Computational Biology Department
M.S. in Automated Science

Resource Handbook for Graduate Students
2020-2021

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Welcome!
The directors of the Masters in Automated Science (MSAS) program would like to welcome you to the Computational Biology Department and to Carnegie Mellon University. This document explains the policies of the MSAS program. You should read it thoroughly.

While this handbook is specific to your academic experience in the MSAS 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 Carnegie Mellon 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.

M.S. in Automated Science Mission Statement
The MSAS program trains practitioners in the design, implementation, and application of automation in scientific research. Graduates become leaders in the emerging paradigm of Automated Science - the combination of automated scientific instruments and artificial intelligence for iteratively interpreting data and selecting experiments. Interested students are given opportunities to pursue research. Our graduates are prepared for rewarding jobs in industry or to pursue their doctoral degrees at top universities.

Degree Offered
The initial MSAS program will focus on biological experimentation, and graduates will receive a Master’s of Science in Automated Science: Biological Experimentation.

This Handbook
The Computational Biology Department has prepared this statement of program policies and procedures to answer questions that students may have as they enter the M.S. in Automated Science (MSAS) 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. We encourage you to discuss any questions or concerns that you may have with the MSAS directors, academic advisor, or program coordinator at any time.

Students should contact the MSAS program coordinator if they would like a version of this handbook in a different format.

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:
• Academic Integrity Policy: https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html
• University Policies Website: http://www.cmu.edu/policies/
• Graduate Education Website: http://www.cmu.edu/graduate/policies/index.html

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

Carnegie Mellon University Statement of Assurance
Carnegie Mellon University does not discriminate in admission, employment, or administration of its programs or activities on the basis of 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 vice president for campus affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2056.


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 on-line at: https://www.cmu.edu/student-affairs/theword/.

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

Program Contacts and Resources

Program Administration

<table>
<thead>
<tr>
<th>Title &amp; Responsibilities</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td><strong>Co-director</strong></td>
<td></td>
</tr>
<tr>
<td><em>Overall Program Management; Academic Integrity Issues; Leave of Absence Approval</em></td>
<td>Robert F. Murphy, Ph.D.</td>
</tr>
<tr>
<td></td>
<td>GHC 7723</td>
</tr>
<tr>
<td></td>
<td>412-268-3480</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:murphy@cmu.edu">murphy@cmu.edu</a></td>
</tr>
<tr>
<td><strong>Co-director</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christopher Langmead, Ph.D.</td>
</tr>
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</table>
### Overall Program Management; Academic Integrity Issues; Leave of Absence Approval

<table>
<thead>
<tr>
<th>Contact Information</th>
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<tbody>
<tr>
<td>GHC 7411</td>
</tr>
<tr>
<td>412-268-7571</td>
</tr>
<tr>
<td><a href="mailto:cjl@cs.cmu.edu">cjl@cs.cmu.edu</a></td>
</tr>
</tbody>
</table>

### Academic Advisor & Assistant Director

<table>
<thead>
<tr>
<th>Academic Advising</th>
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<tr>
<td>Summer internship approvals</td>
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<table>
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<tr>
<th>Contact Information</th>
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<tbody>
<tr>
<td>Joshua Kangas, Ph.D.</td>
</tr>
<tr>
<td>GHC 7715</td>
</tr>
<tr>
<td>412-268-4671</td>
</tr>
<tr>
<td><a href="mailto:jkangas@andrew.cmu.edu">jkangas@andrew.cmu.edu</a></td>
</tr>
</tbody>
</table>

### Program Coordinator

| Admissions; Course Registration; Office and building access |
| Program Ombudsperson |
| Scheduling meetings with program administrators |

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<thead>
<tr>
<th>Contact Information</th>
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<tbody>
<tr>
<td>Janet Garrand</td>
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<tr>
<td>GHC 7725</td>
</tr>
<tr>
<td>412-268-5598</td>
</tr>
<tr>
<td><a href="mailto:jgarrand@andrew.cmu.edu">jgarrand@andrew.cmu.edu</a></td>
</tr>
</tbody>
</table>

### Ombudsperson

Janet Garrand serves as ombudsperson for graduate students to assist with difficult academic or personal situations where a confidential sounding board and/or an intermediary can be helpful. Examples of situations where students are encouraged to seek advice or assistance include:

- Difficulty in communications with the program co-directors, academic advisor, or faculty, particularly when those difficulties may lead to considering leaving the program
- Conflict with other group members that is difficult to resolve within the group
- Issues related to diversity or the departmental climate for those in groups who are historically underrepresented in science, or
- Personal concerns that interfere significantly with the ability to make timely progress in research or program requirements. These might be due to health, family or financial challenges.

Upon the student’s request, information shared will be kept in confidence, as long as no laws require otherwise. Should help be needed from additional sources, the student would be asked before sharing confidential information.

In the event that a difficulty cannot be resolved within the program or department, Janet Garrand can also assist with following the grievance procedures for resolving difficult matters, which are available here: [www.cmu.edu/graduate/policies/appeal-grievance-procedures.html](http://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html).

### Department Level Contacts

<table>
<thead>
<tr>
<th>Title &amp; Responsibilities</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td><strong>Department Head, Computational Biology Department</strong></td>
<td>Russell Schwartz, Ph.D.</td>
</tr>
<tr>
<td></td>
<td>MI 654</td>
</tr>
<tr>
<td></td>
<td>412-268-3871</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:russells@andrew.cmu.edu">russells@andrew.cmu.edu</a></td>
</tr>
</tbody>
</table>
College Level Contacts

<table>
<thead>
<tr>
<th>Title &amp; Responsibilities</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| Dean, School of Computer Science | Martial Hebert, Ph.D.  
GHC 6109  
412-268-1659  
hebert@cs.cmu.edu |
| SCS Associate Dean for Masters Programs, School of Computer Science | David Garlan, Ph.D.  
Wean Hall 4218  
412-268-5056  
garlan@cs.cmu.edu |

University Level Contacts

<table>
<thead>
<tr>
<th>Title &amp; Responsibilities</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| Graduate Student Ombudsperson  
*Students may confer with the university graduate student ombudsperson on issues of process or other concerns as they navigate conflicts.* | Graduate Education Office,  
graded@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.* | Angela Lusk  
Cohon University Center, 111E  
412-268-7117  
alusk@andrew.cmu.edu |

Additional faculty, staff and students can be found on the MSAS website. [http://msas.cbd.cmu.edu/](http://msas.cbd.cmu.edu/)

Academic Calendar

The Academic Calendar can be found at [https://www.cmu.edu/hub/calendar/index.html](https://www.cmu.edu/hub/calendar/index.html) and provides information on all deadlines including registration dates, class start dates, add/drop deadlines, exam dates and more.
Degree Attainment

Preparatory Requirements
Before beginning courses, all students are required to complete an academic integrity instructional module, as prescribed by the co-directors. Students must pass with a grade of 90% or higher on every assignment to be eligible to start classes.

Coursework
To receive the M.S. degree, students must successfully complete the following requirements:
1. At least 172 units of coursework, which includes the specific courses listed below.
2. An average grade of B or above (GPA = 3.0) in those 172 or more units counted toward degree certification. No grade lower than a C (GPA = 2.0) can be counted toward degree certification.
3. Full-time course registration (at least 36 units) for each semester in the program

The required coursework is as follows:

<table>
<thead>
<tr>
<th>Course (Units)</th>
<th>Name</th>
<th>Semester</th>
<th>Course (Units)</th>
<th>Name</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>02-601 (12)</td>
<td>Programming for Scientists*</td>
<td>1</td>
<td>02-750 (12)</td>
<td>Automation of Scientific Research</td>
<td>2</td>
</tr>
<tr>
<td>02-761 (12)</td>
<td>Laboratory Methods for Automated Biology I</td>
<td>1</td>
<td>02-762 (12)</td>
<td>Laboratory Methods for Automated Biology II</td>
<td>2</td>
</tr>
<tr>
<td>03-709 (12)</td>
<td>Applied Cell and Molecular Biology*</td>
<td>1</td>
<td>02-620 (12)</td>
<td>Machine Learning for Scientists</td>
<td>2</td>
</tr>
<tr>
<td>02-680 (9)</td>
<td>Essential Mathematics and Statistics for Scientists*</td>
<td>1</td>
<td>02-702 (3)</td>
<td>Computational Biology Seminar</td>
<td>2</td>
</tr>
<tr>
<td>02-605 (3)</td>
<td>Professional Issues in Automated Science</td>
<td>1</td>
<td>02-605 (3)</td>
<td>Professional Issues in Automated Science</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Units: 48

*See below for rules for students who test out of any of these courses.

<table>
<thead>
<tr>
<th>Course (Units)</th>
<th>Name</th>
<th>Semester</th>
<th>Course (Units)</th>
<th>Name</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>02-712 (12)</td>
<td>Computational Methods for</td>
<td>3</td>
<td>02-725 (12)</td>
<td>Computational Methods for</td>
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<tr>
<td>Course Code</td>
<td>Course Description</td>
<td>Units</td>
<td>Course Code</td>
<td>Course Description</td>
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</tr>
<tr>
<td>02-604 (12)</td>
<td>Fundamentals of Bioinformatics**</td>
<td>3</td>
<td>02-610 (12)</td>
<td>Computational Genomics</td>
<td></td>
</tr>
<tr>
<td>02-661 (12)</td>
<td>MSAS Capstone 1</td>
<td>3</td>
<td>02-662 or 02-700 (12)</td>
<td>MSAS Capstone 2 (professional option) or M.S. Research (research option)</td>
<td></td>
</tr>
<tr>
<td>02-700 or 02-XXX (12)</td>
<td>M.S. Research (research option) or CBD graduate-level elective (professional option)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Total Units: 48  
** Total Units: 36

** Students who took 02-604 in the first semester will take an 02-XXX CBD graduate-level elective in the third semester.

The university’s complete Schedule of Classes can be found at www.cmu.edu/hub.

**Course Credit for Internships**

If a student completes a part-time internship directly relevant to Automated Science, then they may register to receive three units of credit for each term for (02-802A fall/spring).

**Seminars**

During the second semester of the program, each student will register for weekly Computational Biology seminars: Graduate Seminar 02-702 (3 units). Students who are registered for fewer than 48 units in the first semester, because they have tested out of any of the first semester courses, are welcome to register for a seminar during the first semester, if they choose.

**Professional and Research Options**

During the second year, all students are required to take the capstone class (02-661) in the fall semester. Students who want to enter the workforce as soon as possible should also take the capstone class in the spring; this is called the ‘professional option’ in the table above. Those who wish to pursue a Ph.D. after completing their M.S. should also take MS Research (02-700) in the fall and then take a second semester of MS Research in the spring; this is called the ‘research option’ in the table above. Students who elect to the Research option are responsible for finding a research mentor. Typically, students contact faculty directly to learn about available research opportunities, but they may also contact the Program Coordinator who can put them in touch with the CBD faculty member who is providing research placement advice that semester. The Research for Credit Form (http://msas.cbd.cmu.edu/wp-content/uploads/2020/01/MSAS-Research-for-Credit-Form.docx.pdf) must be submitted prior to enrolling in 02-700.
The program’s academic advisor will consult with each student prior to the start of the second year to determine his or her best option. Note that all MSAS students are required to take 02-661 (MSAS Capstone 1), to demonstrate mastery of the techniques of Automated Science.

Important Rules for Coursework

Note that 36 units are required for students to be full time. International students must be in Full-time status for all semesters and need to consult the Office of International Education if they may not be in full time status.

Students must maintain full-time enrollment in the program and all course requirements should be fulfilled by the end of the student’s fourth semester. The only exception that is allowed is if CMU Student Affairs and/or a medical provider requests that a student be allowed to take a reduced course load.

The MSAS Advising committee may waive the requirement for 02-601, 02-680 and/or 03-709 if a student demonstrates proficiency through a placement exam or project. Opportunities to complete placement exams or projects are offered before the start of the fall semester. Students who test out of 02-601 (Programming for Scientists) will take 02-613 (Algorithms and Advanced Data Structures) or 02-604 (Fundamentals of Bioinformatics) in the first semester. Students who took 02-604 in the first semester will take a 02-XXX CBD graduate elective in the third semester. Students who test out of 03-709 will take an equivalent number of course units from the Department of Biological Sciences or Computational Biology Department. Students who test of of 02-680 will take a graduate Computational Biology (02-7XX) or Machine Learning (10-7XX) elective. In all cases the degree requirement remains at 174 units. All course requirements must be fulfilled by the end of the student’s fourth semester unless a medical or other exemption has been granted in writing.

Students must follow the procedures and deadlines for adding, dropping, or withdrawing from courses as identified on the academic calendar. Information can be found at www.cmu.edu/hub/registrar/course-changes/index.html

Most MSAS students will have the opportunity to take a single free elective in the final (4th) semester of the program. All student course selections are subject to the approval of the MSAS program directors. Note that, according to college rules, undergraduate courses listed by the Computer Science Department (15-XXX) are closed to all graduate students, unless that course has a graduate listing.

CMU undergraduate students enrolling for a continuing M.S. can use relevant courses from their junior or senior years to count towards the MSAS degree. The courses used toward MSAS 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.
Program Policies and Procedures

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 Graduate Education Office introduces the students to university resources and services.
- The Program Orientation introduces them to faculty, research, administration, policies and services. The MSAS co-directors will arrange for students to receive the necessary information for enrollment, registration and timelines.

Advising & Coursework

Advising for Coursework
Before each of the fall and the spring semesters, each student meets individually with the academic advisor to select courses and obtain approval. Any requested changes must be brought to the attention of the academic advisor.

Registering for Classes
In the first fall semester, students are pre-enrolled for the required courses. In subsequent semesters, students register online for their own classes; information is available at www.cmu.edu/hub/registration. Students register online at www.cmu.edu/hub/sio with an Andrew ID.

To be full-time, students must register for at least 36 units per semester. Students may not take more than 48 units in any semester.

University Policy on Grades
The university policy on grades may be found at: www.cmu.edu/policies/student-and-student-life/grading.html. 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.

Pass/Fail Courses
Pass/Fail courses are strongly discouraged unless it is a course that is not directly relevant 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. With the exception of 02-605 Professional Issues in Automated Science, and the required 02-702 Computational Biology Seminar, Pass/Fail courses cannot be used to satisfy any MSAS program requirements.

With petition to and approval from the academic advisor, 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 explain 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 academic advisor and the Department Head. Switching a course to Pass/Fail mid-semester will generally only be approved under special circumstances.

**Important notes**
- Classes taken Pass/Fail may not be used to fulfill graduation requirements, with the exception of 02-702 and 02-605.
- Pass/Fail status is irrevocable.

**Auditing a Course**
With approval of the academic advisor, 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 academic advisor. Audited classes are not taken for credit and cannot be used to fulfill graduation requirements.

**Drop/Add/Withdraw Procedure**
Students taking undergraduate and Master’s level courses must follow the procedures and deadlines for adding, dropping, or withdrawing from courses as identified on the academic calendar. Information can be found at [https://www.cmu.edu/hub/registrar/course-changes/](https://www.cmu.edu/hub/registrar/course-changes/)

**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 academic advisor.

**Dropping a Course**
Students may withdraw from a course online. The university has a Drop deadline, after which the course appears on the student's transcript as withdrawn (W).

Complete the Retroactive Add/Drop Petition form after the Drop deadline obtaining permission of both: 1) the teaching department head and 2) the academic advisor.

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

**Transfer Courses & 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 as follows: 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 taken into account 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.) **The MSAS program does not accept transfer credits.**

CMU undergraduate degree holders, please refer to the section on Coursework for carry-over course credit details.

**Monitoring Progress**
Students who have specific concerns about their progress are urged to speak with the academic advisor as early as possible. The academic advisor will meet with the student at least twice a year, providing guidance and monitoring the student's overall progress. In addition, the co-directors will meet with the student as and when needed to discuss progress and resolve issues.

**Grades & Academic standing**
To be in good academic standing, a student is expected to maintain a B average (GPA = 3.0) in the coursework (minimum 172 units) that will be counted towards the degree. No grade lower than C shall be used for completion of degree requirements.

**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.

**University Policy on Grades**
https://www.cmu.edu/policies/student-and-student-life/grading.html 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.

**Working**

**Summer Research**
Summer research in a lab requires you to either be paid (as a CMU employee) or to register for a 02-700.

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. Such positions do not need CPT authorization. For more information, see: https://www.cmu.edu/oie/foreign-students/employment.html
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. With the approval of the MSAS academic advisor, students may enroll in 02-802, Automated Science Internship, to receive three units of credit for completing an internship. **Approval will only be given if the internship is directly relevant to Automated Science.** For example, an internship at Emerald Cloud Lab will be approved, because its primary business involves scientific automation. An internship at Facebook will not. Additionally, the MSAS academic advisor will require a copy of the official offer letter from the company or organization providing the internship. The letter must: (i) be on official letterhead, (ii) signed, and (iii) state the start and end dates of the internship.

To receive credit for 02-802, the following two conditions must be met: (i) the student’s direct supervisor during the internship must certify that their performance was satisfactory, and (ii) the student must present a poster, or other presentation at a program event sometime during the semester following their internship. The MSAS academic advisor will contact the student’s direct supervisor during the internship to determine whether condition (i) is met.

In most cases, the internship will be completed during the summer and the student will enroll (tuition free) in 02-802R. In rare circumstances, the MSAS academic advisor will authorize a student to complete an internship during the academic year. Such students will enroll in 02-802A. Students must pay tuition if enrolled in 02-802A.

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 relevant to Automated Science.** For CPT authorization, students must present the offer letter stating employment dates, work hours, and amount of wages or stipend for the internship. The academic advisor signs all CPT authorization requests and may deny a request if the internship is not relevant to Automated Science. 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 academic advisor before seeking an internship/co-op or signing an offer contract.

Teaching Assistantships

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](https://www.cmu.edu/policies/faculty/evaluation-certification-english-fluency-instructors.html). The protocol for evaluating the English fluency for graduate student instructors will involve completing the ITA test. Students with scores of ‘Pass’ and ‘Restricted I’ will be eligible to be a teaching assistant. Students with scores of ‘Restricted II’ will be limited to serving as graders.
In addition to administering the International Teaching Assistant (ITA) Test (a mandatory screening test for any non-native speaker of English), the Language Support in the Student Academic Success Center helps teaching assistants who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon. Visit the Language Support in the Student Academic Success Center website for additional information: https://www.cmu.edu/student-success/.

**Employment Eligibility Verification**

If you are receiving a stipend, you are going to be a TA or you 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 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.

For more information, please see CMU's Guidance for Completing the Form I-9 and E-Verify Requirements at CMU, 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.

**Vacations and Time-off**

Graduate Students engaged in paid research or serving as teaching assistants are expected to continue with their research and teaching during academic breaks (for example, Spring Break), with the exception of the following official University holidays:

- New Year’s Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Day After Thanksgiving
- Day Before Christmas
- Christmas Day
- Day Before New Year’s Day

Paid time off for personal business or vacations generally is not included as part of a graduate’s financial support. A supported graduate student who wants to take a short break (up to ten days) must get approval for that break from his/her supervisor. Due to federal regulations governing graduate student support, paid time off for personal business and vacations is not provided.
Graduation
MSAS students are certified for graduation by the Computational Biology Department in the School of Computer 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.

The Carnegie Mellon University Commencement Ceremony is held on Sunday.

Program 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 program coordinator 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 program directors to discuss their plans and fill out the appropriate Leave Of Absence form. Final approval of LOA is pending approval of the MSAS co-directors. The student’s place in the program will be held until a mutually determined time. For more information refer to https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/

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 co-directors to discuss their plans and fill out the appropriate Withdrawal form. For more information refer to https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/

Change of Address
Students are responsible for notifying the MSAS program coordinator and the HUB of all changes in a timely manner. Students will be held responsible for any failure 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, which is available via the HUB website: www.cmu.edu/hub/index.html

Statute of Limitations
As outlined in the Master’s Students Statute of Limitations, students 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.

Under extraordinary circumstances, such as leave of absence, military or public service, family or parental leave, or temporary disability, a school or college may, upon the relevant department's recommendation
and with the written approval of the dean (or designate), defer the lapse for a period commensurate with the duration of that interruption. Students who are pursuing a master’s degree as part-time students for all semesters of their program, as approved by their program, may also appeal to their program or department for extension of the time to degree limit.

**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.

Please review both of the following:

- The University Policy on Academic Integrity ([https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html](https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html)). The policy includes the University expectations around academic integrity and provides definitions of cheating, plagiarism, and unauthorized assistance.
- The University’s Academic Disciplinary Actions procedures ([https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html](https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html)). These procedures outline the process for investigating, reporting, and adjudicating violations of the University Policy on Academic Integrity. The procedures also outline the appeal process.

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 will impose penalties for academic integrity violations. Program level consequences may include any or all of the following: academic probation (see below); 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 including 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 MSAS 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](http://www.cmu.edu/academic-integrity)

**Academic Probation and Consequences of Inadequate Progress Toward the Degree**

The MSAS co-directors and academic advisor will review the status of each student at the end of each semester. If the MSAS co-directors and academic advisor determine that a student is making inadequate progress or has an academic integrity violation (AIV), they 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 2.0 after one term or 2.5 after two or more terms, 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. 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 may result in dismissal from the program or other actions as decided upon by the administration of the program. 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 MSAS program.

**Withdrawal of Degree**

The university reserves the right to withdraw a degree even though it has been granted should there be discovery that the work upon which it was based or the academic records in support of it had been falsified. In such a case the degree will be withdrawn promptly upon discovery of the falsification. See [https://www.cmu.edu/policies/student-and-studentlife/withdrawal-of-a-degree.html](https://www.cmu.edu/policies/student-and-studentlife/withdrawal-of-a-degree.html) for more information.

**Student Rights in Academic Conflicts**

A student wishing to appeal a course-level 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 program coordinator who serves as the Graduate Ombudsperson for the Computational Biology Department. If the conflict cannot be resolved on this level, the student is referred to the Program co-directors or the relevant department head who may, with the student’s permission, meet with both the student and the faculty member involved.

In cases where departmental assistance is not possible or not practical due to conflicts of interest or confidentiality concerns, please contact the Computational Biology Department Ombudsperson 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.

**Summary of Graduate Student Appeal and Grievance Procedures**

[https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html](https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html). Graduate students will find the Summary of Graduate Student Appeal and Grievance Procedures on the Graduate Education Resource webpage. This document summarizes processes available to graduate students who seek review of academic and non-academic issues. Generally, graduate students are expected to seek
informal resolution of all concerns within the applicable department, unit or program before invoking formal processes. When an informal resolution cannot be reached, however, a graduate student who seeks further review of the matter is to follow the formal procedures outlined here. These appeal and grievance procedures shall apply to students in all graduate programs of the University. Students should refer to the department specific information in this handbook for department and college information about the administration and academic policies of the program. Additionally, students may confer with the graduate student ombudsman, Graduate Education Office, graded@andrew.cmu.edu, on issues of process or other concerns as they navigate conflicts.

**Early Admission Process for Ph.D. Programs in Computational Biology and Biological Sciences**

MSAS students who have successfully completed their first year may apply for early admission to the Ph.D. programs in Computational Biology and/or Biological Sciences.

**Application process**

Early admission applications will consist of the same materials as a normal application and must be submitted by September 1st. Decisions about the early application will be made by October 1st. Decisions will be a) to offer early admission, b) not to offer early admission but to consider the applicant again during the regular admissions cycle, or c) to reject the application. If a student is rejected they cannot apply again during the regular admission cycle.

Students admitted early would need to decide whether to accept the offer by November 1st. Students admitted early who do not accept the offer by November 1st will not be considered for regular admission. Students who accept the early offer would not be allowed to apply to other PhD programs at CMU or elsewhere.

**Limited Number of early admission offers**

The Computational Biology Ph.D. expects to offer early admission to a maximum of 2 students per year combined from both MSAS and MSCB programs. The Biological Science Ph.D. program expects to make offers of early admission of no more than 20% of its expected incoming class size.

**Adjusted Curriculum**

The curriculum for students who accept an early admission offer may be adjusted for the spring semester to allow inclusion of one or more courses that are required by the Ph.D. program. Such courses would be counted as part of required units for the M.S. program and not for the Ph.D. program, although the requirement for those courses would be waived by the Ph.D. program if a satisfactory grade is received. Minimum unit requirements for the Ph.D. program would still need to be met.

**Support Services and Policies**

**University Graduate Student Ombudperson**

Students may confer with the university graduate student ombudsperson, Graduate Education Office, graded@andrew.cmu.edu, on issues of process or other concerns as they navigate conflicts.
Career and Professional Development Center (CPDC)

www.cmu.edu/career

The Career and Professional Development Center (CPDC) provides students access to campus job fairs and workshops on a variety of topics. In addition on-site career consultants can help students with resumes and mock interviews. Students are encouraged to avail of these services via TartanTRAK.

Language Support in the Student Academic Success Center

www.cmu.edu/student-success

Language Support in the Student Academic Success Center, offers non-native English speakers language support and cross-cultural training, and helps TAs develop fluency. All international students are strongly encouraged to attend seminars and workshops hosted by the Language Support in the Student Academic Success Center. This will prepare students seeking internships and jobs in the USA in fluent English Speech.

Global Communication Center

www.cmu.edu/gcc

The Global Communication Center (GCC) is a new tutoring resource supporting students' efforts to improve their written, oral, and visual communication skills. They support any student, at any level, in any discipline, at any stage of the composing process.

The GCC offers free one-on-one tutoring for academic communication projects in their location on the ground floor of the Hunt Library. Tutors are specifically trained in communication theory, research, and instruction. Students can meet with a tutor by making an appointment or by walking in. It is recommended that students bring electronic copies of the instructor's assignment and any materials the student has prepared.

Libraries

www.library.cmu.edu

There are three university libraries that provide research support for science students: the Roger Sorrells Engineering and Science Library, the Hunt Library and the Mellon Institute Library. The Mellon Institute Library contains reference materials for biology, biochemistry, chemistry, environmental sciences and industrial health.

Enrollment Services (the HUB)

www.cmu.edu/hub

The HUB provides a range of enrollment services. Information regarding the academic calendar, forms, schedule of classes, online registration, graduation procedures and other issues can be found on the website (www.cmu.edu/hub). The HUB is the only University office that can provide an official letter of enrollment, official transcript and enrollment verification. Enrollment verification can be requested online through the HUB. https://www.cmu.edu/hub/registrar/student-records/verifications/.

Student Lounge

The MS Student Office in the Computational Biology Department on the 7th floor of the Hillman Center for Future Generation Technologies can be used to spend time between classes, complete group projects, or just hang out.
Counseling and Psychological Services

http://www.cmu.edu/counseling

Graduate school is often a difficult and stressful time of life. Many MSAS 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 as needed.

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.

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).

Assistance for Individuals with Disabilities

http://www.cmu.edu/education-office/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. 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.

Safeguarding Educational Equity Policy Against Sexual Harassment and Sexual Assault

The University prohibits sex-based discrimination, sexual harassment, sexual assault, dating/domestic violence, and stalking. The University also prohibits retaliation against individuals who bring forward such concerns or allegations in good faith. The policy can be viewed in its entirety at: http://www.cmu.edu/policies/documents/SA_SH.htm. If you have been impacted by any of these issues, you are encouraged to make contact with any of the following resources:

- Office of Title IX Initiatives, http://www.cmu.edu/title-ix/, 412-268-7125, tix@cmu.edu
- University Police, 412-268-2323
- University Health Services, 412-268-2157
- Counseling & Psychological Services, 412-268-2922

Additional resources and information can be found at: https://www.cmu.edu/title-ix/resources-and-information/resources.html

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.

**Student Maternity Accommodation Protocol**

Students whose anticipated delivery date is during the course of the semester may consider taking time away from their coursework and/or research responsibilities. All female students who give birth to a child while engaged in coursework or research are eligible to take either a short-term absence or formal leave of absence. Students in coursework should consider either working with their course instructor to receive incomplete grades, or elect to drop to part-time status or to take a semester leave of absence. Students engaged in research must work with their advisor to develop plans for the research for the time they are away.

Students are encouraged to consult with relevant university faculty and staff as soon as possible as they begin making plans regarding time away. Students must contact the Office of the Dean of Student Affairs to register for Student Maternity Accommodations. Student will complete an information form and meet with a member of the Dean’s Office staff to determine resources and procedures appropriate for the individual student. Planning for the student’s discussion with her academic contact(s) (advisor, associate dean, etc.) will be reviewed during this meeting. To review the Student Maternity Accommodation Protocol in its entirety go to https://www.cmu.edu/graduate/programs-services/maternity-accommodation-protocol.html

**Compliance**

**Environmental Health and Safety Training**

Each graduate student in the MSAS program must complete laboratory, chemical and biological safety training that is presented by Environmental Health & Safety during the Program Student 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. The sexual harassment policy is available at www.cmu.edu/policies. To speak to a sexual harassment advisor, please contact the university sexual harassment hotline at 412.268.7445.

**Animal Training**

Animal training is required for any individual who is 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.

Academic Integrity

Please review the University Policy on Academic Integrity [https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html](https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html) The policy includes the University expectations around academic integrity and provides definitions of cheating, plagiarism, and unauthorized assistance.

A review of the University’s Academic Disciplinary Actions procedures [https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html](https://www.cmu.edu/student-affairs/theword/academic-discipline/index.html) is also recommended. These procedures outline the process for investigating, reporting, and adjudicating violations of the University Policy on Academic Integrity. The procedures also outline the appeal process.

Carnegie Mellon’s Office of Research Integrity and Compliance is sponsoring a Responsible Conduct of Research (RCR) Seminar Series to provide participants with an introduction to topics typically included in RCR curriculum. [https://www.cmu.edu/research-compliance/responsible-conduct/training.html](https://www.cmu.edu/research-compliance/responsible-conduct/training.html).

**Changes to Policies**

All Policies are subject to review one year after adoption or substantial revision, or when there is a change in applicable law, regulation, or policy, whichever comes first. Administrative changes, modifications resulting from changes in relevant laws or regulations, corrections or minor edits to existing policies can be made at any time as needed.

When policies are changed it is because the department believes the new rules offer an improvement. However, students currently enrolled whose degree program is affected by a change in policy may choose to be governed by the older policy that was in place at the time of their matriculation. In case degree requirements are changed and certain courses are no longer offered, the department will try to find some compromise that allows those students to satisfy the original requirements.
Financial and Other Related Issues

Tuition and Fees
Complete information about tuition and fees is available at www.cmu.edu/hub/tuition/index.html. 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 co-directors of the MSAS program.

Students registering for summer courses (with the exception of Automated Biology Internship 02-801R and MS Thesis Research 02-700R) must pay appropriate tuition to register.

University Financial Aid
Graduate students should consult the graduate student financial aid information found on The HUB website: 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. Graduate students who find themselves in need of immediate funds for emergency situations should contact the Office of the Dean of Student Affairs (see Appendix A), www.cmu.edu/student-affairs/index.html, to inquire about an Emergency Student Loan.

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 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 During the Academic Year
M.S. students are allowed to work for hourly wages or for credit at Carnegie Mellon, provided academic progress is not compromised. You can receive either research credit or pay for research in a given semester, but not both. Paid research must be kept separate from projects done for tuition-based academic credit (M.S. Research 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). F-1 and J-1 students may work full-time during
vacation terms or any official school breaks, including summer. What that means is that summer research in a lab does not require CPT authorization. For more information, see: https://www.cmu.edu/oie/foreign-students/employment.html

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 academic advisor.

It is strongly advised that students wait until their second semester to begin work on a paid 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. The fluency of all instructional personnel will be rated by Language Support in the Student Academic Success Center to determine at what level of responsibility the student can TA. Please refer to the Requirements for Teaching.

University Research Funding

The Office of the Assistant Vice Provost for Graduate Education administers two types of professional development funding for graduate students university-wide. The GSA Graduate Student Conference funding and the Graduate Small Project Help (GUSH) are supported by the Graduate Student Assembly (GSA) and the Provost’s Office.

Conference Funding Awards, $500 per student or $1,000 per group per academic year, provide the means for graduate students to 1) make presentations at key conferences/exhibitions in their fields or 2) attend conferences and learn about the broader field of study to which they belong. Notification is within a week of submission and is based on a lottery system. GUSH Research Funding Awards are up to $750 per student per year, defray costs incurred in the completion of research required for a graduate degree at Carnegie Mellon. Notification is within 2-3 weeks and is reviewed by faculty and graduate students.

For more information please see the University Graduate Education website at http://www.cmu.edu/graduate/professional-development/index.html.

Outside Fellowships

Students are encouraged to obtain their own source of funding 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 database of financial aid and fellowship information (www.cmu.edu/fs). The MSAS co-directors are available to help students complete these applications.

For submission, all applications must go through the Computational Biology Department’s Business Manager’s Office, that is, the Business Manager must be notified two weeks in advance of the application submission and must receive a full copy of the application when it is completed.

Emergency Loans

All students are eligible for the Emergency Student Loan, which is an interest-free and emergency base loan repayable within 30 days. It is available through the Office of the Dean of Student Affairs; students
may apply for the loan by stopping in the Student Affairs Office or by calling 268-2075 for an appointment.

Housing
Many 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
All students are required to follow established procedures when using any equipment in classes or in research projects. Costs of repairs necessitated by careless or willfully negligent actions will be billed to student accounts.
Appendix A
2020-2021
Highlighted University Resources for Graduate Students
and
The WORD, Student Handbook

Key Offices for Graduate Student Support

Graduate Education Office

www.cmu.edu/graduate; grad-ed@cmu.edu
The Graduate Education Office provides central support for all Master’s and Doctoral students with a focus on their academic experience at Carnegie Mellon. The Graduate Education Office serves as a hub for connecting graduate students to relevant campus experts and resources to support their academic success, understanding of university level policies and practices and to assist them in advancing their personal and professional development.

Examples of resources offered through the Graduate Education Office include- but are not limited to:
§ Website with university resources, contact information for CMU programs and services, calendar of events related to graduate students
§ Bi-monthly email to all graduate students with information on activities, resources and opportunities
§ Professional Development Seminars and Workshops
§ GSA/Provost Conference Funding Grants
§ GSA/Provost Small Research Grants (GuSH)
§ Consultations on issues related to the graduate student experience

The Graduate Education Office also works with the colleges and departments by informing and assisting in developing policy and procedures relevant to graduate students and working with departments on issues related to graduate students. Additionally we partner 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. Vice President of Student Affairs and Dean of Students Gina Casalegno leads the Division of Student Affairs which includes the offices and departments listed below (not an exhaustive list).

Graduate students will find the enrollment information for Domestic Partner Registration and Maternity Accommodations in the Office of the Dean of Students or on their website. This Office also manages the Emergency Student Loan (ESLs) process. Emergency Student Loans are made available through
generous gifts of alumni and friends of the university. The Emergency Student Loan is an interest-free, emergency-based loan repayable to the university within 30 days. Loans are available to enrolled students for academic supplies, medication, food or other expenses not able to be met due to unforeseeable circumstances.

Additional resources for graduate students include College Liaisons and the Student Support Resources team. 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 student SIO page in the Important Contacts list. The Student Support Resources team offers an additional level of support for students who are navigating any of 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 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)
§ Transgender and non-binary student programs
Assistance for Individuals with Disabilities
http://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. 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.

Eberly Center for Teaching Excellence & Educational Innovation
www.cmu.edu/teaching

We offer 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, our 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 www.cmu.edu/teaching/graduatestudentsupport/index.html.

Graduate Student Assembly
www.cmu.edu/stugov/gsa/index.html

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. Our recent accomplishments are a testament to GSA 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- a great place to study or meet up with friends. GSA also maintains a website of graduate student resources on and off-campus. Through
GSA’s continued funding for professional development and research conferences, the GSA/Provost Conference Funding Program and GSA/Provost GuSH Research Grants are able to run, as managed by the Graduate Education Office. As we move forward, GSA will continue to rely on your feedback to improve the graduate student experience at CMU. Feel free to contact us at <gsa@cmu.edu> to get involved, stop by our office in the Cohon University Center Room 304 or become a representative for your department.

**Office of International Education (OIE)**
http://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 and advisement. 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**
http://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 uro-vaedbenefits@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 relating to areas below:

- Academic and Student Life
- Bias Reporting
- Environmental Health and Safety
- Financial Matters
- High-Risk Incident
- Human Resource Related
- Information Systems
- Research
- Threat of Business Interruption
- Threat of Violence or Physical Harm
- Title IX
Students, faculty and staff can anonymously file a report by calling 877-700-7050 or visiting www.reportit.net (user name: tartans; password: plaid). All submissions are reported to appropriate university personnel. 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**

[www.cmu.edu/computing](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/](https://www.cmu.edu/computing/safe/)) section and the University Computing Policy ([https://www.cmu.edu/policies/information-technology/computing.html](https://www.cmu.edu/policies/information-technology/computing.html)).

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

**Student Academic Success Center**

[https://www.cmu.edu/student-success/](https://www.cmu.edu/student-success/)

**Student Academic Support Programs**

**Tartan Scholars**

The Tartan Scholars program was created to provide support for limited resourced students through an intentional first year undergraduate experience with the goals of enhancing the cohort’s skill and community building through a lens of self-authorship, growth mindset, and a sense of belonging. As part of the Student Academic Success Center, Tartan Scholars are invited to join the University and participate in summer initiatives and pre-orientation activities prior to their first year at the University.

There are opportunities for graduate students to serve as accountability, learning, or development partners, workshop facilitators, and presenters. Contact Diane Hightower at ddhighto@andrew.cmu.edu for more details.
Learning Support

- **Supplemental Instruction**: Supplemental Instruction (SI) is an academic support model that utilizes peer-assisted study sessions. The SI program provides regularly scheduled review sessions on course materials outside the classroom. SI is a non-remedial approach to learning as the program targets high-risk courses and is available in select courses based on data related to past student performance and feasibility.

- **Peer Tutoring**: Weekly Tutoring Appointments are offered in a one-on-one and small group format to students from any discipline who need assistance with a course that may not be supported by our other services. Weekly appointments give students the opportunity to interact regularly with the same tutor to facilitate deeper understanding of concepts. Students can register online through the Student Academic Success website.

- **Academic Coaching**: Academic Coaching provides holistic one-on-one peer support and group workshops to help students find and implement their conditions for success. We assist students in improving time management, productive habits, organization, stress management, and study skills. Students will request support through the Academic Success Center website and attend in-person meetings or meet using video and audio conferencing technology to provide all students with support.

- **“Just in Time” Workshops**: The Student Academic Success team is available to partner with instructors and departments to identify skills or concepts that would benefit from supplemental offerings (workshops, boot camps) to support students’ academic success and learning. We are eager to help convene and coordinate outside of the classroom skill-building opportunities that can be open to any student interested in building skill or reinforcing course concept mastery.

- **Study Partners**: Support for students to create and benefit from their own study groups: The Student Academic Success team assists students in forming and benefiting from peer study groups, whereby all students can reap the benefits of peer-to-peer learning, student agency, and collaboration skill development. Staff from the Student Academic Success Center will be made available to instructors and students to assist with the formation of peer-led study groups. This level of support is open to any course where the instructor requests or agrees such support is appropriate and students are interested in both leading and participating.

Language and Cross-cultural Support

More than 60% of graduate students at Carnegie Mellon are international students, and others are nonnative speakers of English who have attended high school or undergraduate programs in the US. Many of these students want to hone their language and cross-cultural skills for academic and professional success. Students can choose from sessions on

- how to give a strong presentation,
- writing academic emails,
- expectations and strategies for clear academic writing,
- how to talk about yourself as a professional in the U.S.,
- developing clearer pronunciation,
● using accurate grammar,
● building fluency, and more.

Students can make an appointment with a Language Development Specialist to get individualized coaching on language or cross-cultural issues.

The Student Academic Success Center is also charged with certifying the language of International Teaching Assistants (ITAs), ensuring that nonnative English speakers have the language proficiency needed to succeed as teaching assistants in the Carnegie Mellon classroom. Students preparing to do an ITA Certification should plan to take classes offered by the language support team at the SASC from the beginning of their first semester. Start by contacting the language support team at the SASC website or attend a Language Support Orientation at the SASC or in your department.

University Libraries
www.library.cmu.edu

The University Libraries offers a wide range of information resources and services supporting graduate students in course-work, 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
www.cmu.edu/research/index.shtml

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 is found by visiting the Research at Carnegie Mellon website.

Office of Research Integrity & Compliance
www.cmu.edu/research-compliance/index.html

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
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
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. The BeWell@CMU e-newsletter seeks to be a comprehensive resource for CMU regarding all wellness-inspired events, announcements and professional and personal development opportunities. Sign up for the Be Well monthly newsletter via https://bit.ly/BeWellNewsletter or by contacting the Program Director for Student Affairs Wellness Initiatives, at alusk@andrew.cmu.edu.

Religious and Spiritual Life Initiatives (RSLI)
www.cmu.edu/student-affairs/spirituality
Carnegie Mellon is committed to the holistic growth of our students, including creating opportunities for spiritual and religious practice and exploration. We have relationships with local houses of worship from various traditions and many of these groups are members of CMU’s Council of Religious Advisors. We 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. Our RSLI staff are here 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
http://www.cmu.edu/police/
412-268-2323 (emergency only), 412-268-6232 (non-emergency)
The University Police Department is located at 300 South Craig Street (entrance is on 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, finger print 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 and containing 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 412-268-6232. The annual security and fire safety report is also available online at https://www.cmu.edu/police/annualreports/.

**Shuttle and Escort Services**
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**
http://www.cmu.edu/student-affairs/theword/
The WORD is Carnegie Mellon University’s student on-line handbook and is considered a supplement to the department (and sometimes college) handbook. The WORD contains campus resources and opportunities, academic policy information and resources, community standards information and resources. 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. Information about the following is included in The WORD (not an exhaustive list) and graduate students are encouraged to bookmark this site and refer to it often. University policies can also be found in full text at: http://www.cmu.edu/policies/.

Carnegie Mellon Vision, Mission
Statement of Assurance
Carnegie Code
Academic Standards, Policies and Procedures
Educational Goals
Academic and Individual Freedom
Statement on Academic Integrity Standards for Academic & Creative Life
Assistance for Individuals with Disabilities
Master’s Student Statute ofLimitations
Conduct of Classes
Copyright Policy
Cross-college & University Registration
Doctoral Student Status Policy
Evaluation & Certification of English Fluency for Instructors
Final Exams for Graduate Courses
Grading Policies
Intellectual Property Policy
Privacy Rights of Students
Student’s Rights
Research
Human Subjects in Research
Office of Research Integrity & Compliance
Office of Sponsored Programs
Policy for Handling Alleged Misconduct of Research
Policy on Restricted Research
Tax Status of Graduate Student Awards
Campus Resources & Opportunities
Alumni Relations
Assistance for Individuals with Disabilities
Athletics, Physical Fitness & Recreation
Carnegie Mellon ID Cards and Services
Cohon University Center
Copying, Printing & Mailing
Division of Student Affairs
Domestic Partner Registration
Emergency Student Loan Program
Gender Programs & Resources
Health Services
Dining Services
The HUB Student Services Center
ID Card Services
Leonard Gelfand Center
LGBTQ Resources
Multicultural and Diversity Initiatives
Opportunities for Involvement
Parking and Transportation Services
Shuttle and Escort Services
Spiritual Development
University Police
Student Activities
University Stores
Community Standards, Policies and Procedures
Alcohol and Drugs Policy
AIDS Policy
Bicycle/Wheeled Transportation Policy
Damage to Carnegie Mellon Property
Deadly Weapons
Discriminatory Harassment
Disorderly Conduct
Equal Opportunity/Affirmative Action Policy
Freedom of Expression Policy
Health Insurance Policy Immunization Policy
Missing Student Protocol
Non-Discrimination Policy
On-Campus Emergencies
Pets
Political Activities
Recycling Policy
Riotous and Disorderly Behavior
Safety Hazards
Scheduling and Use of University Facilities
Sexual Harassment and Sexual Assault Policy
Smoking Policy
Student Accounts Receivable and Collection Policy and Procedures
Student Activities Fee
Student Enterprises
Workplace Threats and Violence Policy
Appendix B: Program Forms

Forms for the M.S. in Automated Science program
http://msas.cbd.cmu.edu/forms/

- M.S. Program Acceptance Form
- Academic Advising Form including Graduation Plan Worksheet
- Declaration of Research for Credit Form
- Declaration of Internship for Credit Form
- Counting Courses during CMU undergraduate years for carry-over credit

Forms for Enrollment Services (the HUB)
www.cmu.edu/hub/forms.html

- Pass/Fail Approval
- Course Audit Approval
- Late Add Request (current semester only)
- Leave of Absence
- Return from Leave of Absence
- Withdrawal
- Enrollment Verifications are available from Student Information Online, under the Academic Info tab as "Request Verification"