field of study

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## TRAVEL, TOURISM AND EVENT PLANNING

### TRAVEL, TOURISM AND EVENT PLANNING 1121

#### **Introduction to the Travel, Tourism and Meetings Industries**

3 credit hours

Overview of the career opportunities within the travel, tourism and meeting planning industries. Includes airlines, cruise lines, tour operators, wholesalers, charter operations, hotel representatives, car rental agencies, tourist offices, meeting and convention planning companies, incentive travel, consolidators, travel agencies and home-based agents. Specific job titles and necessary skills are examined. (3 lecture hours)

### TRAVEL, TOURISM AND EVENT PLANNING 1122

#### **Introduction to World Destinations**

3 credit hours

Covers the seven continents of the world in general terms. Discusses basic geography terminology, including map reading, time zones, and the location of major airports and cities. Examines companies serving these areas for tourism purposes. Analyzes cultural differences, weather and climate conditions from a traveler's perspective. (3 lecture hours)

### TRAVEL, TOURISM AND EVENT PLANNING 1123

#### **Introduction to Travel Documentation**

3 credit hours

Domestic and international air travel basic terminology and documentation procedures, including fares, reservations, e-ticketing, airline computer Global Distribution Systems (GDS), and Internet capabilities. Examines the interrelationships of accommodations, car rentals, ground handlers, rail travel, air travel, consolidators and tours. (2 lecture hours, 2 lab hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1124

**Introduction to Travel Communication and Business Etiquette**

3 credit hours

Specialized industry interactive techniques and communication standards for travel and meeting planning arrangements. Includes various modes of information transmittal, protocols and professional etiquette for interpersonal interactions in the travel, tourism and meetings industries. (3 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1126

**North American Destinations**

2 credit hours

In-depth study of North America, including the United States, Canada, Mexico, and the islands in the Caribbean and Atlantic Ocean that are in proximity to the North American continent. Covers the location of major cities, airports and sea ports and the air, land and cruise companies serving these areas. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. **Prerequisite:** Travel, Tourism and Event Planning 1122 with a grade of "C" or better or consent of instructor (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1127

**European Destinations**

2 credit hours

In-depth study of Europe and the Middle East. Covers the location of major cities, airports and sea ports and the air, land and cruise companies serving these areas. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. **Prerequisite:** Travel, Tourism and Event Planning 1122 with a grade of "C" or better or consent of instructor (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1128

**Asian and South Pacific Destinations**

2 credit hours

In-depth study of Asia and the South Pacific. Covers the location of major cities, airports and sea ports and the air, land and cruise companies serving these areas. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. **Prerequisite:** Travel, Tourism and Event Planning 1122 with a grade of "C" or better or consent of instructor (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1129

**Central and South American Destinations**

2 credit hours

In-depth study of Central and South America. Covers the location of major cities, airports and sea ports and the air, land and cruise companies serving these areas. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. **Prerequisite:** Travel, Tourism and Event Planning 1122 with a grade of "C" or better or consent of instructor (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1130

**African Destinations**

2 credit hours

In-depth study of Africa. Covers the location of major cities, airports and sea ports and the air, land and cruise companies serving these areas. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. **Prerequisite:** Travel, Tourism and Event Planning 1122 with a grade of "C" or better or consent of instructor (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1150

**Outside Sales/Home Based**

3 credit hours

Knowledge, insight and appreciation of the distinctions between the terms Outside Sales Agent, Home-Based Agent and Independent Contractor within the realm of the travel and tourism industry. Students will assess successful marketing strategies from travel industry professionals. Course may be taken two times for credit. (3 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1202

**Business Management for the Travel Professional**

3 credit hours

Critical skills necessary to manage and succeed in the travel industry. Office routines, best business practices, compensation, operations, marketing, training, technology, legal issues, accounting and strategic planning skills. (3 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1209

**Event Management**

3 credit hours

Event management fundamentals for social, corporate and not-for-profit events. Planning, design, implementation and evaluation of events are covered. (3 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1210

**Introduction to Global Distribution Systems**

3 credit hours

Fundamental computer entries to complete an airline reservation within a computer system. Includes the major airline Global Distribution Systems (GDS), their operation and value to travel agents, outside sales agents, home-based agents and independent contractors. (2 lecture hours, 2 lab hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1820

**Selected Topics**

1 to 3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1821

**Selected Topics II**

1 credit hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour)

## TRAVEL, TOURISM AND EVENT PLANNING 1822

**Selected Topics III**

2 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 1823

**Selected Topics IV**

3 credit hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 1840

**Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2130

**Airline Operations and Security Procedures**

3 credit hours

Operations and security procedures for domestic and international airlines, airport policies for handling passengers and their baggage, and procedures for transporting pets and other live animals, denied boarding compensation and other service areas. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2201

**Fundamentals of Meeting and Event Planning**

3 credit hours

Introduction to meeting and event planning core concepts, including goals and objectives, budgets, planners and vendors, facilities, and service providers. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2203

**Incentive Travel and Planning**

3 credit hours

Incentive travel and planning strategies, techniques and current trends, including program costs, program budgets, proposal writing, presentations, pre-trip and on-site operations, post-program evaluations, and planning incentive travel programs will be covered in this course. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2205

**Advanced Meeting and Event Planning**

3 credit hours

Advanced study of policies, procedures and techniques for the meetings, convention and special event management industries, including evaluation of meetings industry affiliations and trade publications. Characteristics and requirements of incentive travel, Social, Military, Educational, Religious, or Fraternal (SMERF) organizations, and government agency meetings. Also includes marketing and promotional strategies for the arrangement of international itinerary preparation and meeting planning. **Prerequisite:** Travel, Tourism and Event Planning 2201 with a grade of "C" or better or consent of instructor (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2207

**Marketing for the Travel, Tourism and Meetings Industries**

3 credit hours

Travel, tourism and meeting industries marketing principles. Includes market research, market segmentation and current trends along with strategies, positioning and marketing objectives. Students develop an industry marketing plan. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2210

**Advanced Global Distribution Systems**

3 credit hours

Covering the major airline Global Distribution Systems (GDS) with hands-on experience. Formats required to make itinerary changes, connection selections, fare quotes, reserve cars and hotels, and convert currency. Advanced booking procedures for reserving tour packages and cruises. **Prerequisite:** Travel, Tourism and Event Planning 1210 with a grade of "C" or better or consent of instructor (2 lecture hours, 2 lab hours)

TRAVEL, TOURISM AND EVENT PLANNING 2220

**Internet Navigation Skills for the Travel Professional**

3 credit hours

Examination and exploration of travel-related websites, including airlines, cruise lines, hotels, tour operators, government, weather and health organizations. Overview of the design, content and methods of navigation among these sites, and analysis of the various ways that the Internet impacts the travel industry. Students have a hands-on opportunity to build their own website for their favorite travel destination. **Prerequisite:** Computer Information Systems 1110 or 1130 or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

TRAVEL, TOURISM AND EVENT PLANNING 2221

**World Cultures and International Tourism Issues**

3 credit hours

The impact of international cultural differences on the travel, tourism and meetings industries. Includes business ethics, protocols, values, social customs, cultural taboos and accepted standards of behavior chosen from countries with which the United States presently has travel agreements. Also covers current global problems and international issues related to travel, tourism and meeting planning. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2229

**Advanced Travel Documentation**

3 credit hours

Advanced methods for evaluating and selling domestic and international airline reservations, airline tickets and tours. Interpret international documentation requirements along with worldwide travel codes and terminology. Includes research and utilization of information on the Internet and in hotel, tour and resource manuals. **Prerequisite:** Travel, Tourism and Event Planning 1123 with a grade of "C" or better or consent of instructor (2 lecture hours, 2 lab hours)

TRAVEL, TOURISM AND EVENT PLANNING 2230

**Travel Sales and Customer Service**

3 credit hours

Sales techniques related to the travel, tourism and meetings industries and strategies for building customer service skills. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2236

**Cruise Industry Sales Specialization**

3 credit hours

Study of the cruise line industry with analysis of contemporary cruising, marketing strategies and documentation. Includes evaluation of types of ships, styles, sizes, itinerary selection and destinations. Cruise Lines International Association (CLIA) members cruise lines will be evaluated. Credit towards CLIA certification available. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2240

**Tour Escorting, Planning and Operations**

3 credit hours

Wholesale and group tour operations, including the initiation and development of tours and vacation packages, generating group business via travel agency sales, marketing travel products to the retail industry, and reviewing documentation preparation. Basic theories and strategies related to tour escorting are covered. (3 lecture hours)

TRAVEL, TOURISM AND EVENT PLANNING 2820

**Advanced Selected Topics**

1 to 3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 to 3 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 2821

**Advanced Selected Topics II**

1 credit hour

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (1 lecture hour)

## TRAVEL, TOURISM AND EVENT PLANNING 2822

**Advanced Selected Topics III**

2 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in the college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (2 lecture hours)

## TRAVEL, TOURISM AND EVENT PLANNING 2823

**Advanced Selected Topics IV**

3 credit hours

Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in the college *Class Schedule*. May be taken three times for credit as long as different topics are selected. (3 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

**VOCATIONAL SKILLS**

## VOCATIONAL SKILLS 0611

**Employment Skills I**

2 credit hours

Introduction to pre-employment skills to prepare for job placement. Includes resume writing, job interviewing, and completing job applications. **Prerequisite:** Permission of the Vocational Skills program coordinator is required. This course can only be taken on a pass/fail basis. (2 lecture hours)

## VOCATIONAL SKILLS 0612

**Employment Skills II**

2 credit hours

Introduction to on-the-job skills. Includes understanding standards of behavior; communication with employers, co-workers and public; and time management. **Prerequisite:** Permission of the Vocational Skills program coordinator is required. This course can only be taken on a pass/fail basis. (2 lecture hours)

## VOCATIONAL SKILLS 0620

**Keyboard Skills**

2 credit hours

Introduction to the computer keyboard and typing skills. Includes how to touch type alphabetic and special characters. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills coordinator is required. (2 lecture hours)

## VOCATIONAL SKILLS 0621

**Computer Skills I**

2 credit hours

Introduction to computer technology and word processing. Includes the basic parts of a computer, creating and editing documents for business, and using the Internet and e-mail. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills coordinator is required and Vocational Skills 0620 or keyboard experience (2 lecture hours)

## VOCATIONAL SKILLS 0622

**Computer Skills II**

2 credit hours

Continuation of Vocational Skills 0621. Includes word processing, text editing, margins, text alignment, tabs, bullet lists, envelopes and labels. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills coordinator is required and Vocational Skills 0621 (2 lecture hours)

## VOCATIONAL SKILLS 0625

**Business Office Skills I**

2 credit hours

Introduction to basic office tasks and operation of office machines. Includes filing, mailing, copying, faxing and time management skills. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills Coordinators is required. (2 lecture hours)

## VOCATIONAL SKILLS 0631

**Automotive Skills I**

2 credit hours

Introduction to entry-level skills in automotive repair, maintenance and detailing. Includes classroom and hands-on training in basic car operations, tools and safety; oil and filter changes; basic maintenance of fluids, belts and tires; and interior and exterior cleaning. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills program coordinator is required. (2 lecture hours)

## VOCATIONAL SKILLS 0641

**Food Service Skills I**

2 credit hours

Introduction to the basic skills required for entry-level food service occupations. Includes demonstration and hands-on learning in basic sanitation, safe food handling, safety issues, basic food preparation and cooking. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills program coordinator is required. (2 lecture hours)

## VOCATIONAL SKILLS 0651

**Hotel Housekeeping Skills I**

2 credit hours

Introduction to basic skills required for entry-level hotel housekeeping occupations. Includes basic room cleaning, proper trash handling and cleaning product safety. Personal grooming and social skills are also covered. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills program coordinator is required. (2 lecture hours)

## VOCATIONAL SKILLS 0661

**Horticulture Skills I**

2 credit hours

Introduction to skills needed to work in a production greenhouse. Topics include plant potting and watering procedures, plant grooming methods, transplanting methods and plant propagating methods. Students assist in retail operations and plant care. This course can only be taken on a pass/fail basis. **Prerequisite:** Permission of the Vocational Skills program coordinator is required. (2 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)



## WELDING TECHNOLOGY

### WELDING TECHNOLOGY 1100

#### **Welding I**

3 credit hours

Basic electric arc, oxy-fuel, gas metal arc and gas tungsten arc welding processes. Safety procedures required to set up and shut down welding equipment for the various processes. Hands-on experience includes practice with the four welding systems using various thickness materials. Industrial standards and American Welding Society (AWS) standards for quality are discussed. (2 lecture hours, 2 lab hours)

### WELDING TECHNOLOGY 1112

#### **Oxy-Fuel, Welding, Plasma Cutting and Brazing**

3 credit hours

Operation of oxyacetylene welding and cutting equipment and plasma cutting. Students learn to produce quality welds and braze joints in the flat, horizontal, overhead and vertical positions. Also introduces cutting methods of profile, pipe, square and bevel.

**Prerequisite:** Welding Technology 1100 or equivalent (1 lecture hour, 4 lab hours)

### WELDING TECHNOLOGY 1122

#### **Shielded Metal Arc (SMAW)**

3 credit hours

Theory and practice in the preparation and welding of steel joints in various positions. Safety, electrode selection, inspection and testing. Skill is developed in producing different position butt and fillet welds. American Welding Society testing is stressed.

**Prerequisite:** Welding Technology 1100 or equivalent (1 lecture hour, 4 lab hours)

### WELDING TECHNOLOGY 1132

#### **Gas Metal Arc (MIG)**

3 credit hours

Solid steel and cored wire welding on common industrial joints. Travel direction, weave motion, bead sequence and gun angles for out-of-position welding on steel are emphasized. Setup and operation of MIG welder for flux-core, stainless steel and aluminum welding under varying conditions. **Prerequisite:** Welding Technology 1100 or equivalent (1 lecture hour, 4 lab hours)

### WELDING TECHNOLOGY 1142

#### **Gas Tungsten Arc (TIG)**

3 credit hours

Theory and practice of welding in all positions and on various joint configurations using the Gas Tungsten Arc Welding (GTAW or TIG) welding process on carbon steel, stainless steel and aluminum.

**Prerequisite:** Welding Technology 1100 or equivalent (1 lecture hour, 4 lab hours)

### WELDING TECHNOLOGY 1151

#### **Pipe Welding and Fabrication**

3 credit hours

Covers safety inspections, minor repairs, operating parameters, and operation of shielded metal arc welding (SMAW), gas metal arc welding (GMAW), and flux core arc welding (FCAW) equipment in a variety of positions on various materials used in pipe joints. Evaluating and solving complex welding and fabrication problems.

**Prerequisite:** Welding Technology 1100, 1112, 1122, 1132 and 1142 or equivalents or consent of instructor (1 lecture hour, 4 lab hours)

### WELDING TECHNOLOGY 1160

#### **Skill Assessment**

3 credit hours

Theory and practice of test qualification procedures for certification in accordance with AWS, API or other welding codes. Simple non-qualifying bend tests and/or non-destructive tests are performed

at no extra cost. Additional testing may be performed by a private laboratory at the student's expense. **Prerequisite:** Welding Technology 1100 1112, 1122, 1132 and 1142 or equivalents or consent of instructor (1 lecture hour, 4 lab hours)

### WELDING TECHNOLOGY 1840

#### **Independent Study – Individualized**

1 to 4 credit hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

For additional information, please contact the Business and Technology Division Office at (630) 942-2592 or [www.cod.edu/Academic/Bus\\_Tech](http://www.cod.edu/Academic/Bus_Tech)

## WRITING

### WRITING 0461

#### **Writing for College**

1 credit hour

Allows students and instructor to identify one or more areas of writing development that will prepare them for college-level writing assignments. Students and instructor will agree on the writing goals and then create and execute a plan, based on a student writing sample, that will result in improvement in the targeted area. May be taken three times for credit. **Prerequisite:** Appropriate score on the Writing Pre-Course placement test (1 lecture hour)

For additional information, please contact the Liberal Arts Division Office at (630) 942-2047 or [www.cod.edu/larts](http://www.cod.edu/larts)

## ZOOLOGY

### ZOOLOGY 1220

#### **Insects and Humans**

3 credit hours

Study of insect life to include identification and ecology. Recognition and control of major pests as well as other arthropods such as arachnids, millipedes and centipedes. Relationships of insects to humans in the areas of agriculture, culture, forestry and medicine are explored. (2 lecture hours, 2 lab hours)

### ZOOLOGY 1800

#### **Experiential Special Topics**

1 to 3 credit hours

Experiential courses in Zoology cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the Zoology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of Zoology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

**ZOOLOGY 1840*****Independent Study – Individualized***

1 to 4 credit hours

Exploration and analysis of topics within Zoology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 4 lecture hours)

**ZOOLOGY 2250*****Comparative Vertebrate Zoology***

4 credit hours

The classification, anatomy and physiology of vertebrates are presented in a comparative manner. Topics include vertebrate evolution, vertebrate development, and various body systems and their organs. Student dissection of various examples of vertebrates is required. **Prerequisite:** Biology 1151 and 1152 (3 lecture hours, 3 lab hours)

**ZOOLOGY 2260*****Invertebrate Zoology***

4 credit hours

Study of invertebrate phyla. Topics include invertebrate taxonomy, anatomy, physiology, reproduction, evolution, and the relationships of invertebrate with their environment. **Prerequisite:** Biology 1151 and 1152 or equivalent (2 lecture hours, 4 lab hours)

**ZOOLOGY 2800*****Advanced Experiential Special Topics***

1 to 3 credit hours

Advanced experiential courses in Zoology cover topics not otherwise covered by general education courses and other courses in the *Catalog* for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused

reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex zoology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) **Prerequisite:** At least one course in Zoology or consent of instructor

**ZOOLOGY 2840*****Experimental/Pilot Class***

1 to 6 credit hours

Exploration and analysis of topics within the discipline of Zoology. This course is used to pilot a proposal for a permanent discipline course. May be taken three times for credit as long as different topics are selected. **Prerequisite:** Consent of instructor (1 to 6 lecture hours, 2 to 12 lab hours)

For additional information, please contact the Health and Sciences Division Office at (630) 942-8331 or [home.cod.edu/academics/healthandsciences](http://home.cod.edu/academics/healthandsciences)





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