

# GRADUATE STUDENT POLICY HANDBOOK

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M.S. In Quantitative Biology  
and Bioinformatics

Carnegie Mellon University  
Mellon College of Science



# M.S. In Quantitative Biology and Bioinformatics

## RESOURCE HANDBOOK FOR GRADUATE STUDENTS

### Fall 2024 Matriculating Students

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# Welcome

The Department of Biological Sciences directors would like to welcome you to the Masters in Quantitative Biology and Bioinformatics program (MSQBB) at Carnegie Mellon University! This document explains the policies of the MSQBB program. You should read it thoroughly. The MSQBB – Advanced Study degree option is also governed by this document and additional information specific to that degree is on pages 9-12.

While this handbook is specific to your academic experience in the MSQBB program, there are several other resources and offices that graduate students are encouraged to consult during their tenure at Carnegie Mellon University. Information about The Word, the student handbook, the Office of the Assistant Vice Provost for Graduate Education, the Office of the Dean of Student Affairs and others are included in Appendix A of this handbook.

## **MSQBB MISSION STATEMENT**

The MSQBB program seeks to provide students with a basic science background but who haven't yet had quantitative training with skills to enter careers in Bioinformatics and related fields or to gain quantitative skills to help them in the next steps in their education and professional development. The curriculum provides both breadth and depth of training in Quantitative Biological Data Analysis and Bioinformatics skills. Interested students are also given opportunities to pursue research. Our graduates are prepared for rewarding jobs in industry or to pursue their further degrees at top universities.

## **INTRODUCTION**

The Department of Biological Sciences has prepared this statement of policies and procedures to help answer questions that students may have as they enter the MSQBB program. This document specifies requirements that must be achieved in order to be a student in good standing; failure to meet any of these requirements may result in dismissal from the program.

The MSQBB Steering Committee and Graduate Programs Offices in the department provide ongoing guidance and assistance to students throughout the course of their graduate career, and any questions or concerns may be discussed with either the faculty of the MSQBB Steering Committee or the Department Head at any time. The Word/Student Handbook which details university-wide policies, is available upon request from the Graduate Programs Office.

## **UNIVERSITY POLICIES & EXPECTATIONS**

It is the responsibility of each member of the Carnegie Mellon community to be familiar with university policies and guidelines. In addition to this departmental graduate student handbook the following resources are available to assist you in understanding community expectations:

The Word/Student Handbook: [www.cmu.edu/student-affairs/theword//index.html](http://www.cmu.edu/student-affairs/theword//index.html)

Academic Integrity Website: [www.cmu.edu/academic-integrity](http://www.cmu.edu/academic-integrity)

University Policies Website: [www.cmu.edu/policies/](http://www.cmu.edu/policies/)

Office of Graduate and Postdoctoral Affairs: [www.cmu.edu/graduate/policies/index.html](http://www.cmu.edu/graduate/policies/index.html)

# Program Contacts

## MSQBB STEERING COMMITTEE FACULTY

Whom to contact for what?

### Yongxin (Leon) Zhao, Ph.D.

Director, MSQBB

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*Overall Program Management, Academic Integrity Issues, Leave of Absence Approval*

### D.J. Brasier, Ph.D.

Assistant Director (Academic Advising),  
MSQBB, Biological Sciences

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*Academic Advising and Course Selection, Periodic Academic Progress Checks, Change to P/F, Research for Credit, Graduation Certifications, Student Life Issues, International Student Issues, Oral Communication Skills, Alumni Networking, Bioprocessing Optimization, Entrepreneurship, and Regulatory Compliance and Social Events, Career Center and Industry Liaison, Diploma Ceremony, Overall Program Management, CPT authorization*

## PROGRAM FACULTY

<http://www.cbd.cmu.edu/directory/faculty/voting-faculty/>

<https://www.cmu.edu/bio/people/faculty/index.html>

## PRIMARY SUPPORT STAFF

### Ena Miceli

Director of Graduate Operations (Biological Sciences Graduate Programs Office)

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*Graduate Student Database Management, Pre- and Post-Admission Procedures through Graduation, Biological Sciences Graduate Ombudsperson, Graduation Certifications, Diploma Ceremony, Orientation Coordination*

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## DEPARTMENTAL LEVEL CONTACTS

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## **Dejan Slepčev, Ph.D.**

Associate Dean for Faculty and Graduate  
Affairs (BSC)

WH 7123

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slepcev@math.cmu.edu

## **UNIVERSITY LEVEL CONTACTS**

**Graduate Student Ombudsperson**

Warner Hall 533

412-268-7307

suzannel@andrew.cmu.edu

*Students may confer with the university  
graduate student ombudsman on issues of  
process or other concerns as they navigate  
conflicts Suzanne Laurich-McIntyre, Ph.D*

## **John Hannon, Ph.D.**

**Student Affairs Liaison**

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jfhannon@andrew.cmu.edu

*Supporting students to manage mental and  
physical health and other personal issues including  
finding appropriate resources and help managing  
impact on coursework and life outside of classes.*

# Section 1. Degree Attainment

## Courses, Grades, Forms, & Student Status

### COURSEWORK

Before beginning courses, all students are required to satisfactorily complete an academic integrity instructional module, as proscribed by the Steering Committee.

The university's complete Schedule of Classes can be found at [www.cmu.edu/hub](http://www.cmu.edu/hub).

To receive the M.S. degree, students must successfully complete these requirements:

- (A) At least 90 units of coursework (114 units for students in the MSQBB-AS program), which includes courses in specific categories as listed below
- (B) Average grade of B or above (GPA = 3.0) in those 108 or more units counted toward degree certification
- (C) Full-time course registration (at least 36 units) for each semester in the program

Coursework consists of:

- (A) Required Courses (37-39 units)

*Minimum C grade in each course counted toward graduation*

*Should all be done in first semester*

- 03-604: Professional Issues (3 units, Fall)
- 03-701-A1: Statistical Computing for Biological Sciences (6 units, Fall)
- 03-702-A2: Data Analysis for Biological Sciences (6 units, Fall)

- Programming (10-12 units, one of the following)
- 02-601: Programming for Scientists (12 units, Fall)
- 15-110: Principles of Computing (10 units, typically Fall but Spring option)
- 15-112: Fundamentals of Programming and CS (12 units, typically Fall but Spring option)
- 03-708-A3: Practical Computing for Biologists (6 units, Spring)
- 03-713-A4: Bioinformatics Data Integration Practicum (6 units, Spring)

- (B) Core Elective Courses (12 units from the list below)

*Minimum grade of C in each course*

- 02-604: Fundamental Bioinformatics (12 units, Spring)
- 02-719: Genomics and Epigenetics of the Brain (12 units, Fall)
- 02-731: Modeling Evolution (12 units, Spring)
- 03-709: Applied Cell & Molecular Biology (Fall)
- 03-711: Computational Molecular Biology and Genomics (Fall)
- 09-615: Computational Modeling, Statistical Analysis and Machine Learning in Science (Fall)

Students in the MSQBB-AS program are also required to take a second class from the above list (12 additional units).

- (C) At least 39-41 units of elective courses must be taken from Biological Sciences, 03-XXX listed courses (total units to graduate must be 90)

*Minimum C grade in each course counted toward graduation.*

Students in the MSQBB-AS program are also required to take 51-53 elective course units (to a total of 114 toward graduation).

*Minimum C grade in each course counted toward graduation.*

Up to 24 units of 02-6xx or 02-7xx courses can count toward electives (36 units for MSQBB-AS students). Additional courses from other departments may be taken with prior written approval from the Assistant Director.

Please note that all elective courses in Biological Sciences and other Departments have limited space and some courses may not have space for all students who want them. Every effort will be made to help students get into appropriate and relevant elective courses.

Also, students should note that many courses (including some from host departments) have pre-requisite knowledge. Students should check with the Academic Advisor for all courses.

## Other notes

- Up to 12 units of research (03-700) with a faculty advisor may be counted toward the depth credits. Research should be approved by the Assistant Director (Academic Advising).
- Any course not listed above will need written approval of the Assistant Director (Academic Advising). Request will be evaluated based on relevance to program educational goals and absence of equivalent pre-approved courses.
- CMU undergraduate students enrolling for a continuing M.S. can use relevant courses from their undergraduate years to count toward M.S. degree. The courses used toward M.S. degree CANNOT be counted toward undergraduate degree certification. Undergraduate degree advisors need to verify and sign the Declaration of Carry-Over Credit form confirming no double counting.

## Important Rules for Coursework

- All student course selections are subject to the approval of the MSQBB Steering Committee.
- Students must maintain full-time enrollment in the program (minimum 36 units per semester - the only exception that is allowed is if CMU Student Affairs and/or a medical provider request that a student be allowed to take a reduced course load).
- Optional summer internships for course credit (with CPT authorization) may be counted toward elective credit for students in the MSQBB-AS program. CPT authorization depends on the regulations set by the office of international education, any internship should be discussed with the Assistant Director of the MSQBB program prior to applying.

## **COURSE REGISTRATION**

### Registering For Classes

Incoming students will work with the Assistant Director over the summer to prepare for their fall courses. The 4 Easy Steps to Registration may be found at <https://www.cmu.edu/hub/registrar/registration/index.html>

- To be in good standing, students must be full-time, meaning they must take at least 36 units per semester.
- Requests for part-time status are only granted in rare, extenuating circumstances.
- Students are advised to take no more than 48 units in any semester.
- Requests to take more than 48 units require approval from the Assistant Director. Students need to meet all the following criteria: (1) have a QPA above 3.50, (2) justify the value of the added coursework to their goals, (3) show how they will balance the added work in their weekly schedule, and (4) justify the need to take the extra courses in the requested semester and not delay the class to a later semester.



# Course Forms

## **PASS/FAIL COURSES**

With petition to and approval from the Assistant Director (Academic Advising), students may elect to take a course Pass/Fail. Such a petition must give a compelling reason for taking a course Pass/Fail and must argue why that will not impact the student's program of study. Within the registration ADD period during the first two weeks of each semester, the student must fill out the Pass/Fail Approval Form and receive permission from the Assistant Director (Academic Advising) and the Department Head (Biological Sciences). Switching a course to Pass/Fail mid-semester will generally only be approved under special circumstances.

- Prerequisites may not be taken Pass/Fail.
- Classes taken Pass/Fail may not be used to fulfill graduation requirements, with the exception of seminar courses.
- Pass/Fail status is irrevocable.

## **AUDITING A COURSE**

With approval of the MSQBB Steering Committee, a graduate student may audit a course by obtaining permission of the instructor or teaching department and completing the Course Audit Approval Form, including obtaining the signature of the Assistant Director (Academic Advising). Audited classes are not taken for credit and cannot be used to fulfill graduation requirements.

## **ADDING A COURSE**

During the early Add period of each semester, students may add a course by registering online. After the Add deadline, they may add a course by completing the Late Add Request Form and obtaining permission of both: 1) the instructor or teaching department and 2) the Assistant Director (Academic Advising).

## **DROPPING A COURSE**

Students may withdraw from a course online. The university has a Drop deadline toward the end of the semester, after which the course appears on the student's transcript as withdrawn (W). The last day to withdraw from a class is the final day of classes.

Complete the Retroactive Add/Drop Petition form after the Drop deadline obtaining permission of both: 1) the instructor or teaching department and 2) the Assistant Director (Academic Advising).

Remember, however, you must maintain full-time status in the program, which requires you to be registered for 36 units.

## **PITTSBURGH COUNCIL ON HIGHER EDUCATION (PCHE)**

Carnegie Mellon University offers students the opportunity to take courses for credit through a cross-registration program (see Pittsburgh Council on Higher Education (PCHE) and Cross-registration below) and through the receipt of transfer credit from other accredited institutions. The Carnegie Mellon University transcript will include information on such courses: Carnegie Mellon courses and courses taken through the university's cross-registration program will have grades recorded on the transcript and be factored into the QPA. All other courses will be recorded on this transcript, indicating where

the course was taken but without grades. Such courses will not be considered for academic actions, honors, or QPA calculations. (Note: suspended students may take courses elsewhere; however, they may receive transfer credit only if their college's and department's policies allow this.)

## Status

### **FULL-TIME STATUS**

Students must be registered for at least 36 units during each semester to be considered full-time. Any questions about registration should be directed to the Biological Sciences Graduate Programs Office or Enrollment Services (the HUB) or the Assistant Director (Academics).

### **LEAVE OF ABSENCE**

Students who need to delay their studies for personal, medical or academic reasons may do so with a Leave Of Absence (LOA, leaving the university temporarily with a commitment to return). Students must contact the Assistant Director (Academic Advising) and the program co-directors to discuss their plans and fill out the appropriate Leave Of Absence form. Final approval of LOA is pending approval of the MSQBB Steering Committee. The student's place in the program will be held until a mutually determined time. For more information refer to <http://www.cmu.edu/policies>.

### **WITHDRAWAL**

Students who need to withdraw from the program (leave the university with no intention of returning) for personal, medical or academic reasons must contact the Assistant Director (Academic Advising) to discuss their plans and fill out the appropriate Withdrawal form. For more information refer to [www.cmu.edu/policies/documents/StLeave.html](http://www.cmu.edu/policies/documents/StLeave.html).

### **STATUTE OF LIMITATIONS**

As outlined in the Master's Students Statute of Limitations, <http://www.cmu.edu/policies/documents/MastersStudentStatuteLimitations.html>, students who have matriculated at Carnegie Mellon beginning Fall 2012 will complete all requirements for the master's degree within a maximum of seven years from original matriculation as a master's student, or less if required by a more restrictive department, school or college policy. Once this time-to-degree limit has lapsed, the person may resume work towards a master's degree only if newly admitted to a currently offered master's degree program under criteria determined by that program.

### **TRANSFERRING COURSES**

The MSQBB program does not accept transfer credits.

CMU undergraduate degree holders, please refer to carry-over course credit details.

### **CHANGING PROGRAMS**

If an MSQBB student accepts another program's offer to begin before matriculation in the MSQBB program, the MSQBB committee reserves the right to nullify the MSQBB offer.

## **GRADES & ACADEMIC STANDING**

To be in good academic standing, a student is expected to maintain a B average (GPA = 3.0) in the coursework that will be counted towards the degree. No grade lower than B- in foundation course(s) and no grade lower than C in other course categories shall be used for completion of degree requirements.

## **UNIVERSITY POLICY ON GRADES**

This policy offers details concerning university grading principles for students taking courses and covers the specifics of assigning and changing grades, grading options, drop/withdrawals and course repeats. It also defines the undergraduate and graduate grading standards. The policy may be found at [www.cmu.edu/policies/student-and-student-life/grading.html](http://www.cmu.edu/policies/student-and-student-life/grading.html).

## **ACADEMIC PROBATION**

If the MSQBB Steering Committee determines that a student is making inadequate progress, it will notify the student in writing of the deficiencies and the consequences of failing to correct those deficiencies. Any student whose cumulative QPA is at or below 2.5 after one term or who is otherwise not making satisfactory progress toward their degree will receive a letter from the program placing them on academic probation. Under most circumstances, the student will be given one semester to earn a B average in the courses to be counted towards the degree. Additionally, students who don't earn minimum required grades in any classes (B- or higher in foundation classes or C or higher in other classes counting toward the degree) will also be placed on academic probation. Academic probation will end only when the student returns to a B average and fulfills the other requirements laid out in the terms of their probation. Failure to return to good academic standing after one semester dismissal from the program or other actions as decided upon by the administration of the program.

## **ACADEMIC INTEGRITY**

At all times students are expected to maintain ethical conduct as described in the university policies on Academic Integrity.

Serious action will be taken against all students who are caught violating the CMU Academic Integrity Code (as defined here: <http://www.cmu.edu/academic-integrity/>).

In addition to university policies, course instructors set specific policies for every assignment in their course. Instructors typically state on their syllabus what types of collaboration are allowed or not allowed on different types of assignments. However, students are responsible for making sure they understand what kind of collaboration is allowed or not. If you are not 100% certain about what is allowed on an assignment, do not start working on it until you have contacted the instructor to clarify. Unintentional violations of course policy are still treated as violations of academic integrity and can result in course-level penalties and program level penalties.

In addition to any course-level actions taken by instructors (e.g., giving the student a failing grade on the assignment up to a failing grade in the entire course without the option to withdraw), the program co-directors will impose penalties for academic integrity violations. Program level consequences may include any or all of the following: probation (see "Grades" below); suspension for one or more semesters; dismissal from the program; required additional training on academic integrity; or other action as decided upon by the administration of the program.

Consequences for violations of academic integrity or other program policies will be determined by the program administration on a case-by-case basis with consideration of a variety of different factors, including:

- The severity of the violation, including factors such as the number of assignments in question, the weight of those assignments in the course, the type of violation, fraction of the assignment in question that violated course policy, overall impact of the violation on the academic environment in the course, impact of the violation on the academic environment in the program and university in general, and other factors determined by the two program co-directors.
- Whether a student has had an academic integrity violation in the past
- Lying about the facts of the violation or fabricating evidence to cover up a violation

In most cases, two violations (and in some a single violation that is severe or when the student lies about the facts of the case) are grounds for dismissal from the MSQBB program.

Students may appeal whether a violation occurred and also course and/or program level outcomes following University procedures: <http://www.cmu.edu/academic-integrity>

Note that university policies about academic integrity are subject to change and students should review current procedures each semester.

## Seminars, Research & Internships

### **SEMINARS, INVITED TALKS, AND JOURNAL CLUB**

Each semester, all students may register for and attend the weekly seminars (Graduate Research Seminar 03-655, 3 unit). Graduate students are strongly urged to meet the speakers to broaden their knowledge of cutting-edge science and to make useful contacts; the faculty host can arrange individual or small group meetings for interested students.

Note: The above seminar courses are pass/fail; however, students may apply up to three units of seminars toward the graduation units. These courses are very beneficial in keeping abreast with current research and in networking, so we encourage students to enroll for these courses, particularly if they are interested in pursuing a Ph.D. or other advanced degree.

Invited talks from outside speakers and alumni are arranged throughout the year. They will be announced via e-mail.

### **RESEARCH**

Students who are interested in conducting research for academic credit take M.S. Thesis Research 03-700 for research with Biological Sciences faculty mentor.

- Up to 12 units of 03-700 may be counted toward the degree.

Typically, students contact faculty directly to learn about available research opportunities. To register for this class, please contact the Assistant Directors (Academic Advising & Internship) who will assist with registration.

Some faculty members may be willing to pay research assistantships. You can receive either research credit or pay for research in a given semester, but not both.

Summer research in a lab requires you to either be paid (as a CMU employee) or to register for a course. Most students prefer to be employed, but if you want to

get course credit for summer research, please ask the program advisors.

F-1 and J-1 students may work on the CMU campus part-time or full-time during vacation terms or any official school breaks, including summer. What that means is that summer research in a lab does not need CPT authorization. For more information, see: <https://www.cmu.edu/oie/foreign-students/employment.html>

## **INTERNSHIPS (MSQBB-AS ONLY)**

Students often secure internships in industry or academia during the summer between the first and second years, and less often during the academic year. The internship must be relevant to Quantitative Biology and Bioinformatics. Students must contact the Assistant Director during late fall about planning for an internship.

Any student completing an off-campus internship during this summer must register for three units of internship credit over the summer.

Students involved in paid on campus summer research may register for 3 units of summer credit as well. Before beginning any research please discuss with Assistant Directors.

Before registering for internship course credit written approval must be obtained from the Assistant Director (Internships and Job Placement) who will ensure that the internship is relevant to Quantitative Biology and Bioinformatics and maintain contact with the internship supervisor.

## **INTERNATIONAL STUDENTS**

International students who secure paid summer internships outside of Carnegie Mellon must also register for Curricular Practical Training (CPT) or Pre-Completion Optional Practical Training (OPT), both of which are overseen by the Office of International Education (OIE). International students are not eligible for CPT until the summer after their first full academic year. To receive either training authorization from OIE, the internship must be in Quantitative Biology and Bioinformatics. For CPT authorization, students must present the offer letter stating employment dates, work hours, and amount of wages or stipend for the internship. The Assistant Director signs all CPT authorization requests and may deny a request if the internship is not relevant to Quantitative Biology and Bioinformatics. Note that whereas CPT authorization typically has a faster turnaround, OPT authorization is sought through OIE and can take up to 90 days to obtain. All international students MUST consult with OIE for eligibility (and in the case of CPT the Assistant Director) before seeking an internship/co-op or signing an offer contract.

Graduate students are required to have a certain level of fluency in English before they can instruct in Pennsylvania, as required by the English Fluency in Higher Education Act of 1990. Through this Act, all institutions of higher education in the state are required to evaluate and certify the English fluency of all instructional personnel, including teaching assistants and interns. The full university policy can be reviewed at: <https://www.cmu.edu/policies/faculty/evaluation-certification-english-fluency-instructors.html>. The fluency of all instructional personnel will be determined by each department. In addition to administering the International Teaching Assistant (ITA) Test (a mandatory screening test for any non-native speaker of English), the Intercultural Communication Center (ICC) helps teaching assistants who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon. Visit the ICC website for additional information: [www.cmu.edu/icc](http://www.cmu.edu/icc).

MSQBB students are certified for graduation by the Department of Biological Sciences in the Mellon College of Science.

Carnegie Mellon University holds graduation ceremonies in May only. Because there are no August or December commencement ceremonies, we encourage students to participate in the May events. Students who graduate in December should contact the Biological Sciences Graduate Programs Office for details.

There are two May graduation ceremonies for M.S. Quantitative Biology and Bioinformatic students. The Department of Biological Sciences Diploma Ceremony and Reception are usually held on Friday before the university-wide Sunday Commencement. Students who graduated the previous December and those receiving their degrees in May or August are eligible and strongly encouraged to participate.

The Carnegie Mellon University Commencement Ceremony is held on Sunday.

# Section 2. Resources

## Academic Advising

### **ORIENTATION**

There are two orientations for incoming graduate students. Both events take place in the weeks preceding the beginning of the fall semester.

- The University-wide orientation organized by the Office of Graduate Students and Postdoctoral introduces the students to university resources and services.
- The Program Orientation introduces them to faculty, research, administration, policies and services. The MSQBB Steering Committee in collaboration with the Biological Sciences Graduate Programs Office arrange for students to receive the necessary information for enrollment, registration and timelines.

### **ADVISING FOR COURSEWORK**

Before each semester, each student must share their plan for the coming semester with the MSQBB Steering Committee. All changes must be approved by the Assistant Director (Academics).

### **MONITORING PROGRESS**

Students who have specific concerns about their progress are urged to speak with the Assistant Director (Academic Advising) as early as possible. The Assistant Director (Academic Advising) along with members of the MSQBB Steering Committee meet with the student at least twice a year, providing guidance and monitoring the student's overall progress. In addition, the Assistant Director (Academic Advising) meets with the student as and when needed to discuss progress and resolve issues.

### **NOTIFICATION AND CONSEQUENCES OF INADEQUATE PROGRESS TOWARD THE DEGREE**

If the MSQBB Steering Committee determines that the student is making inadequate progress, it will notify the student in writing of the deficiencies and the consequences of failing to correct those deficiencies. Any student whose QPA is at or below 2.5 after one term is placed on academic probation. The terms of the probation, including conditions to be taken off from the probationary status and consequences for not meeting terms of probation, depend on the individual cases and will be stated and spelled out in the letter placing the student on probation. The committee and the student will then formulate a plan to address those deficiencies, including milestones. Consequences of continued failure to make satisfactory progress or not being in good academic standing will be determined by the Steering Committee.

### **STUDENT RIGHTS IN ACADEMIC CONFLICTS**

A student wishing to appeal a departmental disciplinary decision should first speak with the faculty member directly involved. A student who is uncomfortable approaching the faculty member may discuss the matter with the Director of Graduate Operations (Biological Sciences Graduate Programs Office)

who serves as the Graduate Ombudsperson for Biological Sciences. If the conflict cannot be resolved on this level, the student is referred to the Program Co-Directors or the relevant Department Head(s) who may, with the student's permission, meet with both the student and the faculty member involved. The student may also continue to meet with the Director of Graduate Operations (Biological Sciences Graduate Programs Office) who serves as the Graduate Ombudsperson for Biological Sciences.

In cases where departmental assistance is not possible or not practical due to conflicts of interest or confidentiality concerns, please contact the MCS Ombudsman, directly to set up an appointment. Please be sure to refer to the university's summary of graduate student appeal and grievance procedures to determine if there is a specific procedure governing your situation.

## Support Services

### **CAREER AND PROFESSIONAL DEVELOPMENT CENTER (CPDC)**

The CPDC provides students access to campus job fairs and workshops on various topics. Also, on-site career consultants can help students with resumes and mock interviews. Students are encouraged to avail of these services via Tartan TRAK.

### **OFFICE OF INTERNATIONAL EDUCATION (OIE)**

The OIE provides many important services to international students, including immigration advice and social and cultural issues. These services are explained during the University Graduate Student Orientation in August before the fall semester begins.

Because the Department of Biological Sciences believes that excellent English skills are essential, we strongly recommend that students whose native language is not English achieve a PASS by the end of their second year.

### **STUDENT ACADEMIC SUCCESS CENTER (SASC)**

The SASC offers various opportunities for students to deepen their understanding as learners, communicators, and, ultimately, scholars. We support student success by providing academic coaching, communication consulting and workshops, accommodations and support for students with disabilities, and language support for English language learners. Our program offerings are free and open to all students. SASC also engages with faculty and staff to improve academic advisors' coordination and professional development.

Graduate students are required to have a certain level of fluency in English before they can instruct in Pennsylvania, as required by the English Fluency in Higher Education Act of 1990. Through this Act, all higher education institutions in the state are required to evaluate and certify the English fluency of all instructional personnel, including teaching assistants and interns. The full university policy can be reviewed at: <https://www.cmu.edu/policies/faculty/evaluation-certification-english-fluency-instructors.html>

Language Support in the Student Academic Success Center will rate the fluency of all instructional personnel to determine at what level of responsibility the student can T.A. Language Support in the Student Academic Success Center helps T. A.s who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon. Visit the Student Academic Success Center website for additional information: <https://www.cmu.edu/student-success/>.



## **COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS)**

Graduate school is often a difficult and stressful time of life. Many MSBTPE students study far away from home and their previous support systems. We encourage students to use these confidential counseling services for additional support.

CaPS allows students to talk privately about personal, academic, or other concerns in a safe, confidential setting. All counseling center services are provided at no cost.

## **GRADUATE STUDENT ASSEMBLY (GSA)**

The GSA is the branch of student government that represents all graduate students at Carnegie Mellon. MSBTPE students may elect their representative to the GSA. In addition to working with other student government members, university administration, and external advocacy groups, the GSA plans various social events throughout the year. Keep an eye out for emails from the Biological Sciences and Computational Biology departmental representatives with information about GSA events and initiatives.

## **CENTER FOR STUDENT DIVERSITY & INCLUSION**

The center staff serves as a resource to assist historically underrepresented students and those who are the first in their families to attend college in navigating a return to campus after a leave, as well as connecting, developing, and achieving educational plans that are compatible with their life goals.

## **LIBRARIES**

Three university libraries provide research support for science students: Sorrells Engineering and Science Library, Hunt Library, and Mellon Institute Library. The Mellon Institute Library contains materials for biology, biochemistry, chemistry, environmental sciences, and industrial health.

## **TEACHING SUPPORT AND OPPORTUNITIES**

Students should avail themselves of Carnegie Mellon's Eberly Center for Teaching Excellence, which sponsors courses on preparing and presenting course lectures, understanding students, formulating syllabi, writing exams, and other topics. The university also sponsors seminars on teaching for TAs and students considering careers in academic settings.

## **COMPUTING SERVICES**

Many general computer questions can be resolved quickly by contacting the Help Center (412-268-HELP [8-4357] or [advisor@andrew.cmu.edu](mailto:advisor@andrew.cmu.edu)).

If the Help Center cannot resolve a problem remotely, the departmental IT Support Consultant can provide hands-on technical support for computers, printers, and software. To place a service request to the IT Support Consultant, email [bio-it-support@andrew.cmu.edu](mailto:bio-it-support@andrew.cmu.edu). For emergencies, call the IT Support Consultant directly at 8-1990.

In addition to general technical support, the IT Support Consultant can help with computer purchases, software purchases, and computer retirement and disposal.

## **THE HUB**

The HUB provides a range of enrollment services. The Academic Calendar includes information

on all deadlines, including registration dates, class start dates, add/drop deadlines, exam dates, and more. Information regarding forms, schedule of classes, online registration, graduation procedures, an official letter of enrollment, official transcript, and enrollment verification.

## **MELLON INSTITUTE MAILROOM AND GATES STUDENT LOUNGES**

There are two locations providing a comfortable space for MSBTPE students. MSBTPE students may use these spaces to spend time between classes, complete group projects, or hang out.

- (1) Mellon Institute Mailroom is located by the loading dock entrance on the 3rd floor (which is the ground floor)
- (2) The MS Student Office in the Chemical Engineering Department is on the 7th floor of the Hillman Center for Future Generation Technologies.

## **HONORARY SOCIETIES**

Graduate students are encouraged to belong to professional societies such as Phi Kappa Phi and Sigma Xi. They are nominated, if qualified, by either the Department of Biological Sciences or the Computational Biology. They are also urged to join the societies specific to their sub-discipline.

## **STUDENT ORGANIZATIONS**

Students are encouraged to participate in the following Biological Sciences departmental graduate student-driven organizations:

- Career Club

Students' involvement complements their academic development as well as their professionalization.

## **ASSISTANCE FOR INDIVIDUALS WITH DISABILITIES**

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical and programmatic campus access to all events and information within the Carnegie Mellon community. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Sections 503 and 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources secure online portal or email [access@andrew.cmu.edu](mailto:access@andrew.cmu.edu) to begin the interactive accommodation process.

Students with disabilities are encouraged to self-identify with Equal Opportunity Services by contacting Catherine Getchell, 412-268-6121, [getchell@cmu.edu](mailto:getchell@cmu.edu) to access the services available at the university and initiate a request for accommodations.

# Compliance Issues

## **ENVIRONMENTAL HEALTH AND SAFETY TRAINING**

Each MSBTPE graduate student must complete laboratory, chemical, and biological safety training presented by Environmental Health & Safety during the Department of

Biological Sciences Orientation prior to beginning regular coursework. Students who work with or near radioactive substances must undergo radiation safety training.

## **SEXUAL HARASSMENT TRAINING**

All graduate students are required to receive sexual harassment training, which is given in the fall semester or can be taken online [www.cmu.edu/hr/learning/eLearning/SHA-training.html](http://www.cmu.edu/hr/learning/eLearning/SHA-training.html). The sexual harassment policy is available at [www.cmu.edu/policies](http://www.cmu.edu/policies). To speak to a sexual harassment advisor, please contact the university's sexual harassment hotline at 412.268.7445.

## **ANIMAL TRAINING**

Animal training is required for any individual listed on an animal protocol. Currently, training is offered through the University of Pittsburgh Animal Research Protection Office) and must be completed before research studies involving laboratory animals can begin.

For more information on training, please contact:

IACUC Education and Compliance Office - 412-383-2008 or [iacuc@pitt.edu](mailto:iacuc@pitt.edu)

## **Ethics**

At all times, students are expected to conform to the highest ethical standards; consequences for academic or scientific misconduct are severe and may include dismissal from the program. The University Policy on Academic Integrity includes

University expectations around academic integrity and provides definitions of cheating, plagiarism, and unauthorized assistance.

In addition, the University's Academic Disciplinary Actions procedures outline the process of investigating, reporting, and adjudicating violations of the University Policy on Academic Integrity.

Carnegie Mellon's Office of Research Integrity and Compliance is committed to maintaining the integrity fundamental to research activities through the responsible and ethical conduct of its faculty, staff, and students. The Responsible Conduct of Research (RCR) is a widely accepted set of ethical principles and professional standards for conducting research in the university community. CMU provides a variety of Responsible Conduct of Research seminars as listed in the RCR core elements.

# Section 3. Financial And Other Related Issues

## **TUITION AND FEES**

Information about tuition and fees is available at [www.cmu.edu/hub/tuition](http://www.cmu.edu/hub/tuition). All tuition and fees must be paid in full by the due date; a student not in good financial standing will be dismissed from the program. Any exception to this policy must be discussed with the Department Heads.

## **UNIVERSITY FINANCIAL AID**

Graduate students should consult the graduate student financial aid information found on The HUB website: <https://www.cmu.edu/sfs/financial-aid/graduate/index.html>. Students will find the Graduate Financial Aid Guide, information about funding options and how to apply for financial aid and other helpful links.

## **OFFICE OF THE DEAN OF STUDENTS EMERGENCY LOAN PROGRAM**

Graduate students needing immediate funds for emergencies should contact the Office.

Of the Dean of Students to inquire about emergency funding available to enrolled students.

## **HEALTH INSURANCE AND SERVICES**

Carnegie Mellon has a Student Health Insurance policy requiring full-time, degree-seeking students to carry adequate medical insurance, unless you are enrolled as the dependent, partner/spouse or principal in an employer or government-sponsored insurance plan.

The university offers one level of health plan. It is the responsibility of each student to make arrangements with Student Health Services to either pay for their insurance at the beginning of the semester or elect a payment plan over the course of the academic year. Optional dental and vision insurance are also offered. More information is available at the Student Health Services website [www.cmu.edu/health-services](http://www.cmu.edu/health-services) or by email to [shinsure@andrew.cmu.edu](mailto:shinsure@andrew.cmu.edu).

The Student Health Services Center provides general and some specialized medical care at a discount or free of charge to all full-time Carnegie Mellon students. There are fees for laboratory tests and prescription drugs at the on-site pharmacy.

## **EMPLOYMENT DURING THE ACADEMIC YEAR**

M.S. students are allowed to work for hourly wages at Carnegie Mellon, provided academic progress is not compromised. Paid research must be kept separate from projects done for tuition-based academic credit (M.S. Research 03-700 or 02-700).

For students who desire to earn wages, there are limited employment opportunities in faculty research groups. Students are responsible for seeking out such opportunities.

F-1 and J-1 students may work on the CMU campus 20 hours or fewer per week while

school is in session (during fall semester or spring semester). For more information, see: <https://www.cmu.edu/oie/foreign-students/employment.html>

It is strongly advised that students wait until their second semester to begin work on a research project. The number of hours worked should not exceed 12 hours per week. M.S. students are not usually eligible for teaching assistantships. However, M.S. students can work as a Teaching Assistant for an hourly wage. There are minimum English proficiency requirements. Please refer to Requirements for Teaching.

## **UNIVERSITY RESEARCH FUNDING**

GuSH Research Funding is a source of small research grant funds provided by the Graduate Student Assembly (GSA) and the Provost's Office and managed by the Office of Graduate and Postdoc Affairs. Students can find more information about the application process and deadlines at <https://www.cmu.edu/graduate/professional-development/research-funding/index.html>

## **OUTSIDE FELLOWSHIPS**

Students are encouraged to obtain their funding source through fellowships sponsored by the National Institutes of Health (NIH) or the National Science Foundation (NSF). The university's Fellowships and Scholarships Office (FSO) maintains a financial aid and fellowship database.

All applications must be submitted through the Business Manager's Office. The Business Manager must be notified before submitting the application and receiving a complete copy. The department and the university administer all fellowships. Students whose award amount is lower than the current stipend level receive a supplement to bring their stipend up to the departmental level; students receive the total fellowship amount if it exceeds the departmental stipend level.

## **FACILITIES AND EQUIPMENT**

The Biological Sciences department owns and maintains equipment such as centrifuges and autoclaves for departmental members' use. Each graduate student engaged in wet lab research must be trained in properly using and maintaining this equipment. Logs must be signed, and any problems noted. Individual laboratories are liable for repair and replacement costs if their personnel misuse equipment.

## **CHANGE OF ADDRESS**

Students are responsible for notifying the Department of Biological Sciences Business Office and HUB of all changes in a timely manner. Students will be held accountable for failing to receive official college

