

**Carnegie
Mellon
University**

GRADUATE STUDENT POLICY HANDBOOK

**M.S. in Biotechnology and
Pharmaceutical Engineering**

Fall 2023 Matriculating Students

www.cmu.edu/ms-biotech-pharma

M.S. IN BIOTECHNOLOGY AND PHARMACEUTICAL ENGINEERING

Resource Handbook for Graduate Students

Fall 2023 matriculating students

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CARNEGIE MELLON UNIVERSITY VISION & MISSION

<https://www.cmu.edu/about/mission.html>

Vision

Carnegie Mellon University will have a transformative impact on society through continual innovation in education, research, creativity, and entrepreneurship.

Mission

To create a transformative educational experience for students focused on deep disciplinary knowledge; problem solving; leadership, communication, and interpersonal skills; and personal health and well-being.

To cultivate a transformative university community committed to (a) attracting and retaining diverse, world-class talent; (b) creating a collaborative environment open to the free exchange of ideas, where research, creativity, innovation, and entrepreneurship can flourish; and (c) ensuring individuals can achieve their full potential.

To impact society in a transformative way — regionally, nationally, and globally — by engaging with partners outside the traditional borders of the university campus.

WELCOME

The directors and assistant directors of the Masters in Biotechnology and Pharmaceutical Engineering program (MSBTPE), a joint offering from the Department of Biological Sciences and the Chemical Engineering Department, would like to welcome you to the program and Carnegie Mellon University! This document explains the policies of the MSBTPE program. You should read it thoroughly.

While this handbook is specific to your academic experience in the MSBTPE 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.

MSBTPE MISSION STATEMENT

The MSBTPE program seeks to train the world's best Biotechnologists, Pharmaceutical Engineers, and Bioprocess Engineers at the Masters level. The curriculum provides both breadth and depth of

training in Biotechnology and Pharmaceutical Engineering. Interested students are also given opportunities to pursue research. Our graduates are prepared for rewarding jobs in industry or to pursue their doctoral degrees at top universities.

INTRODUCTION

The Department of Biological Sciences and the Chemical Engineering Department have prepared this statement of policies and procedures to help answer questions that students may have as they enter the M.S. in Biotechnology and Pharmaceutical Engineering (MSBTPE) program. This document specifies requirements that must be achieved to be a student in good standing; **failure to meet any of these requirements may result in dismissal from the program.**

The MSBTPE Steering Committee and Graduate Programs Offices in both departments provide ongoing guidance and assistance to students throughout the course of their graduate career. Questions or concerns may be discussed with either the faculty of the MSBTPE Steering Committee or the Department Heads 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

Academic Integrity Website: www.cmu.edu/academic-integrity

University Policies Website: www.cmu.edu/policies/

Graduate Education Website: www.cmu.edu/graduate/policies/index.html

Please see Appendix A for additional information about The Word and University resources.

[Academic Calendar](#) provides information on all deadlines including registration dates, class start dates, add/drop deadlines, exam dates and more.

COVID 19 UPDATES

Due to the changing nature of conditions and expectations surrounding public health and safety requirements please visit www.cmu.edu/coronavirus/ for the most up to date information.

CARNEGIE MELLON UNIVERSITY STATEMENT OF ASSURANCE

Carnegie Mellon University does not discriminate in admission, employment, or administration of its programs or activities based on race, color, national origin, sex, handicap or disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state, or local laws or executive orders.

Inquiries concerning the application of and compliance with this statement should be directed to the university ombudsperson, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2056.

You can obtain general information about Carnegie Mellon University by calling 412-268-2000. The Statement of Assurance can also be found online at: www.cmu.edu/policies/documents/SoA.html.

THE CARNEGIE MELLON CODE

Students at Carnegie Mellon, because they are members of an academic community dedicated to the achievement of excellence, are expected to meet the highest standards of personal, ethical and moral conduct possible.

These standards require personal integrity, a commitment to honesty without compromise, as well as truth without equivocation and a willingness to place the good of the community above the good of the self. Obligations once undertaken must be met, commitments kept.

As members of the Carnegie Mellon community, individuals are expected to uphold the standards of the community in addition to holding others accountable for said standards. It is rare that the life of a student in an academic community can be so private that it will not affect the community as a whole or that the above standards do not apply.

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity of others. New knowledge cannot be developed without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist.

The commitment of its faculty, staff and students to these standards contributes to the high respect in which the Carnegie Mellon degree is held. Students must not destroy that respect by their failure to meet these standards. Students who cannot meet them should voluntarily withdraw from the university.

The Carnegie Mellon Code can also be found online at: <https://www.cmu.edu/student-affairs/theword/code/index.html>.

PROVOST'S STATEMENT ON STUDENT WELL BEING

Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit their website at <http://www.cmu.edu/counseling/>. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.

ALSO

If you or someone you know is feeling suicidal or in danger of self-harm, call someone immediately, day or night:

CaPS: 412-268-2922

Re:solve Crisis Network: 888-796-8226

If the situation is life threatening, call the police:

On campus: CMU Police: 412-268-2323

Off campus: 911

FOOD INSECURITY

If you are worried about affording food or feeling insecure about food, there are resources on campus who can help. Email the CMU Food Pantry Coordinator to schedule an appointment:

Pantry Coordinator

cmu-pantry@andrew.cmu.edu

412-268-8704 (SLICE office)

PROGRAM CONTACTS

MSBTPE STEERING COMMITTEE FACULTY

Whom to contact for what?

Co-director, MSBTPE

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

James Schneider, Ph.D.
DH 3121
412-268-4394
schneider@cmu.edu

Co-director, MSBTPE

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

Jonathan Minden, Ph.D.
MI 279
412-268-2669
minden@cmu.edu

Assistant Director (Academic Advising), MSBTPE,
Biological Sciences
*Academic Advising and Course Selection, Periodic
Academic Progress Checks, Change to P/F, Research for
Credit, Graduation Certifications, Student Life Issues, Oral
Communication Skills, Alumni Networking, Social Events*

Natalie McGuier, Ph.D.
MI 315A
412-268-5989
nmcguier@cmu.edu

Assistant Director (Professional Issues), MSBTPE,
Biological Sciences

*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 & OPT
authorization*

DJ Brasier, Ph.D.
MI 415A
412-268-1951
dbrasier@cmu.edu

PROGRAM FACULTY

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

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

PRIMARY SUPPORT STAFF

Director of Graduate Operations
(Biological Sciences Graduate Programs Office)
*Graduate Student Database Management, Pre- and Post-
Admission Procedures through Graduation, Biological
Sciences Graduate Ombudsperson, Graduation
Certifications, Diploma Ceremony, Orientation
Coordination*

Ena Miceli
MI 415
412-268-3012
emiceli@andrew.cmu.edu

Administrative Coordinator
(Chemical Engineering Department Academic
Programs Office)

*DH MSBTPE building access and Chemical Engineering
faculty contact support*

Janet Latini
DH 1107
412-268-2230
jlatini@andrew.cmu.edu

OTHER SUPPORT STAFF

IT Support Consultant (BSC)

Ryan Parrotte
MI 411J
412-268-4535
ryanpar@andrew.cmu.edu

DEPARTMENTAL LEVEL CONTACTS

Department Head,
Biological Sciences Department

Veronica Hinman, Ph.D.
MI 634A
412-268-9348
vhinman@andrew.cmu.edu

Department Head,
Chemical Engineering Department

Anne Robinson, Ph.D.
DH 1111
412-268-2230
asrobins@andrew.cmu.edu

Business Manager (BSC)

David Casillas
MI 410
412-268-4182
dcasillas@andrew.cmu.edu

COLLEGE LEVEL CONTACTS

Dean,
Mellon College of Science

Curtis Meyer, Ph.D.
MI 432
412-268-5124
mcsdean@andrew.cmu.edu

Dean,
Carnegie Institute of Technology

Jonathan Cagan, Ph.D.
SH 419
412-268-3713
cagan@cmu.edu

Associate Dean for Graduate Students,
Mellon College of Science

Manfred Paulini, Ph.D.
WH 7307
412-268-3887
paulini@cmu.edu

Associate Dean for Diversity, Equity, and Inclusion,
Mellon College of Science

Michael Young, Ph.D.
6122 Wean Hall
412-268-2545
michaely@andrew.cmu.edu

Associate Dean for Graduate and Faculty Affairs,
Carnegie Institute of Technology

Shelly Anna, Ph.D.
SH 110
412-268-2478
sanna@cmu.edu

UNIVERSITY LEVEL CONTACTS

Graduate Student Ombudsperson
Students may confer with the university graduate student ombudsman on issues of process or other concerns as they navigate conflicts

5000 Forbes Ave
412-268-1018
ombudsperson@andrew.cmu.edu

Student Affairs Liaison
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.

John Hannon, Ph.D.
Warner Hall 300
412-268-2139
jfhannon@andrew.cmu.edu

SECTION 1. DEGREE ATTAINMENT

COURSES AND GRADES

COURSEWORK

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

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

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

- A. At least 108 units of coursework, 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. Minimum grade of a C or above (GPA = 2.0) in any course that shall count towards degree certification
- D. Full-time course registration (at least 36 units) for each semester in the program

Coursework consists of:

A) Foundation Courses (39-57 units)

Minimum C grade in each course counted toward graduation

- **03-622** Modern Biology (Fall, 9 units)
- **03-709** Applied Cell and Molecular Biology (Fall, 12 units)
- **03-604** Professional Skills (Fall, 3 units)
- **06-621** Material Balance in Bioprocesses (Fall, 9 units)
- **06-637-A3** Bioseparations (Spring, 6 units)
- **06-638-A4** Spectroscopy & Characterization (Spring, 6 units)
 - Note: 06-637 and 06-638 might be offered under the course number 06-685 Special Topics: Bioseparations and Spectroscopy as a full-semester, 12-unit course. The Academic Advisor will update students with the appropriate course number for registration.
- **06-722** BioProcess Design (Fall, 12 units)
- **03-776-A3** Molecular Techniques for Bioprocess (Spring, 6 units)
- **06-777-A4** CPS III lab (Spring, 6 units)

The MSBTPE Steering Committee may waive 03-622 and/or 06-621. It is recommended that students with strong biology background take the placement exam for 03-622 and those with strong engineering background take one for 06-621. To have a course waived, the student must

demonstrate proficiency in the course topics through a placement exam or interview with an instructor. Placement exams are offered before the start of the fall semester. If a student misses a placement exam because of illness or immigration delays, then s/he must contact the committee before the start of classes to schedule a time to take the exam(s) before the end of the first week of classes. Because the total number of units required to graduate is 108, students who waive more than 9 units of foundation course must add a corresponding number of required depth course units (see below). This preserves the degree requirement at 108 units. Students who place out of a foundation course should take an appropriate course approved by the Steering Committee.

Note: The Professional Skills course should be taken during a student's **first semester**. This is a Pass/Fail course and must be passed to complete the MSBTPE degree.

B) At least 24 units of graduate-level elective courses must be taken from Biological Sciences, 03-XXX listed courses.

Minimum C grade in each course counted toward graduation.

C) At least 12 units of graduate-level elective courses must be taken from Chemical Engineering, 06-XXX listed courses.

Minimum C grade in each course counted toward graduation.

D) Additional Graduate-Level Elective Courses (12-21 units – depending on whether more than 9 units of foundation courses are waived, see above)

Minimum C grade in each course counted toward graduation

These may be courses from either Biological Sciences or Chemical Engineering. Other department courses may be used with permission from the Academic Advisor.

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

Other notes:

- Up to 12 units of research (06-600 or 03-699) with a faculty advisor may be counted toward the depth credits. Research should be approved by the Assistant Director (Academic Advising). Research taken as 06-600 or 06-700 will count toward the Chemical Engineering (06-XXX) requirement in the depth category; research taken as 03-699 or 03-700 will count as biology 03-XXX depth coursework. Students may take as many units of research credit as they like, and all units will be shown on the transcript. However, a maximum of 12 units of 600-level research (06-600 and/or 03-699) can count toward graduation.
- Students who write an honors thesis (see "Graduation Honors and Awards") may enroll in 03-700 or 06-700. Students need written approval from the full MSBTPE Steering Committee is needed to enroll in these courses. Students may take as many units of thesis research credit as they like, and all units will be shown on the transcript. However, a maximum of 12

units of thesis research (06-700 and/or 03-700) can count toward graduation (this is in addition to the 12 units of 600-level research which can be counted).

- Any course not listed above will need **written approval** from the Assistant Director (Academic Advising). Requests 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 an 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 MSBTPE Steering Committee.**
- **During the first semester, all coursework must count toward degree completion. Any exceptions require written permission from the Assistant Director for Academics.**
- **In the second semester, 36 units of coursework must be taken, but the student may take additional courses that don't count toward the degree. Exceptions require approval of the Assistant Director for Academics. Every course requires written permission from the Assistant Director for Academics.**
- **All course requirements must be fulfilled by the end of the student's third semester. In addition to completing all remaining degree requirements, students may take other courses that don't count toward their degree with permission from the Assistant Director for Academics.**
- **Students must maintain full-time enrollment in the program (minimum 36 units per semester - the only exception allowed is if CMU Student Affairs and/or a medical provider request that a student be allowed to take a reduced course load).**
- **If a student completes a Biotechnology and Pharmaceutical Engineering internship, then they may receive three units of depth credit for each term for (03-690A).**

CERTIFICATE OF DEGREE

The degree title is Master of Science in Biotechnology and Pharmaceutical Engineering

CHANGING PROGRAMS

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

GRADES & ACADEMIC STANDING

To be in good academic standing, a student must maintain a B average (GPA = 3.0) in the coursework that will be counted towards the degree. No grade lower than C in any courses shall be used for completion of degree requirements.

UNIVERSITY POLICY ON GRADES

This policy details the 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.

PROCESS FOR APPEALING FINAL GRADES

<https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>

Final grades will be changed only in exceptional circumstances and only with the approval of the instructor and the department, unit or program. Grading is a matter of sound discretion of the instructor and final grades are rarely changed without the consent of the instructor who assigned the grade. The following circumstances are the unusual exceptions that may warrant a grade appeal: (a) the final grade assigned for a course is based on manifest error (e.g. a clear error such as arithmetic error in computing a grade or failure to grade one of the answers on an exam), or (b) the faculty or staff member who assigned the grade did so in violation of a University policy.

ACADEMIC PROBATION

If the MSBTPE 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 them. Any student whose cumulative QPA is at or below 3.0 or otherwise not making satisfactory progress toward their degree, at any time during or at the end of the semester, 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. Students who don't earn the minimum required grades in any class (C or higher in 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 will result in dismissal from the program or other actions as decided upon by the Steering Committee.

STANDARD DEGREE REQUIREMENTS & DEGREE CERTIFICATION

Carnegie Mellon graduate students are expected to complete their degree requirements within the standard length of time for their program of study as outlined in the relevant Graduate Student Handbook. Standard program lengths for graduate students vary significantly – ranging from two semesters for some full-time master’s programs to several or more years for doctoral programs. Upon completion of the graduate program degree requirements, the degree will be certified by the student’s academic program in the semester in which the student completes the requirements.

EARLY COMPLETION

Graduate students who consider the completion of all degree requirements in less than the standard length of time for their program of study may consult with their degree-granting program or department to determine if early degree certification is allowed and under what circumstances.

EXTENDED OR LONGER-THAN-STANDARD COMPLETION

Longer-than-standard degree completion may occur due to academic interruptions in making progress toward the degree as defined by the academic program, interruptions of full-time study or progress towards the degree due to serious, documented medical issues, or other unusual or unforeseen circumstances.

Master’s students who require longer than the standard time to complete their degree requirements are expected to remain in close contact with their graduate program, and will be certified at the end of the semester in which they have completed their degree requirements. Students shall reference [CMU Policy on Master’s Student Statute of Limitations](#) regarding guidelines and restrictions which place an upper limit on the maximum length of time allowable for master’s degree completion and certification.

ADDITIONAL GUIDANCE FOR STUDENTS

PROGRAM OF STUDY

Students seeking guidance about their program of study and degree requirements should consult with their academic advisor and/or appropriate associate dean.

FINANCIAL AID AND STUDENT ACCOUNT

Students are expected to make normal progress toward their degree in order to graduate within the standard timeframe for their program of study. Under U.S. Federal Title IV regulations, student eligibility for federal financial aid is contingent upon enrollment in and successful completion of courses that are counted as credit toward their current degree program. To receive the maximum amount of federal financial aid for which they may be eligible, students must enroll each semester in at least 36 units that count toward their current degree level. (See separate guidance regarding integrated degree completion.)

Students should consult with their designated college liaison in The HUB regarding billing and financial aid, particularly for early completion, longer-than- standard completion, or integrated undergraduate and master's degree programs.

INTERNATIONAL STUDENTS

Immigration status for students in F-1 and J-1 non- immigrant status is tied to making normal progress toward completing degree requirements. Therefore, F-1 and J-1 students who are considering completing their degree requirements early, anticipating longer-than-standard completion, or moving from an undergraduate to a graduate student classification (integrated undergraduate-graduate study) should consult with their designated advisor in the Office of International Education (OIE) to ensure compliance with immigration regulations.

ACADEMIC INTEGRITY

Students are expected to maintain ethical conduct as described in the university policies on Academic Integrity.

Serious action will be taken against any student 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 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 treated as violations of academic integrity** and can result in course-level 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 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.

The program administration will determine the consequences for violations of academic integrity or other program policies on a case-by-case basis considering 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 MSBTPE program.

Students may appeal whether a violation occurred and 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.

PROFESSIONAL DEVELOPMENT, RESEARCH, AND INTERNSHIPS

PROFESSIONAL SKILLS COURSE

Professional Skills (06-604) meets weekly. This course presents an opportunity for students to learn about available resources on campus and outside, share knowledge, and hone their professional skills. The primary goal of this course is to position students for an on-time graduation and to empower students with the important tools necessary to find an internship, secure a job, or to pursue a Ph.D.

All students will need to register for 06-604, a 3-unit course, and complete the course with a pass grade during their first semester. This course contributes towards the units for graduation certification and the 36 units required for a student to be considered full-time. As a pass/fail course, it is not factored into a student's QPA. NOTE this is the only course that a student may count toward graduation with a "pass" grade aside from 3 more units of seminar (next section), which may count toward depth.

SEMINARS, INVITED TALKS, AND JOURNAL CLUB

Each semester, all students may register for and attend the weekly seminars (*Graduate Research Seminar 03-655*, 1 unit; and/or *Graduate Seminar 06-800*, 1 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 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 interested in conducting research for academic credit take *M.S. Thesis Research 03-700* or *06-600* for research with Biological Sciences faculty mentor or Chemical Engineering faculty mentor respectively.

- Up to 12 units of 06-600 or 03-700 may be counted toward the degree without written approval from the MSBTPE advising committee.

- Students may be eligible for “Research Honors.”

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.

Students are strongly advised to wait until their second semester to begin research. Some faculty members may be willing to pay for 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. Meaning that summer research in a lab does not need CPT authorization. For more information, see: [Employment as a Foreign Student](#).

INTERNSHIPS

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 Biotechnology and Pharmaceutical Engineering. Students must contact the Assistant Director (Internships and Job Placement) during late fall about planning for an internship.

Any student completing an off-campus summer internship must register for three (tuition-free) units of 03-600R, Biotechnology and Pharmaceutical Engineering Internship. Students who complete an internship during the fall or spring semester should register for three (tuition charged) units of 03-600A, Biotechnology and Pharmaceutical Engineering Internship.

Students involved in paid on campus summer research should also register for 03-600-R before beginning any research, please discuss with Assistant Directors.

Before registering for 03-600 R or A **written approval** must be obtained from the Assistant Director (Internships and Job Placement) who will ensure that the internship is relevant to Biotechnology and Pharmaceutical Engineering and maintain contact with the internship supervisor.

INTERNATIONAL STUDENTS

International students who secure paid summer internships outside Carnegie Mellon must also register for Curricular Practical Training (CPT) or Pre-Completion Optional Practical Training (OPT). The Office of International Education (OIE) oversees both CPT and OPT. International students are not eligible for CPT until the summer after their first full academic year. **The internship must be in Biotechnology and Pharmaceutical Engineering to receive training authorization from OIE.** 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 (Internships and Job Placement) signs all CPT authorization requests and may deny a request if the internship is not relevant to Biotechnology and Pharmaceutical Engineering. 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 (Internships and Job Placement) before seeking an internship/co-op or signing an offer contract.

ENGLISH LANGUAGE PROFICIENCY

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/>.

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.

COURSE REGISTRATION

In the first fall semester, students are pre-enrolled for the foundation courses. In subsequent semesters, students register online for their classes; information is available at [HUB Registration](#). Students register online at www.cmu.edu/hub/sio with an Andrew ID.

- Students must register for at least 36 units per semester to be full-time
- Students are advised to take no more than 48 units in any semester.
- Students who need assistance registering for oversubscribed courses in the Mellon College of Science should contact the Assistant Director (Academic Advising); students who need assistance in registering for oversubscribed courses in the School of Computer Science should contact the Assistant Director of Internship and Job Placement.

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.)

PASS/FAIL COURSES

Pass/Fail courses are strongly discouraged unless it is a course that is not counted toward the degree to the student's program of study or if there is a medical hardship in completing a course. Taking a course for credit indicates an intellectual commitment to the material and may be viewed more positively by other professors and potential employers than a Pass. Potential employers gain more information about a student's ability from seeing a letter grade on a transcript than from a P. Except for 06-602 Bioprocessing Optimization, Entrepreneurship, and Regulatory Compliance in Biotechnology and Pharmaceutical Engineering, Pass/Fail courses cannot be used to satisfy any MSBTPE program requirements or to satisfy any prerequisites.

With a 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 defend 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, except for seminar courses and 06-602.
- Pass/Fail status is irrevocable.

AUDITING A COURSE

With the approval of the MSBTPE 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 an online course. 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.

TRANSFERRING COURSES

The MSBTPE program does not accept transfer credits.

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

TUITION FEES

Complete information about tuition and fees is available at [the Graduate Tuition & Fees website](#). 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 must be discussed with the Directors of the MSBTPE program.

Students registering for summer courses must pay summer tuition (including *Biotechnology and Pharmaceutical Engineering Internship 03-690*). Before registering for these summer courses, students should check with Assistant Directors about tuition.

GRADUATION, HONORS, AND AWARDS

RESEARCH HONORS

The directors of the MSBTPE program confer awards for academic achievement, research honors, professional honors, and outstanding leadership at graduation. Students maintaining a GPA of 4.0 or higher will receive an award for academic achievement. Students with substantial research accomplishments, such as a publication or honors thesis, will receive an award for research achievement. Students who make substantial contributions to the MSBTPE community, such as serving as a GSA representative or organizing social events will receive an award for leadership.

If you are interested in completing a research-based thesis, you are required to: (1) complete 12 or more units of independent research study with a faculty advisor (with MSBTPE Advising committee approval), and (2) write and defend a master's thesis. If you satisfy the above requirements, you qualify for Research Honors.

Full research honors requirements are available from the Assistant Director (Academics). The final thesis should have the following sections:

1. Title page & Dedication/Acknowledgements
2. Abstract (1 page)
3. Introduction chapter (4 or more pages):
 - a) Separate from introduction sections in other chapters

- b) This is a place for the student to put the entire thesis in context
- 4. 1 or more additional chapters (20 or more pages each).
 - a) Chapter format should be consistent and may match the format of any journal article in the field of study.
- 5. Bibliography (pages are enumerated but do not count toward page total). This may be a standalone bibliography for the whole thesis or each chapter may have its own bibliography.

GRADUATION CEREMONIES

MSBTPE 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 that pertain to M.S. Biotechnology and Pharmaceutical Engineering students. The Department of Biological Sciences Diploma Ceremony and Reception are usually held on the Saturday afternoon before the university-wide Sunday Commencement. Students who have 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.

STATUS

FULL-TIME STATUS

Students must be registered for **at least 36 units** 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 MSBTPE 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 <https://www.cmu.edu/hub/registrar/course-changes/>.

STATUTE OF LIMITATIONS

As outlined in the [Master's Students Statute of Limitations](#), 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.

SECTION 2. RESOURCES

ACADEMIC ADVISING

ORIENTATION

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

- The University-wide orientation organized by the Graduate Education Office introduces the students to university resources and services.
- The Program Orientation introduces them to faculty, research, administration, policies, and services. The MSBTPE Steering Committee in collaboration with the Biological Sciences Graduate Programs Office and the Graduate Office of the Chemical Engineering Department arranges 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 MSBTPE Steering Committee. All changes must be approved by the Assistant Director (Academics).

ADVISING FOR PROFESSIONAL DEVELOPMENT

As part of 03-602, students will have opportunities to develop their professional skills during their first semester. In subsequent semesters, students are encouraged to meet with the Assistant Director (Internship and Job Placement) to advise on further professional development.

MONITORING PROGRESS

Students with specific concerns about their progress are urged to speak with the Assistant Director (Academic Advising) as early as possible. The Assistant Director (Academic Advising) and members of the MSBTPE 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 MSBTPE 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 QPA is at or below 3.0 after one term or who otherwise is not making sufficient progress toward graduation is placed on academic probation. The probation terms, including conditions to taken off probationary status and consequences for not meeting the probation terms, will be stated and spelled out on the probation letter. 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 Career and Professional Development Center (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 TartanTRAK. TRAINING AND SUPPORT SERVICES

The Office of International Education (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.

The Student Academic Success Center (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.

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).

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 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.

ENROLLMENT SERVICES (THE HUB)

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

COUNSELING AND PSYCHOLOGICAL SERVICES

www.cmu.edu/counseling

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

Counseling and Psychological Services (CaPS) offers students the opportunity 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

Graduate Student Assembly (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 a variety of 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.

SPECIAL INTEREST GROUPS

Various organizations exist to provide support for groups underrepresented in science. Information about these groups can be obtained from the Office of Graduate Education (www.cmu.edu/graduate).

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 for their sub-discipline.

STUDENT ORGANIZATIONS

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

- Career Development Committee
- The Graduate Student Assembly

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, digital, and programmatic access to ensure that students with disabilities have equal access to their educational experience. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Section 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 to begin the interactive accommodation process.

Students with physical, sensory, cognitive, or emotional disabilities are encouraged to self-identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to access@andrew.cmu.edu, or call (412) 268-6121.

SEXUAL MISCONDUCT POLICY

The University prohibits sex-based discrimination, sexual harassment, sexual assault, dating/ domestic violence, sexual exploitation, stalking and violation of protective measures. The University also prohibits retaliation against individuals who bring forward such concerns or allegations in good faith.

The [University's Sexual Misconduct Policy](#)

The [University's Policy Against Retaliation](#)

If you have been impacted by any of these issues, you are encouraged to make contact with any of the following resources:

- [Office for Institutional Equity and Title IX](#)

412-268-7125, institutionalequity@cmu.edu

- [University Police](#)
412-268-2323

Additional resources and information can be found at:

<https://www.cmu.edu/title-ix/resources-and-information/index.html>

GESTATIONAL AND PARENTAL ACCOMMODATIONS

Providing holistic student support is a top priority at Carnegie Mellon. The protocols on this page are designed to support the parental needs of students and their families.

Students seeking any of the Parental Accommodations described below must register with the Office of the Dean of Students by contacting the office for an appointment by calling 412-268-2075. Students are encouraged to register with the Office of the Dean of Students ninety (90) days in advance of the anticipated arrival of the child as applicable in the individual circumstance. At the time of registering, students will have the opportunity to consult about resources, procedures, funding options and preparation for discussing academic accommodations with the student's academic department. Students should also consult with their academic advisors either before or in conjunction with registering with the Office of the Dean of Students.

ACCOMMODATIONS FOR GESTATIONAL PARENTS

The birth of a child is a significant life event that may require time away from academic pursuits for delivery and recovery from delivery of a newly born child. Students whose anticipated delivery date is during the course of a semester may need to take time away from their academic responsibilities. Carnegie Mellon students seeking time away are afforded two options as possible accommodation:

- Short-Term Accommodation for Gestational Parents – A short term absence from academic responsibilities up to a maximum of six (6) weeks. Short-Term Accommodation may be extended by two (2) weeks, for a total of eight (8) weeks, where a longer absence is medically necessary. Prior to the absence students must work with relevant university faculty and staff to adjust their course work, research, teaching and other academic responsibilities during the period of absence. This may include extensions of time to complete assignments, incomplete grades, and/or dropping courses, shifting research responsibilities and adjusting TA assignments. Students who take a Short-Term Accommodation will remain enrolled.
- Formal Leave of Absence– A formal leave of absence under the Student

Leave Policy. Generally, the Student Leave Policy permits students to take a leave of absence for a full-semester, mini-semester, or for the time remaining in the semester during which the leave is taken. Students who take a Formal Leave of Absence (<https://www.cmu.edu/policies/student-and-student-life/student-leave.html>) drop all remaining courses for the semester and are unenrolled for the semester. International students must consult with the Office of International Education (<https://www.cmu.edu/oie/>) before considering this option due to visa implications.

EMPLOYMENT ELIGIBILITY VERIFICATION

If you are receiving a stipend, are a TA, or are planning to have a position with CMU then Employment Eligibility Verification is required. Form I-9 must be completed within 3 business days of beginning work for any type of compensation (stipend or employment). Additional details are highlighted below. To ensure compliance with federal law, Carnegie Mellon University maintains the Employment Eligibility Verification (I-9) Policy [pdf] covering the university's I-9 and E-Verify requirements:

- Every individual receiving a stipend from CMU or employed by CMU must comply with the I-9 Policy by completing the Form I-9 within three business days following the first day of stipend start date/employment.
- Individuals who expect to work on a federally funded project are further responsible for submitting an E-Verify Processing Request Form to the Office of Human Resources if required.
- For more information, please see CMU's Guidance for Completing the Form I-9 and E-Verify Requirements at CMU [pdf], or visit the Human Resources Service website to learn more about Form I-9 and E-Verify and to schedule an appointment to complete the Form I-9.
- Students who fail to complete the Form I-9 in a timely manner may have stipend payments suspended. If employed by the university, an individual who fails to timely complete the Form I-9 may be subject to disciplinary action up to and including termination of employment.

FINANCIAL ASSISTANCE FOR STUDENT PARENTS

Carnegie Mellon also offers the following options for financial assistance to students who become parents while enrolled:

[Interest Free Loan](#) – Any student who becomes a parent is eligible to apply for an interest-free parental loan) from the Office of the Dean of Students.

CONSENSUAL INTIMATE RELATIONSHIP POLICY REGARDING UNDERGRADUATE STUDENTS

This policy addresses the circumstances in which romantic, sexual or amorous relationships/interactions with undergraduate students, even if consensual, are inappropriate and prohibited. The purpose of this policy is to assure healthy professional relationships. This policy is not intended to discourage consensual intimate relationships unless there is a conflicting professional relationship in which one party has authority over the other as in the policy

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 responsible for failing to receive official college notices due to not having a correct address on file; F-1 students may jeopardize their status if address information is not kept current. Students can change their address using SIO.

TIME AWAY FROM ACADEMIC RESPONSIBILITIES

Graduate students should not assume that their time-off follows the academic calendar of courses. Many are coming from an undergraduate environment where their university employment followed their course schedule. For many graduate degree programs, there is an expectation that graduate students continue research during academic breaks and time away from campus which may or may not be negotiated with the students. If there are requirements for student time beyond a typical week day, this should be specified.

Clarify that University Holidays are also student holidays, and students need to consult their faculty about coverage if they have challenges with taking time off during University Holidays. For example, if experiments are running that need to be monitored continuously students should speak with their faculty about arrangements to take an equal number of days off at another time.

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.

ANIMAL TRAINING

Animal training is required for any individual listed on an animal protocol. Currently, training is offered through the University of Pittsburgh Institutional Animal Care and Use Committee (IACUC) and must be completed before research studies involving laboratory animals can begin:

IACUC Modules include:

- Purpose Bred Mice and Rats in Research, Testing and Teaching (general)
- Large Animal Research and Training (general)
- Species-specific modules: Cat, Dog, Ferret, Rabbit, Ruminant, Swine, Nonhuman Primates, Guinea Pig, and Hamster

Note: Users are required to take the Purpose Bred Mice and Rats in Research, Testing and Teaching (general) module or the Large Animal Research and Training (general) module and All applicable species-specific modules as per protocol.

For more information on training, please contact:

IACUC Education and Compliance Office - 412-383-1754 or iacuc@pitt.edu

INTELLECTUAL PROPERTY

Students are required to comply with the [University Policy on Intellectual Property](#). This policy was developed to encourage and support the generation and dissemination of new knowledge by faculty, staff and students. It applies to patentable inventions, copyrightable material or trade secrets, works of art, and inventions and creations that might be considered proprietary.

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 the [Graduate Tuition & Fees website](#). 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 the Dean of Students](#) (see Appendix A) 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 a health plan. The student must 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 or by email to 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 AT CMU DURING THE ACADEMIC YEAR

M.S. students can 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 06-700*).

There are limited employment opportunities in faculty research groups for students who desire to earn wages. 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 the fall or spring semester). For more information, see: <https://www.cmu.edu/oie/employment/index.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 Teaching Assistants 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 such as those 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.

For submission, all applications must go through the Business Manager's Office. The Business Manager must be notified before the application submission and receive a full, completed copy of the application. 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.

HOUSING

Graduate students live in off-campus houses and apartments in the many neighborhoods surrounding the university. Housing Services does provide some local area information, resource links, and CMU Off-Housing (a list of apartments posted by area landlords), which can be found in the Community Housing section.

FACILITIES AND EQUIPMENT

The Biological Sciences department owns and maintains equipment such as centrifuges and autoclaves for departmental members' use. It is the responsibility of each graduate student engaged in wet-lab research to be trained in the proper use and maintenance of this equipment. It is also imperative that logs are signed, and any problems noted. Individual laboratories are liable for repair and replacement costs if their personnel misuse equipment.

ACCESS TO MELLON INSTITUTE

The Mellon Institute access is granted through CMU IDs. The Director of Graduate Operations must approve access.

Appendix A

2023-2024

Highlighted University Resources for Graduate Students

Key Resources for Graduate Student Support

Office of Graduate and Postdoctoral Affairs

<https://www.cmu.edu/graduate>

graded@cmu.edu

The Office of Graduate and Postdoctoral Affairs provides university-wide support for all graduate students and academic programs, with a focus on supporting graduate student success at Carnegie Mellon. Examples of resources offered through the Office of Graduate and Postdoctoral Affairs include, but are not limited to:

- Website with university resources, contact information for CMU programs and services, possible financial assistance and potential funding opportunities, and various procedural and policy information
- Newsletter to all graduate students with information on activities, resources, and opportunities
- Professional development seminars and workshops, and various programming and events for the graduate student community

The Office of Graduate and Postdoctoral Affairs also works directly with the colleges and departments on issues related to graduate students and serve as a resource for developing policy and procedures. The Office of Graduate and Postdoctoral Affairs partners with many other offices and organizations, such as the Graduate Student Assembly, to support the holistic graduate student educational experience.

Office of the Dean of Students

<https://www.cmu.edu/student-affairs/dean/>

The Office of the Dean of Students provides central leadership of the metacurricular experience at Carnegie Mellon including the coordination of student support. Graduate students will find the enrollment information for Domestic Partner Registration and Parental Accommodations in the Office of the Dean of Students or on their website. This Office also manages the Student Emergency Support Funding process. There are currently three forms of support funding for enrolled students: emergency student loans, student parental loans, and the Tartan Emergency Support Fund. Inquiring students will be provided with additional information about the various types of funding

during a consultation meeting with a member of the Dean of Students team. Tuition costs are not eligible for Student Emergency Support funding.

College Liaisons and the Student Support Resources team serve as additional resources for graduate students. College Liaisons are senior members of the Division of Student Affairs who work with departments and colleges addressing student concerns across a wide range of issues. College Liaisons are identified on the Important Contacts list in Student Information Online (SIO). The Student Support Resources team offers an additional level of support for students who are navigating a wide range of life events. Student Support Resources staff members work in partnership with campus and community resources to provide coordination of care and support appropriate to each student's situation.

The Division of Student Affairs

The Division of Student Affairs includes (not an exhaustive list):

- Athletics, Physical Education and Recreation
- Career and Professional Development Center (CPDC)
- Center for Student Diversity and Inclusion
- Cohon University Center
- Counseling & Psychological Services (CaPS)
- Dining Services
- Office of Community Standards and Integrity (OCSI)
- Office of Student Leadership, Involvement, and Civic Engagement (SLICE)
- University Health Services (UHS)
- Wellness Initiatives

Center for Student Diversity & Inclusion

<https://www.cmu.edu/student-diversity/>

Diversity and inclusion have a singular place among the values of Carnegie Mellon University. The Center for Student Diversity & Inclusion actively cultivates a strong, diverse and inclusive community capable of living out these values and advancing research, creativity, learning and development that changes the world.

The Center offers resources to enhance an inclusive and transformative student experience in dimensions such as access, success, campus climate and intergroup dialogue. Additionally, the Center supports and connects historically underrepresented students and those who are first in their family to attend college in a setting where students' differences and talents are appreciated

and reinforced, both at the graduate and undergraduate level. Initiatives coordinated by the Center include, but are not limited to:

- First generation/first in family to attend college programs
- LGBTQ+ Initiatives
- Race and ethnically focused programs, including Inter-University Graduate Students of Color Series (SOC) and PhD SOC Network
- Women's empowerment programs, including Graduate Women's Gatherings (GWGs)

Assistance for Individuals with Disabilities

<https://www.cmu.edu/disability-resources/>

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical, digital, and programmatic access to ensure that students with disabilities have equal access to their educational experience. The Office works to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Section 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 to begin the interactive accommodation Process.

Students with physical, sensory, cognitive, or emotional disabilities are encouraged to self-identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to access@andrew.cmu.edu, or call (412) 268- 6121.

Eberly Center for Teaching Excellence & Educational Innovation

<https://www.cmu.edu/teaching/>

The Eberly Center offers a wide variety of confidential, consultation services and professional development programs to support graduate students as teaching assistants or instructors of record during their time at Carnegie Mellon University and as future faculty members at other institutions. Regardless of one's current or future teaching context and duties, Eberly's goal is to disseminate evidence-based teaching strategies in ways that are accessible and actionable. Programs and services include campus-wide Graduate Student Instructor Orientation events and our Future Faculty Program, both of which are designed to help participants be effective and efficient in their teaching roles. The Eberly Center also assists departments in creating and conducting customized programs to meet the specific needs of their graduate student instructors. Specific information about Eberly Center support for graduate students is found at:

<https://www.cmu.edu/teaching/graduatestudentsupport/>

Graduate Student Assembly

<https://www.cmu.edu/stugov/gsa/>

The Graduate Student Assembly (GSA) is the branch of Carnegie Mellon Student Government that represents and advocates for the diverse interests of all graduate students at CMU. GSA is composed of representatives from the different graduate programs and departments who want to improve the graduate student experience at the different levels of the university. GSA is funded by the Student Activities Fee from all graduate students. GSA passes legislation, allocates student activities funding, advocates for legislative action locally and in Washington D.C. on behalf of graduate student issues and needs, and otherwise acts on behalf of all graduate student interests. GSA's recent accomplishments are a testament to their making a difference, and steps to implementing the vision laid out by the strategic plan.

<https://www.cmu.edu/stugov/gsa/about-the-gsa/strategic-plan.html>

GSA offers an expanding suite of social programming on and off-campus to bring graduate students from different departments together and build a sense of community. GSA is the host of the Graduate Student Lounge on the 3rd floor of the Cohon University Center. GSA also maintains a website of graduate student resources on and off-campus. GSA continues to rely on student feedback to improve the graduate student experience at CMU. Feel free to contact them at gsa@cmu.edu to get involved, stop by their office in the Cohon University Center Room 304 or become a representative for your department.

Office of International Education (OIE)

<https://www.cmu.edu/oie/>

Carnegie Mellon hosts international graduate and undergraduate students who come from more than 90 countries. The Office of International Education (OIE) is the liaison to the University for all non-immigrant students and scholars, as well the repository for study abroad opportunities. OIE provides many services including: advising on personal, immigration, study abroad, academic, and social and acculturation issues; presenting programs of interest such as international career workshops, tax workshops, and cross-cultural and immigration workshops; international education and statistics on international students in the United States; posting pertinent information to students through email and the OIE website and conducting orientation and pre-departure programs.

Veterans and Military Community

<https://www.cmu.edu/veterans/>

Military veterans are a vital part of the Carnegie Mellon University community. Graduate students can find information on applying for veteran education benefits, campus services, veteran's groups at CMU, and non-educational resources through the Veterans and Military Community website.

There are also links and connections to veteran resource in the Pittsburgh community. The ROTC and Veteran Affairs Coordinator can be reached at urovaedbenefits@andrew.cmu.edu or 412-268-8747.

Carnegie Mellon Ethics Hotline

<https://www.cmu.edu/hr/resources/ethics-hotline.html>

The health, safety and well-being of the university community are top priorities at Carnegie Mellon University. CMU provides a hotline that all members of the university community should use to confidentially report suspected unethical activity, violations of university policy, or violations of law. Students, faculty and staff can anonymously file a report by calling 1-844-587-0793 or visiting <https://cmu.ethicspoint.com/>. All submissions are reported to appropriate university personnel and handled discreetly.

The hotline is NOT an emergency service. For emergencies, call University Police at 412-268-2323.

Policy Against Retaliation

It is the policy of Carnegie Mellon University to protect from retaliation any individual who makes a good faith report of a suspected violation of any applicable law or regulation, university Policy or procedure, any contractual obligation of the university, and any report made pursuant to the Carnegie Mellon University Code of Business Ethics and Conduct.

Additional details regarding the Policy Against Retaliation are available at:

<https://www.cmu.edu/policies/administrative-and-governance/whistleblower.html>

Key Offices for Academic & Research Support

Computing and Information Resources

<https://www.cmu.edu/computing/>

Computing Services maintains and supports computing resources for the campus community, including the campus wired and wireless networks, printing, computer labs, file storage, email and software catalog. As members of this community, we are all responsible for the security of these shared resources. Be sure to review the Safe Computing (<https://www.cmu.edu/computing/safe/>) section and the University Computing Policy (<https://www.cmu.edu/policies/information-technology/computing.html>)

Visit the Computing Services website (<https://www.cmu.edu/computing/>) to learn more. For assistance the Computing Services Help Center is available at 412-268-4357 (HELP) or ithelp@cmu.edu.

Student Academic Success Center

<https://www.cmu.edu/student-success/>

The Student Academic Success Center's (SASC) work to support success focuses on creating spaces for students to engage in their coursework and approach to learning through many group and individual program options. SASC supports student success by providing academic coaching, subject-specific tutoring, effective communication strategies, accommodations for students with disabilities, and language support for multilingual learners. SASC engages with faculty and staff to improve the coordination and professional development for academic advisors. Visit the SASC website for more information about services offered in areas such as communication and language support; language and cross-cultural support; and learning support.

University Libraries

<https://www.library.cmu.edu/>

The University Libraries offers a wide range of information, resources, and services supporting graduate students in coursework, research, teaching, and publishing. The library licenses and purchases books, journals, media, and other needed materials in various formats. Library liaisons, consultants, and information specialists provide in-depth and professional assistance and advice in all-things information, including:

- Locating and obtaining specific resources
- Providing specialized research support
- Advanced training in the use and management of data

Sign up for workshops and hands-on topic-specific sessions such as data visualization with Tableau, cleaning data with OpenRefine, and getting started with Zotero. Weekly drop-in hours for Digital Humanities and for Research Data Research Management are scheduled during the academic year. Start at the library home page to find the books, journals, and databases you need; to identify and reach out to the library liaison in your field; to sign up for scheduled workshops; and to connect with consultants in scholarly publishing, research data management, and digital humanities.

Research at CMU

<https://www.cmu.edu/research/>

The primary purpose of research at the university is the advancement of knowledge in all fields in which the university is active. Research is regarded as one of the university's major contributions to society and as an essential element in education, particularly at the graduate level and in faculty development. Research activities are governed by several university policies. Guidance and more general information are found by visiting the Research at Carnegie Mellon website.

Office of Research Integrity & Compliance

<https://www.cmu.edu/research-compliance/>

The Office of Research Integrity & Compliance (ORIC) is designed to support research at Carnegie Mellon University. The staff work with researchers to ensure research is conducted with integrity and in accordance with federal and Pennsylvania regulation. ORIC assists researchers with human subject research, conflicts of interest, responsible conduct of research, export controls, and institutional animal care & use. ORIC also provides consultation, advice, and review of allegations of research misconduct.

Key Offices for Health, Wellness & Safety

Counseling & Psychological Services

<https://www.cmu.edu/counseling/>

Counseling & Psychological Services (CaPS) affords the opportunity for students to talk privately about academic and personal concerns in a safe, confidential setting. An initial consultation at CaPS can help clarify the nature of the concern, provide immediate support, and explore further options if needed. These may include a referral for counseling within CaPS, to another resource at Carnegie Mellon, or to another resource within the larger Pittsburgh community. CaPS also provides workshops and group sessions on mental health related topics specifically for graduate students on campus. CaPS services are provided at no cost. Appointments can be made in person, or by telephone at 412-268-2922.

Health Services

<https://www.cmu.edu/HealthServices/>

University Health Services (UHS) is staffed by physicians, advanced practice clinicians and registered nurses who provide general medical care, allergy injections, first aid, gynecological care, and contraception as well as on-site pharmaceuticals. The CMU Student Insurance Plan covers most visit fees to see the physicians and advanced practice clinicians & nurse visits. Fees for prescription medications, laboratory tests, diagnostic procedures and referral to the emergency room or specialists are the student's responsibility and students should review the UHS website and their insurance plan for detailed information about the university health insurance requirement and fees. UHS also has a registered dietician and health promotion specialists on staff to assist students in addressing nutrition, drug and alcohol and other healthy lifestyle issues. In addition to providing direct health care, UHS administers the Student Health Insurance Program. The Student Health Insurance plan offers a high level of coverage in a wide network of health care providers and hospitals. Appointments can be made by visiting UHS's website, walk-in, or by telephone, 412-268-2157.

Campus Wellness

<https://www.cmu.edu/wellness/>

At Carnegie Mellon, we believe our individual and collective well-being is rooted in healthy connections to each other and to campus resources. The university provides a wide variety of wellness, mindfulness and connectedness initiatives and resources designed to help students thrive inside and outside the classroom.

Religious and Spiritual Life Initiatives (RSLI)

<https://www.cmu.edu/wellbeing/resources/religious-spiritual/index.html>

Carnegie Mellon is committed to the holistic growth of our students, including creating opportunities for spiritual and religious practice and exploration. RSLI has relationships with local houses of worship from various traditions and many of these groups are members of CMU's Council of Religious Advisors. They also offer programs and initiatives that cross traditional religious boundaries in order to increase knowledge of and appreciation for the full diversity of the worldview traditions. RSLI staff are available to support students across the spectrum of religious and spiritual practice and would be more than happy to help you make a connection into a community of faith during your time at CMU.

University Police

<https://www.cmu.edu/police/>

x2323

The University Police Department is located at 4551 Filmore Street. The department's services include police patrols and call response, criminal investigations, fixed officer and foot officer patrols, event security, and crime prevention and education programming as well as bicycle and laptop registration. Visit the department's website for additional information about the staff, emergency phone locations, crime prevention, lost and found, fingerprint services, and annual statistic reports. Carnegie Mellon University publishes an annual campus security and fire safety report describing the university's security, alcohol and drug, sexual assault, and fire safety policies. The report also contains statistics about the number and type of crimes committed on the campus and the number and cause of fires in campus residence facilities during the preceding three years. Graduate students can obtain a copy by contacting the University Police Department at [x2323](tel:x2323). The annual security and fire safety report is also available online at:

<https://www.cmu.edu/police/annualreports/>

Shuttle and Escort Services

<https://www.cmu.edu/parking/transport/>

Parking and Transportation coordinates the Shuttle Service and Escort Service provided for CMU students, faculty, and community. The Shuttle & Escort website has full information about these services, stops, routes, tracking and schedules.

The WORD

<https://www.cmu.edu/student-affairs/theword/>

The WORD is Carnegie Mellon University's online student handbook and serves as the foundation for the department (and sometimes college) handbook. The WORD contains university-wide academic policy information and resources, community policies and resources, and describes the university level procedures used to review possible violations of these standards. It is designed to provide all students with the tools, guidance, and insights to help you achieve your full potential as a member of the Carnegie Mellon community. Graduate students are encouraged to bookmark this site and refer to it often. University policies can also be found in full text at:

<https://www.cmu.edu/policies/>.