



## Graduate Student Handbook

This student handbook will inform you of the requirements and policies of each of our programs. Please see the section for the program you are enrolled in.

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

Note: The information contained in this graduate handbook template focuses on the resources and locations available at the Carnegie Mellon Pittsburgh Campus.

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## Mission of the Department

Machine Learning is a scientific field addressing the question "How can machines *learn*, i.e., how to create algorithms and corresponding effective computer implementations capable of automatically analyze data and improve their performance with experience?" We study learning from many kinds of experience: predicting which medical patients will respond to which treatments by analyzing experience captured in databases of online medical records, or building mobile robots that learn models of their environments by gathering navigational experience from their sensors and actively interacting with people, or designing computer aids for scientific discovery that combine initial scientific hypotheses with new experimental data to automatically produce refined scientific hypotheses that better fit observed data.

To tackle these problems, we develop algorithms that discover general conjectures and knowledge from specific data and experience, based on different methods, including sound statistical and computational principles, as well as instruction and self-exploration. We also develop theories of learning processes that characterize the fundamental nature of the computations and experience sufficient for successful learning in machines and in humans.

The mission of the Machine Learning Department is to help lead the development of the discipline of machine learning, by performing leading research in this field, by developing and propagating a model academic curriculum for the field, and by helping society to benefit from the knowledge gained by the field.

We are committed to the principle that students may achieve competence through a variety of methods, including courses, seminars, projects, and independent and guided research. Our curricula are designed to give students the tools they need to solve real-world problems by using advanced machine learning techniques and developing their own learning algorithms. We are dedicated to providing exceptional training for future leaders in the field.

## Department Personnel

- Tom Mitchell, Interim Dean of School of Computer Science (SCS)
- Robert Frederking, Associate Dean for Doctoral Programs, SCS
- David Garlan, Associate Dean for Master's Programs, SCS
- Roni Rosenfeld, Department Head, Machine Learning Department (ML)
- Barnabás Póczos, Co-Director, Doctoral Programs in ML
- Cosma Shalizi, Co-Director, Doctoral Programs in ML
- Nina Balcan, Co-Director, Master's Programs in ML
- Ruslan Salakhutdinov, Co-Director, Master's Programs in ML
- Matt Gormley, Director, Undergraduate Programs in ML
- Diane Stidle, PhD Programs Administrator
- Dorothy Holland-Minkley, Master's and Undergraduate Programs Administrator
- [ML Core Faculty](#)
- [ML Affiliated Faculty](#)
- [ML Related Faculty](#)

- Russ O'Lare, Business Manager, ML
- Alison Chiocchi, Employment Processes Manager
- Christina Melucci, Assistant to the Dept. Head, ML

The Co-Directors serve as ombudsmen 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 advisor, particularly when those difficulties may lead to considering changing advisors or 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 department, please see the grievance procedures for resolving difficult matters, which are available here:  
<https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html>

Additionally, students may confer with the university graduate ombudsman, Suzie Laurich-McIntyre, [slaurichmcintyre@cmu.edu](mailto:slaurichmcintyre@cmu.edu), on issues of process or other concerns as they navigate conflicts. Suzie Laurich-McIntyre is the Assistant Vice Provost for Graduate Education.

Students can also confer with Angie Lusk, [alusk@andrew.cmu.edu](mailto:alusk@andrew.cmu.edu), the SCS Student Affairs contact. Angie Lusk is listed as an emergency contact for all graduate students in SCS, since she serves as a liaison, and students are particularly welcomed to reach out to her with inter-departmental concerns.

## Degrees Offered

### [PhD in Machine Learning](#)

Joint PhD in Machine Learning and Public Policy

Joint PhD in Neural Computation and Machine Learning

Joint PhD in Statistics and Machine Learning

### [Primary Master's in Machine Learning](#)

### [Fifth-Year Master's in Machine Learning](#)

### [Secondary Master's in Machine Learning](#)

## Expected Background

Incoming students must have a strong background in Computer Science, including a solid understanding of complexity theory and good programming skills, as well as a good background in mathematics. Specifically, the first-year courses assume at least one year of college-level probability and statistics, as well as matrix algebra and multivariate calculus. Experience in MATLAB/R/SciPy-NumPy is especially helpful, as is probability/stats, linear algebra, and matrix and tensor calculus. This background should be at least at the level of the following courses:

15-150 Principles of Functional Programming

15-210 Parallel and Sequential Data Structures and Algorithms

36-225 Introduction to Probability Theory

36-226 Introduction to Statistical Inference

We will accept equivalent coursework or experience from outside of CMU for these prerequisites.

## ML Degree Requirements

ML PhD students: 7 12-unit courses + presentation skills + writing skills + 2 TAs + PhD thesis

ML Master's students: 9 12-unit courses + 36-unit Practicum

## ML Course Requirements

The course requirements for the ML PhD and ML Master's are slightly different and students should refer to the appropriate section. ML PhD students who are interested in earning an ML Master's along the way to their PhD should read both sections and plan their courses appropriately.

## Internship Opportunities

You must discuss your plans for an internship with your advisor for approval. The summer semester is the optimal time for an internship. The only way to complete an internship during the academic year is to take a Leave of Absence or to adhere to the rules for Consulting.

International students are required to consult with the Office of International Education for eligibility before seeking an internship/co-op or signing an offer contract. The dates of the internship must be within the dates of the semester, as determined by the university.

## Registering for Internships

There are official course numbers associated with internships, and students enrolled in these courses will receive a pass/fail grade.

Register for the practicum course: 10-935 for PhD students or 10-635 for MS students.

If PhD students will end their practicum after the summer semester end date but before the fall



classes begin they must use the extended PhD timeline and register for 10-936, section I instead.

Upon completion of the internship you must submit an Internship Survey to your program administrator.

Your faculty advisor will assign a pass/fail or letter grade that will count towards your program research requirements. Advisors are individually responsible for adequately supervising this portion of the programs.

Note: PhD students are able to substitute practicum units for research units up to 4 times during their PhD degree Program. Substituting more than 4 times requires approval from the Co-Directors. International students must consult with the Office of International Education (OIE) for eligibility before seeking an internship/practicum or signing an offer contract. Note that neither research nor practicum units count towards the coursework requirement of either the PhD or the MS program.

#### **Resources to Obtain an Internship**

- Department Internship announcements
- University Career Fairs
- [Career and Professional Development Center](#)

## PhD Program in Machine Learning

The PhD program is run by the Machine Learning Department which is part of Carnegie Mellon's School of Computer Science. This program builds on ML's world-class faculty, which includes a number of faculty with cross-appointments in diverse areas ranging from Statistics, Language Technologies and Robotics to the Tepper Business School.

### Program Requirements

To complete the degree of Doctor of Philosophy in Machine Learning, we require that each student

- Participate in directed research and/or practicum
- Complete the coursework listed in the ML PhD Course Requirements section
- Serve as a teaching assistant at least twice for Machine Learning Department courses
- Demonstrate professional presentation skills & writing skills
- Write and orally defend a thesis describing a significant piece of original research in a specialized area of Machine Learning.

*Note:* Because there is great overlap in the course requirements, you may find that you are able to earn a Master's in Machine Learning along the way to your PhD. If you are interested in this, read the requirements in the Primary Master's in Machine Learning section. If you fulfill the Master's requirements, you can email the PhD Programs Administrator to request that you be awarded a Master's. A student who has already received an MS degree from another department in the School of Computer Science will not typically receive the MS degree from MLD, with the exception under "Rules about Previously Taken Courses."

### ML PhD Course Requirements

The four set core and two menu core courses together provide a foundation in machine learning, statistics, probability, algorithms, and AI, while the elective can be used to deepen the student's knowledge in their chosen subfield.

#### Set Core

All students take **all four** courses from the Set Core.

- 10-715 Advanced Introduction to Machine Learning
- 10-716 Advanced Machine Learning: Theory and Methods
- 10-718 Data Analysis
- 36-705 Intermediate Statistics

#### Menu Core

Students take their **choice of two** courses from the Menu Core:

- 10-703 Deep Reinforcement Learning *or* 10-707 Topics in Deep Learning
- 10-708 Probabilistic Graphical Models
- 10-725 Convex Optimization
- 10-805 Machine Learning with Large Datasets *or* 15-826 Multimedia Databases and Data Mining

- 15-750 Algorithms *or* 15-853 Algorithms in the Real World
- 15-780 Graduate AI
- 36-707 Regression Analysis
- 36-709 Advanced Probability *or* 36-710 Advanced Statistical Theory

Note: The Menu Core courses must be chosen from two different lines (e.g., if 15-750 Algorithms is taken, then 15-853 Algorithms in the Real World may not be the second Menu Core course).

### **Elective**

PhD students take **one elective**, which may be any course at the 700 or higher level in the School of Computer Science or Department of Statistics and Data Science (36-xxx), including additional courses from the Menu Core, or other courses by approval. The elective is chosen in consultation with the student's advisor, with courses outside SCS or Statistics and Data Science also needing approval from the Co-Directors of the program.

*Note:* All courses, including the electives, must be 12 units or greater. Two 6-unit mini courses can count as a single 12-unit elective.

### **Directed Research**

Research is the fundamental part of the PhD program. PhD students will work on research with their faculty advisor. The advisor has the option to give a letter grade or pass/fail grade for research courses.

Different students, and different advisors, have different ideas of what directed research means and how progress can be demonstrated. It is the responsibility of both the student and their advisor to formulate for each semester a set of reasonable goals, plans, and criteria for success in conducting directed research. Advisors are individually responsible for adequately supervising this portion of the graduate program.

During a PhD student's first two years, you should be working on directed research at least half time; once all coursework is completed, you should be working on directed research full time (except when teaching).

### **Registering for Directed Research**

There are official course numbers associated with directed research at CMU, 10-697 for MS students, 10-920 for PhD students. Active PhD students (excludes LOA and ABS status) are required to complete 24-48 units of Graduate Reading and Research each Fall, Spring and Summer semester unless waived by the Co-Directors.

### **Program Milestones**

- **By the end of the third year**, coursework, presentation skills, writing skills and TA requirement should be complete.
- **During the third or fourth year**, a thesis proposal should be presented to the MLD community.

- **By the end of the fifth year**, the dissertation should be complete and the student should give the final defense.

### **Statute of Limitations**

As outlined in the Doctoral Student Status Policy, <https://www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html>, students will complete all requirements for the PhD degree within a maximum of ten years from original matriculation as a doctoral student. Once this time-to-degree limit has lapsed, the person may resume work towards a doctoral degree only if newly admitted to a currently-offered doctoral 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, defer the lapse of All But Dissertation status for a period commensurate with the duration of that interruption. Students who are pursuing the PhD 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.

### **Rules about Previously Taken Courses**

If a student has taken some of the MLD core courses before joining the MLD PhD program, and has not counted these courses toward any other PhD-level degree, the student may count these courses toward the MLD PhD. In this situation the student will need to take fewer than 6 new core courses to graduate. A student must always take at least one elective course while registered in the MLD PhD program, irrespective of any courses taken before joining the PhD program.

If any core courses are counted toward both the ML PhD and a lower-level degree (such as an MS) from another department outside of MLD, the student will not receive an MS degree from MLD. If the student wishes to receive an ML MS in addition to the outside degree, they must take additional courses so as not to count any courses toward both the ML MS degree and the outside degree. Some students will have taken similar courses at other universities before entering the MLD PhD program. Based on such equivalent coursework, any student can apply to replace (not reduce) up to two courses with either menu core courses or electives. All requests must be supported by the advisor, and will be evaluated by the PhD Co-Directors.

### **Proficiencies in Teaching, Research, Presentation and Writing Skills**

#### ***Teaching Requirement***

Each PhD candidate must participate in two terms of instruction, either through TA duties or serving as the instructor for a class to fulfill the teaching requirement.

For a student to be considered for a Teaching Assistant (TA) position for one of our courses, they should have previously taken that course or a similar course.

If the student's native language is not English, they will be required to receive International Teaching Assistant (ITA) certification: <https://www.cmu.edu/icc/language-certification/index.html>

### **Writing Skills Requirement:**

In order to satisfy the Writing Skills requirement the student must be the first author on a paper. The quality of the paper must be such that if submitted to a major conference or journal it has the possibility of acceptance. It doesn't have to actually be submitted. The student must have a Review Committee of two reviewers.

The Review Committee consists of one faculty from Carnegie Mellon, may be the faculty advisor, and one PhD student who is not a co-author on the paper. If the Faculty Reviewer is a co-author, they must explicitly indicate the student's contribution to the writing. The Review Committee fills out the [Writing Skills Review Form](#) and must unanimously approve the paper to satisfy the requirement. If the student fails, the evaluators give guidance on the necessary revisions and the student tries again.

A ML PhD student may waive the writing skill requirement if the student already has a first author paper accepted at a top ML conference/journal since these papers already went through peer review.

Conferences: AISTATS, AAAI, COLT, ICML, KDD, NeurIPS, etc.

Journals: JMLR

To waive the Writing Skills requirement based on this criterion, please fill out the [Writing Skills Waiver form](#) and send to your program administrator.

### **Summer Research**

During the summer semester, PhD students may choose to either secure a summer internship or continue research with their advisor. A student must discuss their summer plans with their advisor and register for the appropriate course. A student must register for the Practicum course or PhD Internship, depending on the dates, if they are going on a summer internship. At the end of the internship, the student must submit a written report to their advisor, who will determine their pass/fail grade for the semester. The Practicum course, PhD Internship and the Reading & Research courses will count towards the program research requirements.

*Note:* International students must apply for Curricular Practical Training (CPT) with the Office of International Education for immigration authorization for summer internship. The dates of the summer internship must be within the dates of the summer semester, as determined by the university.

### **The Research Matching Process in MLD**

Carnegie Mellon is a research institution. We are strongly committed to scientific excellence, both in research and education. In particular, we believe that a close personal interaction among students, faculty, and staff is of the utmost importance for educating the next generation of leaders in academia and industry. MLD students are therefore matched to a faculty advisor in the very beginning of the program who will guide their research and advise them in academic matters.

After attending research talks during the MLD Orientation and after meeting with potential advisors, both ML students and potential advisors submit a form, indicating preferences for advisorships. Based on these forms, the Co-Directors of the MLD program will then match

students with faculty advisors. Each student either will be assigned to one advisor or may be co-advised by two faculty advisors. A student's advisor may change if the research direction changes and there is no longer a match.

Students seeking to switch advisors is routine, especially during the early part of the degree program. It often results from an evolution of the student's research interests. Students seeking to switch advisors are welcome to meet with either of the Co-Directors for advice about switching or suggestions of potential advisors to contact. Students must consult with the current advisor and the potential advisor for agreement of the switch. You may also add a Co-Advisor at any time also by consulting with your advisor and potential advisor. If there are any changes to your advisor or an addition of a Co-Advisor, please inform the PhD Programs Administrator.

### **Role of the Advisor**

The faculty advisor is a student's primary contact, both in research and in academic matters. Typically, a student has strong interests in the research area of the faculty advisor and will closely collaborate with the faculty member. The advisor is typically the primary person directing the student's research, and is also expected to provide financial support (stipend and tuition) for the student.

### **Rules for the MLD PhD Thesis Committee (applicable to all ML PhDs)**

The thesis committee should be assembled by the student and their advisor, and approved by the PhD Program Director(s). It must include:

- At least one MLD Core Faculty member
- At least one additional MLD Core or Affiliated Faculty member
- At least one External Member, usually meaning external to CMU
- A total of at least four members, including the advisor who is the committee chair

### **PhD Thesis Proposal**

ML PhD students are expected to present their thesis proposal during their third or fourth year. Typically, the proposal is completed by the beginning of the fourth year. Fulfilling the requirement involves writing and orally presenting a proposal, and obtaining advice and approval from the thesis committee. Students should meet with the thesis committee members at least once to discuss the proposed work before the proposal.

Generally, a thesis proposal will be approximately 25 pages plus references, and will include (a) a clear statement of the research problem and proposed research, (b) a discussion of related research and how the proposed work fits into the field, (c) a description of the technical approach, (d) preliminary research results that demonstrate the proposed research is plausible and worthwhile, (e) a discussion of research issues to be pursued, and (f) a tentative schedule for completing the work.

Of course, in a proposal it is impossible to predict precisely which research issues will be solved in the future. Nevertheless, the proposal should include a list of specific research directions and questions that are likely to be addressed, and for each of these an assessment indicating what could be a baseline approach, and a discussion of ideas for pursuing the issue, along with an

assessment of what will be easy versus difficult. The student needs to show that the proposed research will be original and interesting, and that it is likely to succeed. During the later thesis defense, the student will *not* be required to show that he or she has done everything that was proposed. In this sense, the proposal is an opportunity to present the student's best current ideas about the thesis research and obtain some useful early feedback from experts in the research area. The proposal need not have answers to every question it raises, but it should bring up a good list of questions that will drive the research.

Students should allocate at least 2.5 hours for the proposal presentation and examination. The presentation by the candidate is normally about 45 minutes. In addition to the student, at least two committee members, one of whom is the Chair, must be physically present at CMU for the proposal; other committee members may attend by teleconference.

The thesis proposal is a public presentation and must be announced two weeks prior to the talk. It is the candidate's responsibility to ensure that the proposal information is sent to the PhD Programs Administrator at least two weeks before the presentation. The draft thesis proposal document should be sent to the thesis committee members at least one month prior to the proposal presentation; committee members may require the document earlier, in some cases.

#### **All But Dissertation (ABD) Policy**

After the presentation of an acceptable thesis proposal, and satisfying all other requirements except for the dissertation and its oral defense, students are regarded as "all but dissertation."

The policy is explained at <http://www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html> .

#### **PhD Thesis**

Normally, the thesis dissertation is completed during the student's fifth year. The thesis must describe a significant piece of original research work. It is evidence of proficiency, high attainment, and ability to do research in a specialized area of Machine Learning.

The final thesis defense is a public presentation and must be announced two weeks prior to the talk. It is the candidate's responsibility to ensure that the proposal information is sent to the PhD Programs Administrator at least two weeks before the presentation.

Work with the PhD Programs Administrator to determine timing so as to avoid department and class conflicts. Contact your thesis committee to get their availability. The date should be scheduled two months in advance. You should send a draft of the thesis to your committee about one month before you plan to defend. Your committee should get back to you with their approval to defend before the announcement goes out, two weeks before your defense date.

Students should allocate at least 3 hours for the thesis defense and examination. In addition to the student, at least two committee members, one of whom is the Chair, must be physically present at CMU for the defense. All committee members must either be in attendance or attend by teleconference.

The presentation by the candidate is normally about 45 minutes. The thesis committee chair (advisor) determines who may ask questions and in what order and brings the discussion to a close at the appropriate time. The question-and-answer period is followed by a closed-door session attended by only the members of the thesis committee and any interested faculty members. If the student passes the oral presentation, the options of the committee are:

- To approve without corrections
- To approve subject to minor changes, to be approved later by the thesis chair only
- To require a resubmission after major changes and re-approval of the entire committee
- Not to approve the thesis

All members of the committee are required to sign a yellow Final Oral Examination card to indicate that the student has passed the thesis oral examination.

In addition, the thesis committee chair, the Department Head, and the Dean sign a final certification sheet after final approval of the thesis by the thesis committee and student has submitted the final version to the PhD Programs Administrator.

If the student fails to pass either the oral or the written defense, the faculty will discuss their status by the next end-of-semester meeting.

### **Student Progress**

Student progress will be evaluated at the end of each academic semester by the MLD faculty. Students will enter information into the MLD online system to inform the faculty of the goals for the semester and if they were achieved. The student will also enter the plans for the next semester. After the faculty meet, the assessment of the student's progress will be communicated via the same online system.

### **Financial Support**

The Machine Learning Department is committed to providing full tuition and stipend support for the academic year, for each full-time ML PhD student, making satisfactory progress, for a period of 5 years. Research opportunities are constrained by funding availability. The funding commitments assume that the student is making satisfactory progress in the program, as reported to the student at the end of each academic term. Students are strongly encouraged to compete for outside fellowships and other sources of financial support. The department will supplement these outside awards in order to fulfill its obligations for tuition and stipend support.



## Primary Master's Program in Machine Learning

This highly selective program consists primarily of coursework, with a very limited research component, and typically takes three to four semesters to complete.

### Program Requirements

To complete the degree of Master of Science in Machine Learning, we require that each student:

- Complete the ML MS Course Requirements, described below
- Complete a practicum, described below
  - Total: 144 units (108 units of coursework and 36 units of practicum)

### ML MS Course Requirements

The four set core and three menu core courses together provide a foundation in machine learning and statistics while the two electives can be used to deepen the student's knowledge in their chosen subfield.

#### Set Core

All students take **all four** courses from the Set Core.

- 10-701 Introduction to Machine Learning *or* 10-715 Advanced Introduction to Machine Learning
- 10-716 Advanced Machine Learning: Theory and Methods
- 10-718 Data Analysis
- 36-700 Probability & Mathematical Sciences *or* 36-705 Intermediate Statistics\*

*Note:* MS students interested in pursuing the ML PhD should consider taking 10-715 and 36-705 instead of 10-701 and 36-700, due to the course requirements of the ML PhD. If a student takes 10-701 and later enters the PhD, they may be able to use 10-701 to fulfill that requirement, as described in the Course Waiver Policy section below.

#### Menu Core

Students take their **choice of three** courses from the Menu Core:

- 10-617 Intermediate Deep Learning *or* 10-703 Deep Reinforcement Learning *or* 10-707 Topics in Deep Learning
- 10-708 Probabilistic Graphical Models
- 10-725 Convex Optimization
- 10-620 Independent Study (under ML Core Faculty; 12 units)

*Note:* The Menu Core courses must be chosen from three different lines (e.g., if 10-617 Intermediate Deep Learning is taken, then 10-703 Deep Reinforcement Learning cannot be used as a Menu Core course).

#### Electives

Students take their **choice of two** courses from the Electives:

- 10-617 Intermediate Deep Learning
- 10-703 Deep Reinforcement Learning
- 10-707 Topics in Deep Learning
- 10-708 Probabilistic Graphical Models
- 10-725 Convex Optimization
- 10-745 Scalability in Machine Learning
- 10-805 Machine Learning with Large Datasets (or 10-605 Machine Learning with Large Datasets taken in Spring 2019 or earlier)
- 10-XXX Special Topics in Machine Learning (*course numbers vary*)
- 15-750 Algorithms
- 15-780 Graduate Artificial Intelligence
- 15-826 Multimedia Databases and Data Mining
- 15-853 Algorithms in the Real World
- 36-707 Regression Analysis
- 36-709 Advanced Probability
- 36-710 Advanced Statistical Theory
- 10-620 Independent Study (under ML Core Faculty; 12 units)

*Note:* A student may take 10-620 Independent Study twice, with one counting for the Menu Core and the other counting for the Electives.

### Practicum Requirements

To earn an MS, students must complete a 36-unit practicum. This practicum may be either directed research or an internship related to machine learning. Unlike Independent Study, directed research for the practicum does NOT need to be under ML Core Faculty. Most students complete the practicum during the summer, and it may be paid or unpaid.

### Independent Study

The Machine Learning Department allows Independent Study for credit. To count, an Independent Study must be for at least 12 units and must be supervised by a Machine Learning Department core faculty member for MS students. PhD students may use research conducted under ML Core Faculty or their ML PhD advisor, and may use the course number 10-940 Independent Study. To request approval of an independent study, the student should give their program administrator: the number of credit hours sought, an indication of support from the supervising faculty member, a description of the work to be undertaken, and a short description of the deliverables that will be due to the research advisor at the end of each semester, such as a write-up of work done, a summary of the literature studied, a copy of the code produced, or a presentation to the research group.

In rare circumstances, the Machine Learning Department allows students to count courses taken at outside universities while at MLD; these are listed as Independent Study credit, and are not subject to the 12-unit requirement above. The approval process is the same as for other Independent Study courses: the deliverable is the outside course grade, while the supervising faculty member certifies that the course is appropriate for the student and the number of credit

hours, and is responsible for recommending a grade threshold to the co-directors at the beginning of the course, as well as verifying the threshold at the end of the course.

### Double-Counting Courses

Any course counted toward another master's-level or bachelor-level degree may not be counted toward the Primary Master's in Machine Learning.

### Program Milestones

There are no official milestones that a student must pass. However, most students follow the following timeline:

- First semester: Complete 10-701 (or 10-715), 36-700 (or 36-705), and one other course
- Second semester: 10-716 and two other courses
- Summer: Complete the practicum
- Third semester: Complete the final three courses

### Statute of Limitations

As outlined in the Master's Students Statute of Limitations, <http://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html>, students who have matriculated at Carnegie Mellon beginning Fall 2012 or later 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.

### Summer Internships for MS Students

During the summer semester, Master's students need to secure a summer internship or summer directed research. You must discuss your summer plans with your advisor and register for 36 units of the appropriate course: 10-635 Practicum for an internship or 10-697 Reading and Research for research at Carnegie Mellon. (ML PhD students may use the PhD-level course numbers instead.) At the end of the practicum, you must submit a short, written report to your advisor, who will determine your pass/fail grade for the semester. The Practicum course and the Reading & Research course will count towards your program requirements.

*Note:* International students must apply for Curricular Practical Training (CPT) with the Office of International Education for immigration authorization for internships before committing to an

internship. The dates of your internship must be within the dates of the semester, as determined by the university.

### **Student Progress**

Student progress will be evaluated at the end of each academic semester by the MLD faculty. Students will enter information into the MLD online system to inform the faculty of the goals for the semester and if they were achieved. The student will also enter the plans for the next semester. After the faculty meet, the assessment of the student's progress will be communicated via the same online system.

### **Financial Support**

The MS program does not offer any type of financial support. Tuition for this program is the responsibility of the student.

## Fifth-Year Master's in Machine Learning

The 5<sup>th</sup>-Year Master's in Machine Learning allows CMU undergraduates to complete a MS in Machine Learning in one additional year by taking some of the required ML courses as an undergraduate.

### Program Requirements

To complete the degree of Master of Science in Machine Learning, we require that each student:

- Complete the ML MS Course Requirements, including 4 Set Core, 3 Menu Core, and 2 Elective courses. These Course Requirements are the same as in the Primary Master's section above
- Complete a practicum, as described in the Primary Master's section above
- Be enrolled full-time (at least 36 units per semester)

### Double-Counting Courses

In order to graduate in one year with this MS degree, you will have to have successfully completed 10-701 (or 10-715) and two other required courses during your undergraduate years at Carnegie Mellon. These courses may be double-counted toward the 5<sup>th</sup> year master's degree. No other courses may be double-counted. Triple-counting, such as between a minor, major, and the master's, is not allowed.

10-315 may be used to fulfill the 10-701 requirement if the student does well on 10-701's final exam. The student should contact the instructor of 10-701 and request to take the 10-701 final exam during the regularly scheduled 10-701 final exam time. (Note that the course will remain listed as 10-315 on the transcript.)

### Program Milestones

There are no formal milestones for this one-year program. The progress of students in the program will be assessed by the faculty at the end of each semester. However, most students follow the following timeline:

- By end of summer after senior year: Complete the practicum
- By end of the first semester of fifth year: Complete 36-700 (or 36-705), 10-718, and one other course
- By end of the second semester of fifth year: Complete 10-716 and the final 2 courses

In particular, it is the student's choice if they wish to complete the practicum in the summer between senior year and the fifth year or during the summer after the fifth year.

### Statute of Limitations

As outlined in the Master's Students Statute of Limitations, <http://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html>, students who have matriculated at Carnegie Mellon beginning Fall 2012 or later 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.

### **Student Progress**

Student progress will be evaluated at the end of each academic semester by the MLD faculty. Students will enter information into the MLD online system to inform the faculty of the goals for the semester and if they were achieved. The student will also enter the plans for the next semester. After the faculty meet, the assessment of the student's progress will be communicated via the same online system.

### **Financial Support**

The MS program does not offer any type of financial support. Tuition for this program is the responsibility of the student.

## Secondary Master's Program in Machine Learning

The MLD Secondary Master's program in Machine Learning is designed to train PhD students, faculty, and staff in other disciplines to become tomorrow's leaders in the rapidly growing area of machine learning. This program will build on Carnegie Mellon's Machine Learning Department which has assembled a multi-disciplinary team of faculty and students across several academic departments, dedicated to producing the next generation of machine learning methods.

### Program Requirements

To complete the degree of Master of Science in Machine Learning, we require that each student:

- Complete the ML Course Requirements, including 4 Set Core, 3 Menu Core, and 2 Elective courses. These Course Requirements are the same as in the Primary Master's section above
- Complete a practicum, as described in the Primary Master's section above

### Double-Counting Courses

Any course counted toward another master's-level or bachelor-level degree may not be counted toward the Secondary Master's in Machine Learning. If a course is counted toward the student's PhD degree it may also be counted towards the Secondary Master's in Machine Learning, so long as such double-counting is permitted by their PhD department.

For students in Statistics and Data Science, the two-semester Advanced Data Analysis sequence (36-757 and 36-758) can be used to waive the 10-718 Data Analysis requirement. In that case, an additional elective from the Machine Learning Department must be taken.

### Double-Counting the Practicum

Students pursuing a PhD may petition to have research in their home department count to satisfy the practicum, if such research contains significant machine learning content. This may be under a course number in their home department, but must still total 36 units.

*Note:* International students should be aware that the Secondary MS does not qualify them for CPT/OPT.

### Program Milestones

The requirements for the ML MS degree must be completed before the end of the student's primary degree; there is no provision for remaining in the ML MS program beyond the end of the student's primary degree.

### Statute of Limitations

PhD students must graduate from this program before or concurrent with their PhD degree.

As outlined in the Master's Students Statute of Limitations, <http://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html>, students who have matriculated at Carnegie Mellon beginning Fall 2012 or later 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.

### **Student Progress**

Student progress will be evaluated at the end of each academic semester by the MLD faculty. Students will enter information into the MLD online system to inform the faculty of the goals for the semester and if they were achieved. The student will also enter the plans for the next semester. After the faculty meet, the assessment of the student's progress will be communicated via the same online system.

### **Financial Support**

The MS program does not offer any type of financial support. Tuition for this program is the responsibility of the student, the PhD home department or, in the case of faculty or staff, may be paid by the university's [tuition benefits](#).



## Registration Policies

During the fall and spring semesters, MS students should normally be registered for at least 36 units and PhD students should normally be registered for 48 units. During the summer, students should be registered for 36 units.

### Course Waiver Policy

Some students will have taken some of the above courses before entering the program: for example, as ML MS students entering the ML PhD program, or as non-degree students at Carnegie Mellon entering the ML MS program. If students have previously taken the above-named courses at Carnegie Mellon before joining the program, those may be used to satisfy the requirements and do not need to be repeated. (Note that courses can only be used for a single Master's degree and restrictions about double-counting between the Machine Learning Master's degree and other degrees are described in each section.)

If a student entering the MLD PhD program has already taken 10-701 and received an A (A+, A, A-) as the final grade you are able to waive the 10-715 requirement. If the final grade is a B+ or below, then you either should take 10-715 or take the final exam with a passing grade to fulfill the requirement.

Some students will have taken similar courses at other universities before entering the ML MS or PhD program. Based on such equivalent coursework, any student can apply to replace (not reduce) up to two courses with either menu cores or electives. All electives must be supported by the advisor, and will be evaluated by the program Co-Directors.

PhD Students who want to replace a course should send a formal request to the PhD Programs Administrator. The document should contain the transcripts and contents of those courses. Student must also identify the replacement course. Either the student's advisor or the Co-Directors of the program must approve the course replacement by sending email to the PhD Program Administrator.

In addition, students must satisfy all university requirements for the graduate degree:  
<http://www.cmu.edu/graduate/policies>

### Cross Registration Program with Local Universities

<https://www.cmu.edu/policies/student-and-student-life/transfer-credit-evaluation-and-assignment.html>

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 grade. 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.)

### **Course Add/Drop Policy**

Students are able to add, drop, and withdraw from courses for a limited time after the first day of class. The university's policies can be found at the HUB website:

<https://www.cmu.edu/hub/registrar/course-changes/>

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/index.html>. There is a separate calendar for doctoral level courses.

- Full-time graduate student status, according to the University and the Department, is 36 units.
- Dropping below full-time may affect your financial aid eligibility, loan repayment, housing, tax dependency and/or visa status, and varsity sports eligibility.
- Dropping all courses is not the equivalent of leaving the university temporarily (leave of absence) or permanently (withdrawal). A student who wishes to remove him/herself from the university must submit either a Leave of Absence or Withdrawal form.

### **Course Audit Policy**

Auditing is presence in the classroom without receiving academic credit, a pass/fail, or a letter grade. Audited courses will not count towards your degree requirements. The extent of a student's participation must be arranged and approved by the course instructor. A student wishing to audit a course is required to register for the course, complete the Course Audit Approval Form, obtain permission of the course instructor and their advisor, and return the form to the Registrar's Office prior to the 10<sup>th</sup> day of class.

Any student enrolled full-time may audit a course without additional tuition charges. Part-time students who choose to audit a course will be assessed tuition at the regular per-unit tuition rate.

### **Grades and Grading**

University Policy on Grades [www.cmu.edu/policies/student-and-student-life/grading.html](http://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.

For Machine Learning students, course work with a grade of C+ or lower is not acceptable toward graduate degree requirements. Students receiving a grade of C+ or lower will either have to retake the course or work with the instructor to do remedial work to prove they have learned the material.

## Policy on Grades for Cross-registration Courses

<http://www.cmu.edu/policies/student-and-student-life/transfer-credit-evaluation-and-assignment.html>

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 grade. Such courses will not be taken into account for academic actions, honors or QPA calculations.

The Machine Learning Department does not accept transfer credit. While it is rare, requirements may sometimes be replaced if students have taken equivalent coursework elsewhere. The Co-Directors of the program will decide whether a certain course may be replaced based on the accreditation of the institution offering the course, the course description, the learning outcomes of the course, the course syllabus, and student work product. This replacement is rare, and students should not expect to have requirements replaced based on courses taken at other institutions. Refer to the Course Waiver Policy section for more information.

PhD students who follow their advisors and enter the MLD PhD program are considered exceptional cases and will be reviewed on an individual basis to determine course waivers.

## Academic Integrity

Please review the University Policy on Academic Integrity (<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>) 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.

A first violation usually has repercussions at the course level, such as failure of the course. Depending on severity, however, a first violation may result in program-level repercussions, including dismissal from the program and recommendation for expulsion from the university. Academic integrity on research papers, including a dissertation, is also enforced strictly; citations are required to avoid plagiarism, including self-plagiarism. A second academic integrity violation usually results in dismissal from the program and recommendation for expulsion from the university.

Violations will be discussed at the end of semester review meeting (Black Friday) and the department reserves the right to assess additional penalties to the student, as outlined in the

University Policy found at: <https://www.cmu.edu/student-affairs/ocsi/academic-integrity/grads.html>

We may ask graduate students to complete the OLI on-line education course: [OIE's website](#).

## **Student Progress Review**

The Machine Learning faculty meet at the end of each academic semester to make a formal evaluation of each student in the program, in a meeting traditionally known as Black Friday. The co-directors and faculty research advisors communicate in written form the assessment from these Black Friday meetings to the graduate students. Additional oral conversations take place, as and if needed.

Evaluation and feedback on a student's progress are important both to the student and to the faculty. Students need information on their overall progress to make long range plans.

At each semi-annual Black Friday meeting, the faculty review the student's previous semester's coursework and research progress and the student's next semester's plans to ensure that the student is making satisfactory progress. The evaluation of a student's progress in directed research often depends on the student having produced some tangible result; examples include the implementation of pieces of a software system, a written report on research explorations, an annotated bibliography in a major area, or, as part of preparation for doing research, a passing grade in a graduate course (beyond the required core courses and electives).

The purpose of having all the faculty meet together to discuss all of the students is to ensure uniformity and consistency in the evaluation by all of the different advisors. The faculty measure each student's progress against the goal of completing the program in a reasonable period of time. In their evaluation, the faculty consider courses taken, directed research, teaching if applicable, skill, development, papers written and lectures.

The faculty's primary source of information about the student is the student's advisor. The advisor is responsible for assembling the above information and presenting it at the faculty meeting. The student should make sure the advisor is informed about participation in activities and research progress made during the semester. Each student is asked to submit a summary of this information to the advisor at the end of each semester; this summary is viewable by all faculty during the Black Friday meeting.

Based on the above information, the faculty decide whether a student is making satisfactory progress in the program. If so, the faculty usually suggest goals for the student to achieve over the next semester. If not, the faculty make more rigid demands of the student.

Ultimately, permission to continue in the program is contingent on whether or not the student continues to make satisfactory progress toward the ML degree. If a student is not making satisfactory progress, the faculty may choose to drop the student from the program.

### **Terms of progress in Black Friday letters from faculty:**

Each Black Friday letter will include a code indicating your current progress. The codes we use are:

SP = In the semiannual evaluation of all our students the faculty reviewed your progress toward the [MS or PhD]. We have determined that your current level of progress is satisfactory. USP = We have determined that your current level of progress is unsatisfactory. The letter will contain specific instructions for how to return to SP standing.

N-2 = We have determined that there are significant problems with your current level of progress. Accordingly, this is an N-2 letter: you are in danger of receiving an N-1 letter at the next Black Friday meeting unless you improve your rate of progress in the program. The letter will contain specific instructions for how to return to SP standing.

N-1 = This is an N-1 letter. You may not be allowed to continue in the program past the next Black Friday meeting unless you satisfy specific conditions that will be given in the letter.

### **Process for Leave of Absence and Return from Leave of Absence**

Students who wish to leave the program temporarily may request a leave of absence by submitting a request to their program administrator. Leaves are initially granted for a period of no more than one year, but an extension of up to one additional year may be granted under exceptional circumstances. When an extension is granted, the conditions for return must be negotiated with the advisor and the Co-Directors, prior to returning to the program. The return must typically be at the start of a semester.

Students on leave of absence should contact their program administrator two months prior to the end of the leave to indicate their plans for the next year.

University process for leave of absence: <https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/>

### **Process for Withdrawal from Program**

Students who wish to withdraw from the program should first discuss it with their advisor and then notify their program administrator.

University process for withdrawal from program: <https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/>

## **Resources and Regulations Governing Research at Carnegie Mellon** [Office of Research Integrity & Compliance](#)

Carnegie Mellon University promotes the responsible conduct of research through high standards of ethics and accountability in planning, conducting and reporting research. The responsible conduct of research is demonstrated through behavior that meets generally accepted standards. These standards are set forth by state and federal regulations, institutional

policies, professional codes of conduct, and personal convictions. The building blocks of responsible conduct of research include:

- Honesty - conveying information truthfully and honoring commitments,
- Accuracy - reporting findings precisely and taking care to avoid errors,
- Efficiency - using resources wisely and avoiding waste, and
- Objectivity - letting the facts speak for themselves and avoiding improper bias

We may ask graduate students to complete the CITI on-line education course: [CITI's website](#).

- Office of Sponsored Programs, <https://www.cmu.edu/osp/>
- Office of Research Integrity & Compliance <https://www.cmu.edu/research-compliance/index.html>
- Intellectual Property Policy <https://www.cmu.edu/policies/administrative-and-governance/intellectual-property.html>
- Policy on Restricted Research <https://www.cmu.edu/policies/research/restricted-research.html>

Human Subjects in Research Policy <https://www.cmu.edu/policies/research/human-subjects-in-research.html>

Link to University Policies: <http://www.cmu.edu/policies/>

## Teaching Requirements

For a student to be considered for a Teaching Assistant (TA) position for one of our courses, they should have previously taken that course or a similar course.

If the student's native language is not English, they will be required to take the International Teaching Assistant (ITA) test.

### Evaluation and Certification of English Fluency for Instructors

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.

In addition to administering the International Teaching Assistant (ITA) Test (a mandatory screening test for any non-native speaker of English), the Intercultural Communication Center (ICC) helps teaching assistants who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon. Visit the ICC website for additional information: [www.cmu.edu/icc](http://www.cmu.edu/icc).

The full university policy can be reviewed at: <http://www.cmu.edu/policies/faculty/evaluation-certification-english-fluency-instructors.html>. The fluency of all instructional personnel will be determined by each department.

The Eberly Center for Teaching Excellence is a resource for TA and instructor training and included in the section *Additional University Resources, Appendix A*.

The responsibilities of a TA vary with different courses. Examples are:

- Help design homework assignments and other instructional materials
- Give recitations
- Grading
- Help with organizing poster sessions (if applicable)
- Advise small groups of students for class projects (if applicable)
- Hold office hours for individual tutoring

## Departmental Resources

The Machine Learning Department is located on the 8<sup>th</sup> floor of Gates Hillman Center (GHC).

Location of multi-function printers, available to those with a CS account, and printing etiquette is found here: <http://www.cs.cmu.edu/~help/printing/index.html>

Information about public computer clusters and printers can be found at:  
<http://www.cs.cmu.edu/~help/printing/index.html>

The department's fax machine is located in the PhD Programs Administrator's office, 8001 GHC.

Key Distribution: Please see your program administrator for a key if you have assigned office space. Primary and 5th-Year MS students can use their CMU student ID to access the Machine Learning Master's Students Lounge in NSH A401, and can request a key to a locker in the lounge from the Master's Programs Administrator.

CS Main Office: We do not have our own Main Office or mail facilities. CS is allowing us to use the following services.

Functions of the CS Main Office:

- Send mail
- Pick up mail/packages
- Send overnight packages

Please do not take any supplies from the CS Main office; office supplies for the ML Department are on the 8<sup>th</sup> floor of GHC.

Mailboxes are located on the 6<sup>th</sup> floor of GHC. A US Post Office is located in the basement of University Center.

To have packages delivered to you, please use the following address:



Your Name  
Machine Learning Dept.  
School of Computer Science  
6105 Gates Building  
Carnegie Mellon University  
5000 Forbes Ave.  
Pittsburgh, PA 15213

If this full address is too long, you can use the following truncated address:

Your Name  
School of Computer Science – MLD                      *[Omit this line if necessary]*  
Carnegie Mellon University – GHC 6105  
5000 Forbes Ave.  
Pittsburgh, PA 15213

Academic Calendar: The Academic Calendar can be found at <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.

Purchasing and Reimbursement Procedures and Policies: The university has detailed and strict policies relating to the purchase of goods, services, equipment, etc., whether using a general ledger account, restricted account, or grant. There are also reimbursement policies, along with tax exempt considerations that graduate students must adhere to.

## Departmental Seminars

The Machine Learning Department sponsors seminars by researchers from within and outside Carnegie Mellon, which are attended by faculty, staff and graduate students. Students are encouraged to meet and interact with visiting scholars. This is extremely important both to get a sense of the academic projects that are pursued outside of Carnegie Mellon and to get to know the leaders of such projects. That applies not only to seminars directly relevant to a student's research interests: the seminars provide an opportunity to widen one's perspective on the field.

We currently have the following seminars:

[ML Distinguished Lecture Series](#)  
[ML Lunch Seminar](#)  
[ML Special Seminars](#)

## Additional Department Policies

### "Grandfather" Policy

When policies are changed it is because the department believes the new rules offer an improvement; any such changes will be communicated to the current graduate students. The 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.

### **Tuition and Funding**

Current tuition rates and cost of living including books, insurance, activities and technology fees, food and lodging costs can be found at the [Enrollment Services website](#). Graduate fellowships are available to qualified, full-time students in the **PhD program ONLY**, which include full graduate tuition, a monthly stipend, and student fees with the exception of student health insurance. Health insurance is responsibility of the student.

**Master's programs are not funded by the department; however, students are welcome to apply for external funding opportunities. Please review the extensive data available on-line: <http://www.cmu.edu/fso>.**

### **Teaching Assistantships**

Teaching assistantships are awarded to selected students. Teaching assistant duties include, but are not limited to, holding office hours, conducting recitation classes, and grading. There are minimum English proficiency requirements that must be met in order for a student to accept a teaching assistantship. Pennsylvania state law requires that all students who are not native speakers of English take and pass a state-administered proficiency test. Support for teaching activities can be found through the [Eberly Center for Teaching Excellence](#). Students who will be TAs for the department are encouraged to visit the Teaching Center and to take advantage of the information and services located there. Students can apply for Teaching Assistantships on our webpage: <https://www.ml.cmu.edu/academics/ta.html>

### **Outside Employment**

Students are not allowed to be employed outside of the university during the academic year nor during the summer if they are being supported by the department, except as described in the next section, "Consulting."

### **Consulting**

The department has traditionally granted full-time students the right to devote up to an average of one day (of university time) 8 hours per week to outside, paid, professional activities, where that activity is consistent with that person's role as a member of the student body and where that activity also enhances the contribution of the student to the university. Such activity benefits both the student and the university. Students must fill out a Student Consulting Application and Agreement, have their advisor sign in agreement, and submit it to their program administrator for Department Head approval. Any such consulting must be consistent with U.S. labor laws and for international students, with visa terms.

International students are required to consult with the Office of International Education for eligibility before signing an offer contract.

## Travel Support

The department encourages PhD students to travel to conferences and workshops to enhance their professional and career development.

Policy: If a PhD student wants to attend a conference or workshop, the student's advisor or research sponsor should support the trip through either a research contract or a discretionary account. Student travel is unlimited as long as there is money available from research contracts and/or discretionary funds of a sponsoring faculty member.

If no such funding is available to the student, then limited departmental funds may be available upon request from the Machine Learning Department. Since departmental funds are limited, the maximum to be reimbursed will be \$200 plus the registration fee, if only attending the conference or workshop; \$600 plus the registration fee, if presenting a paper. Department funding is only available to the student for one trip per year and will not be transferred to the following year. This funding is only available if the advisor agrees with the student's decision to attend the conference but does not have the funds.

Process: To obtain travel support, the PhD student and their faculty advisor/research sponsor must first agree that the student should take the trip. Then in advance of the trip the student must fill out and print the [Student Travel Authorization Form](#) and get their advisor's signature before forwarding the form to the PhD Programs Administrator.

The faculty member must (i) indicate the amount and the reason for providing partial support (be sure the charge number is filled in) or (ii) state on the Comments line that no funds are available from any research or discretionary account. Student then submits the form to the PhD Programs Administrator to request approval from the Department Head.

The university may also be able to help with conference funding, to apply, please see instructions at:

<http://www.cmu.edu/graduate/professional-development/conference-funding/index.html>

GuSH is a source of small research grant funds provided by GSA and the Provost's Office and managed by the Graduate Education Office. Students can find more information about the application process and deadlines at: [www.cmu.edu/graduate](http://www.cmu.edu/graduate).

## Reimbursements

### Business Expenses

Previously approved legitimate business expenses can be reimbursed. Receipts must be submitted within 30 days of the expense. Any receipts submitted after 90 days will be considered income and you will be taxed. Your advisor's administrative assistant will help you claim reimbursement provided you have the following:

- receipt indicating item purchased and proof of payment
- business purpose for purchasing item
- account to be charged for reimbursement
- Approval (by faculty) in email, for reimbursement
- Signed expense report

Please consult with your advisor's assistant prior to incurring the expense for additional instruction.

### **Travel Expenses**

Previously approved legitimate travel expenses can be reimbursed. Receipts must be submitted within 30 days of the expense. Any receipts submitted after 90 days of the dates of travel will be considered income and you will be taxed. Your advisor's administrative assistant will help you claim reimbursement provided you have the following:

- Flight receipts must show full itinerary (dates/times), class that was traveled, and last 4 digits of your credit card number.
- Hotel receipts must show a zero balance with proof of payment and your name
- Receipts for meals must be collected, unless you claim per diem meals; both daily meals and per diem meals cannot be claimed for the same travel expense report
- Personal car mileage is calculated at \$0.55 per mile; mileage covers gas, but not tolls.
- Business purpose for travel
- Account to be charged for reimbursement
- Approval (by faculty member) in email, for reimbursement
- Signed travel expense report

#### **Conditions:**

All receipts must have proof of purchase indicated. For business expenses, tax will not be reimbursed under any circumstance, except for non-travel business meals. To avoid paying tax, see if a staff member can purchase the item for you with a University-provided Procurement Credit Card.

Tax will be reimbursed for expenses incurred due to normal business-related travel (hotel, airfare, meals), but NOT for miscellaneous expenses such as the purchase of a replacement mouse for a department laptop, poster board for a presentation, etc., purchased while traveling or preparing for travel. These items should have been purchased through a department approved buyer thus not incurring tax expense.

### **Department Office/Building Security, Repairs and Services**

Please contact Jamie Gregory or Paul Stockhausen ([building@cs.cmu.edu](mailto:building@cs.cmu.edu)) for reporting damages, needed repairs, security concerns for routine items. For immediate security concerns, please contact the CMU Campus Police at 412-268-2323

### **Department Graduate Student Committees**

Departmental committees consist of the Doctoral Review Committee (DRC) PhD & MS Admissions Committees, Presentation Skills Committee, Social Committee and Wellness Network.

We also have a student representative for the department for the University Graduate Student Assembly.

## University Policies & Department Expectations

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

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

Academic Integrity Website: <https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>

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

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

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.

Obtain general information about Carnegie Mellon University by calling 412-268-2000.

The Statement of Assurance can also be found on-line at:

<http://www.cmu.edu/policies/administrative-and-governance/statement-of-assurance.html>

### The Carnegie Mellon Code

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

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

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

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity

of others. New knowledge cannot be developed without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist.

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

The Carnegie Mellon Code can also be found on-line at:

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

## **Additional University Policies/Protocols**

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

Students with disabilities are encouraged to self-identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to Catherine Getchell, 412-268-6121, [getchell@cmu.edu](mailto:getchell@cmu.edu).

### **Protocol for Review/Redress of Academic Conflicts**

Please see the University Policy:

<http://www.cmu.edu/academic-integrity/documents/academic-disciplinary-actions-overview-for-graduate-students.2013.pdf>

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

<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, Suzie Laurich-McIntyre, [slaurichmcintyre@cmu.edu](mailto:slaurichmcintyre@cmu.edu), on issues of process or other concerns as they navigate conflicts.

## **Safeguarding Educational Equity**

### **Policy Against Sexual Harassment and Sexual Assault**

Sexual harassment and sexual assault are prohibited by CMU, as is retaliation for having brought forward a concern or allegation in good faith. The policy can be viewed in its entirety at: [http://www.cmu.edu/policies/documents/SA\\_SH.htm](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](mailto: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>

## **Maternity Accommodation Protocol**

<https://www.cmu.edu/graduate/programs-services/maternity-accommodation-protocol.html>

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 course work 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 faculty 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 Maternity Accommodations. Students 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.

## **University Financial Aid**

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

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](http://www.cmu.edu/student-affairs/index.html), to inquire about an Emergency Student Loan.

## **Vacations and Time-Off**

Students with graduate assistantships are expected to continue with their research during academic breaks (including the Summer months) with the exception of the official university

holidays. A complete list of the official university holidays can be found at the [Human Resources website](#).

Due to federal regulations governing graduate student support, paid time off for personal business and vacations is not provided. A supported graduate student wanting to take a one week break during one of the summer months in which they are receiving a stipend is expected to get approval for that break with their advisor and make up the work during the other three weeks of that month. Supported graduate students wishing to take longer periods of personal time off must do so without pay and must receive advanced approval from their research advisor a minimum of four weeks prior to the requested time off. The advisor must then notify the PhD Programs Administrator and Business Manager of this approval so that stipend adjustments can be processed.

### **Enrollment Verification**

Enrollment Services is the only University office that can provide an official letter of enrollment, official transcript, or enrollment verification. Enrollment verification can be requested online through The HUB at: <http://www.cmu.edu/hub/records/index.html>



## Highlighted University Resources for Graduate Students and The WORD, Student Handbook

### Key Offices for Graduate Student Support

#### Graduate Education Office

[www.cmu.edu/graduate](http://www.cmu.edu/graduate); [grad-ed@cmu.edu](mailto: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. Our goals are to support, advise and guide individual graduate students as they work to complete their degrees and to provide resources which will enhance their professional development experience.

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 all issues related to the graduate student experience

The Graduate Education Office is directed by Suzie Laurich-McIntyre, Ph.D., Assistant Vice Provost for Graduate Education, who offers personalized consultations with graduate students to support their academic success, connects them with relevant resources, and clarifies university level policies.

The Graduate Education Office also works with the colleges and departments by informing and assisting in forming 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 our graduate students' advancement.

#### 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 following offices and departments (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

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.

The Office of Community Standards and Integrity provides consultation, support, resources and follow-up on questions and issues related to Academic Integrity: <https://www.cmu.edu/student-affairs/ocsi/students/index.html>

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.

### **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/education-office/disability-resources/>

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical and programmatic campus access to all events and information within the Carnegie Mellon community. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Sections 503 and 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the

process through [Disability Resources secure online portal](#) or email [access@andrew.cmu.edu](mailto:access@andrew.cmu.edu) to begin the interactive accommodation process.

Students with disabilities are encouraged to self-identify with the Office of Disability Resources and request needed accommodations. Any questions about the process can be directed to Catherine Getchell, 412-268-6121, [getchell@cmu.edu](mailto:getchell@cmu.edu)

### **Eberly Center for Teaching Excellence & Educational Innovation**

[www.cmu.edu/teaching](http://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](http://www.cmu.edu/teaching/graduatestudentsupport/index.html).

### **Graduate Student Assembly**

[www.cmu.edu/stugov/gsa/index.html](http://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 3<sup>rd</sup> 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>](mailto:gsa@cmu.edu) to get involved, stop by our office in the Cohon University Center Room 304 or become a representative for your department.

### **Intercultural Communication Center (ICC)**

[www.cmu.edu/icc/](http://www.cmu.edu/icc/)

The Intercultural Communication Center (ICC) is a support service for nonnative English speakers, both newly arrived international students as well as students who attended high school and/or

undergraduate programs in the US. The ICC offers seminars, workshops, and 1-1 consultations that develop the language and cross-cultural skills needed to succeed in academic programs at Carnegie Mellon University. The ICC provides International Teaching Assistant (ITA) testing, a required test indicating a nonnative speaking TA has the language proficiency required to work with students in classes, labs or individual meetings. The ICC also supports International Teaching Assistants in developing fluency and cultural understanding to teach successfully at Carnegie Mellon University.

### **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. OIE provides many services including: advising on personal, immigration, academic, social and acculturation issues; presenting programs of interest such as international career workshops, tax workshops, and cross-cultural and immigration workshops; maintaining a resource library that includes information on cultural adjustment, 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 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, non-educational resources and international military service information 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](mailto: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](http://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

#### Academic Coaching/Consulting - The Office of Academic Development

<https://www.cmu.edu/acadev/coaching/index-grad.html>

The Academic Coaching Program is a student assistance program that supports graduate students in the development and/or improvement of skills, strategies, and processes that are necessary for a productive and successful experience at CMU and beyond. Support for graduate students comes in two forms: Individualized Sessions and Group Workshops. Individualized Sessions are the primary focus and can be best understood as working with a personal consultant. Academic Coaches/Consultants meet with students regularly, in a one-on-one capacity, in order to assess a student's needs and implement strategies to satisfy those needs, while providing a variety of support throughout the process. Areas of focus include, but are not limited to:

- Self-Management
  - Developing and/or adjusting your organizational system
  - Managing time and combating stress and procrastination
  - Prioritization and decision making
  - Advancing mindset, self-efficacy, and belongingness
  - Balancing coursework, research, and professional development opportunities
- Study Skills
  - Identifying and modifying your learning process
  - Metacognition
  - Test-taking and note-taking strategies
  - Content comprehension and retention

#### Computing and Information Resources

[www.cmu.edu/computing](http://www.cmu.edu/computing)

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

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

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

### **Global Communication Center**

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

The Global Communication Center offers free one-on-one tutoring and workshops for native and non-native English speakers from any academic discipline. Our tutors are trained to provide research-backed communication strategies on written, oral, and visual communication projects, in the sciences and the humanities. We can help you improve the effectiveness of your communication in any academic project, including the following:

- Technical reports
- Dissertations
- Research posters
- Oral presentations
- Journal articles
- Grant proposals
- Class essays

You can visit us at any stage in the project—whether you are just getting started and need to talk through ideas or are putting the finishing touches on a final draft.

We also offer workshops on topics including crafting professional emails, team communication, PowerPoint slide design, data visualization, and job application materials.

For more information, to view our resources, or to schedule an appointment, visit our website.

### **Research at CMU**

[www.cmu.edu/research/index.shtml](http://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](http://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 consults on, advises about and handles allegations of research misconduct.

## Key Offices for Health, Wellness & Safety

### Counseling & Psychological Services

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

Counseling & Psychological Services (CaPS) affords the opportunity for students to talk privately about issues that are significant for them in a safe, confidential setting. Students sometimes feel uncertain about why they are feeling upset and perhaps confused about how to deal with those feelings. An initial consultation with a CaPS therapist will clarify options and provide a recommendation to the appropriate mental health resource at Carnegie Mellon or the larger Pittsburgh community. CaPS also provides workshops and group sessions specifically for graduate students on campus. CaPS services are provided at no cost. Appointments can be made in person or by telephone, 412-268-2922.

### Health Services

[www.cmu.edu/HealthServices/](http://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 the university, 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 [bit.ly/BeWellatCMU](http://bit.ly/BeWellatCMU) or by contacting the Program Director for Student Affairs Wellness Initiatives, at [alusk@andrew.cmu.edu](mailto:alusk@andrew.cmu.edu).

### Religious and Spiritual Life Initiatives (RSLI)

[www.cmu.edu/student-affairs/spirituality](http://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 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 of Limitations
- 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 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
- Student's Rights
- 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