SOUTH FLORIDA STATE COLLEGE

Division of Arts and Sciences

COURSE SYLLABUS

Spring Term 2023

CHM 1020 Introducing General Chemistry (3 credit hours)

Welcome – Welcome to CHM 1020, Introducing General Chemistry. The overarching goals of this course are: (1) to encourage a sense of awe, wonder, and curiosity about Chemistry as one of the four physical sciences, (2) to foster an appreciation for the beauty of nature's physical laws in general, (3) to develop a lifelong interest in Chemistry, and (4) to help the students to build the foundation and prepare for the next level Chemistry courses.

Catalog Description: Introducing General Chemistry is an introductory course designed for liberal studies and non-science majors. It is also suitable for you, if you have not taken high school chemistry and plan to take CHM 2045C. The course covers modern chemical theories used to develop an understanding of fundamentals of inorganic chemistry and its applications without an extensive use of mathematics. Emphasis is on quantitative relationships using dimensional analysis to solve problems and includes selected topics from both organic and biochemistry. This course may not be taken for credit subsequent to earning a grade of C or higher in CHM 2045C.

This course is designed for non-science majors. We will cover some basic chemical principles as needed to support your understanding of Chemistry as it relates to some major societal-technological issues. Basic chemical principles are covered and related to larger topics that may include the chemistry of water and the atmosphere, energy sources, natural and man-made materials, chemistry of the everyday life, and environmental issues. The course assumes that you will be able to read critically and thoughtfully, work independently with textbook, actively participate in online discussions, and timely submit all assignments.

Course Specific Outcomes: Upon successful completion of this course, students will be able to:

1. Demonstrate knowledge of the names and symbols of elements, and the general structure of the Periodic Table of Elements.
2. Demonstrate an understanding of the structures of atoms, isotopes, and ions.
3. Demonstrate the ability to write and interpret chemical formulas, and correctly balance chemical equations.
4. Demonstrate an understanding of the differences between physical and chemical properties, and physical and chemical changes.
5. Demonstrate an understanding of the rules for naming simple covalent and ionic compounds.
6. Demonstrate an understanding of the difference between pure substances (elements and compounds)
and mixtures (homogeneous and heterogeneous).

7. Demonstrate an understanding of the Earth's atmosphere and its chemistry, including its layers, composition, air pollution, ozone chemistry, and global climate change.
8. Demonstrate an understanding of the chemistry of aqueous media, including pure water, solutions, and acids/bases.
9. Demonstrate an understanding of the formulas, structures, and names of simple organic molecules and functional groups, and how they relate to energy sources, nutrition, and materials.
10. Demonstrate an understanding of nuclear reactions and processes, including radioactive decay and nuclear fission.

Prerequisites: None.

Required Course Materials:
Chemistry for Changing Times 14th edition; John W. Hill; Terry W. McCreary; Doris K. Kolb; ISBN -13: 9780133890754

Instructional Methods:

This course will be offered in the online format. The textbook is available at the college bookstore, or you may purchase it online. You will be required to access the course's Brightspace website regularly for online discussions, notes, and to take both quizzes and exams. All exams and quizzes will be administered online. There are no required face-to-face meetings, and you are never required to be on campus.

Course Resources:
Besides the required textbook, all additional study materials, helpful links, assignments, and activities for every week of the class are available on the **Brightspace course page**. All work that is scheduled for every week of the course on the Brightspace course page, must be submitted by the due dates indicated in the course schedule. The introductory post is required in the first week or you will be counted as a "no show" and will be unenrolled from the course, which may impact your financial aid or student status. Prompt submission of assignments and quizzes also constitute attendance in the course. The Course Schedule provides due dates for all course materials.

Course Requirements: Assessments (Exams/Quizzes/Assignments):

INTERNET: You must have access to the Internet to complete the requirements of this course and access the online textbook. You will be expected to access the class Brightspace website weekly to obtain assignments, take quizzes, access course material, and take exams.
You should be proficient in using a computer. Brightspace online learning environment will be used for the course. You should have readily accessible and reliable access to the Internet **(you only have one attempt for every assignment in this course)**. For **successful** completion of this course, it is imperative to refer to the **Course Schedule and Assignment Checklist**, at the end of the **Course Syllabus,** log into Brightspace every day, check your college email and Brightspace course email regularly, refer to your course announcement on Brightspace, and communicate with the instructor periodically via email or forum. You must read all assigned chapters in your textbook; submit the discussions posts and peer replies, quizzes, and exams on time. You must view the weekly folders on Brightspace, which include

links to PowerPoint presentations, discussion boards, quizzes, exams, and additional readings. **NO LATE WORK IS ACCEPTED IN THIS COURSE.**

The **Chemistry Video** or **Picture of the Day** (**CVPOD**) discussions:
These discussions are aimed on inspiring an interest in the subject of Chemistry, learning more about this subject on the specific (and often quite captivating!) examples, and maintaining an enriching student-student conversation on the course-related Chemistry topics throughout the semester. Please review the ***CVPOD Discussions Instructions*** file located in the **Syllabus Schedule and other documents** module for the details. Usually there will be one CVPOD discussion scheduled for every week of the course. See the **Course Schedule and Assignments Checklist** located in the **Syllabus Schedule and other documents** module for specific deadlines.

Online Quizzes: 15 scheduled online quizzes will be given, according to the *Course Schedule & Assignment Checklist*. Each quiz contains about 20 multiple choice questions. During the process of taking a quiz you may save your answers, and then return to it later, before you finally are ready to submit it. Please note though, that you only have **one attempt** for every quiz in this course. So, make sure you have reviewed the corresponding chapter content, and feel comfortable with the material, before you proceed to taking a quiz. No make-up will be provided for missed quizzes.

Exams: There will be **3 online unit exams** given during the semester, according with Course Schedule. Each exam will contain about 40 multiple choice questions and you will have to take it in one sitting. That means, once you have started you won't be able to interrupt. It also will be timed, with the time limit of 2 hr. There will be only **one attempt** for every exam in this course. So, make sure you have reviewed the corresponding chapters, and feel comfortable with the material, before you proceed to taking an exam. No make-up will be provided for missed exams.

Final Exam Policy: The final examination in this course is mandatory. Any student not completing the exam will receive a grade of F for the course.
Final Exam Format: online, comprehensive, about 40 multiple choice questions, recommended time limit 1 hr, taken individually on your own schedule during the final exam time.

Grading:
Grading Evaluation/Criteria
Grading percentages for different assignments or exams may vary somewhat for each faculty teaching the course.

Grade percentage:

The grades of exams, project and quizzes will be added together to determine your final grade. The final grade will be calculated according to the following scheme:

Quizzes	25 %
Discussions	25 %
Unit Exams	25 %

Final (comprehensive)	25 %
Totally	100%

Grading Scale:

≥ 90% A
80 – 89 B
70 – 79 C
60 – 69 D
< 60% F