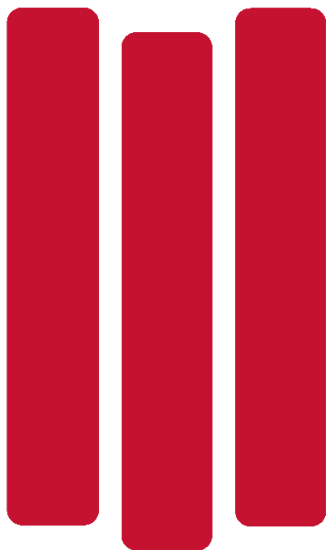**Human Computer Interaction Institute / School of Computer Science & Dietrich College of Humanities and Social Sciences**

Graduate Student Handbook
Academic Year 2023-2024

METALS

Masters of Educational Technology & Applied Learning Sciences

https://metals.hcii.cmu.edu

Last revision date: August 22, 2023

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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1 Welcome

Welcome to the Carnegie Mellon community! And congratulations again on being accepted to one of the world's best universities. What our founder, Andrew Carnegie, said over 100 years ago - "My heart is in the work." - still rings true today at Carnegie Mellon.

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 Graduate and Postdoctoral Affairs, the Office of the Dean of Students, and others are included in Appendix A of this handbook.

2 Vision, Mission & Philosophy

2.1 Carnegie Mellon University Vision

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

2.2 Carnegie Mellon University Mission

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

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

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

2.3 Human-Computer Interaction Institute Mission

The Human-Computer Interaction Institute (HCII) is an interdisciplinary community of students and faculty at Carnegie Mellon University. The HCII's mission is to understand and create technology that harmonizes with and improves human capabilities, goals, and social environments, through interdisciplinary research and education joining design, computer science, and behavioral and social sciences.

While the HCII is headquartered within the School of Computer Science, members of the HCII community represent a broad spectrum of the Carnegie Mellon University campus including the College of Humanities and Social Sciences, Graduate School of Industrial Administration, College of Fine Arts, Tepper School of Business, Carnegie Institute of Technology, as well as the School of Computer Science. Collaborators and sponsors come from other universities in Pittsburgh and around the world, and a range of industry partners from small startup companies to multi-national corporations.

2.4 Philosophy

Reasonable Person Principle

We believe that quality does not come from rules and structure, but from high standards and a vigorous and exciting environment. Consequently, the department has a bare minimum of rules and requirements. Instead, as in other parts of the Institute and School, we rely on the reasonable person principle. This principle says that we should all operate under the assumption that we are reasonable and intelligent adults in a cooperative community, and that we will operate in all situations as a reasonable person would. Everyone is expected to know that the lack of a specific rule is not a license to game the system, subvert its intent, or do something outside what any reasonable person would see as right. When something is not clear, ask first!

History of the HCII

The idea for a Human-Computer Interaction Institute at CMU can be traced back to 1967, and to the very origins of the computer science program here. Founders Allen Newell, Herbert A. Simon, and Alan J. Perlis – an interdisciplinary team if ever there was one –believed that the new discipline of computer science should include the study of phenomena surrounding computers, not just the theory and design of computation devices themselves (Letter to Science, vol. 157, no. 3795, 9/22/67, pp. 1373-1374).

In 1985, Bonnie John (still a graduate student at the time!) opened the first user studies laboratories for faculty and student use. Originally built to observe and record individual users of the ZOG system (an early hypermedia system), the labs are now used for training in usability analysis and for carrying out a large range of studies in human-computer interaction. In 1993, Bonnie John offered the first CMU course in Human-Computer Interaction. Soon after, a committee drawing on faculty across the campus founded the Institute.

By 2000, the CMU faculty/staff directory listed over 60 faculty, staff, and postdoctoral researchers affiliated with the HCII. HCII research and educational programs span a full cycle of knowledge creation. The cycle includes research on how people work, play, and communicate within groups, organizations, and social structures. It includes the design, creation, and evaluation of technologies and tools to support human and social activities. The HCII has a record of evaluating and monitoring the immediate and longer-term usability and social aspects of new technologies and tools. This work

informs new technologies and tools.

Research at the HCII

Research carried out at the HCII addresses all areas in which people live and work, communicate and collaborate, learn and change with and through technology. Some examples are user-interface software tools, cognitive models, dialogue systems, data visualization, gesture recognition, intelligent agents, visual interface design, human-robot interaction, computer-supported cooperative work, computer music and drama, intelligent tutors, technical writing, assistive technologies, and the organizational and social impact of technology. Our methodologies are as varied as the research we carry out. HCII faculty and students are often solicited as collaborators, by academia and industry. Our industry alliances range from an individual company working with a small group of students to multi-company consortia seeking multi-national solutions.

3 Degrees Offered

The Human-Computer Interaction Institute (HCII) at Carnegie Mellon University is pleased to offer multidisciplinary undergraduate and graduate educational programs that emphasize understanding, implementing and evaluating technologies for the benefit of people and society.

In this program, students will earn a Master of Educational Technology and Applied Learning Sciences.

3.1 METALS Program Overview

METALS is an intense, interdisciplinary program that condenses a normal two-year graduate program into twelve months. A part-time option as well as a sixteen month are both available as well. The program is taught jointly by leading experts in the Human-Computer Interaction Institute and the Department of Psychology at Carnegie Mellon. METALS is also part of the Carnegie Mellon University's Simon Initiative.

The first and second semesters in the METALS program focus on mastering core knowledge and skills through courses in learning principles, technology design and implementation, and a range of engaging electives. The second semester introduces the capstone project, a substantial team-based industry project with an external client. The third semester over the summer focuses on capstone project exclusively. An optional fourth semester is available for students who would like to take either

additional electives or reduce the program intensity by taking the five required electives over a longer period.

This program is distinct from both Master of Human Computer Interaction (MHCI) and the Learning Sciences track in the HCII PhD program and is not designed as a feeder to that program.

Full Time Status and Part Time Status

Note that 36 units is required for students to be full time. Less than 36 units is considered part time. **International students must be enrolled as full-time students** for all semesters and need to consult the Office of International Education if they are not in full time status.

Program Goals

Graduates of the METALS program are trained to design, develop, and implement advanced solutions, making sense of state-of-the-art technologies and methods such as:

- Artificial Intelligence
- Machine Learning
- Language Technologies
- Intelligent Tutoring Systems
- Educational Data Mining
- Tangible Interfaces

Upon completion of the METALS program, graduates:

- Understand how these technologies can be applied to engineer and implement innovative and effective educational solutions.
- Understand cognitive and social psychology principles relevant to research-informed instructional design.
- Possess the instructional and interaction design skills needed to create solutions that not only enhance learning but are also desirable.
- Understand the role of and have skills in using psychometric and educational data mining methods in evaluating and improving educational solutions.
- Develop continual improvement programs that employ *in vivo* experiments and

educational data mining to reliably identify best practices and opportunities for change.

3.2 Program History

The curriculum is an outgrowth of the extensive research conducted by the National Science Foundation's Science of Learning Center, LearnLab, in which more than 200 researchers produced more than 2,050 publications and talks as well as over 360 classroom studies. Our partners have employed our research at several companies including **Western Governors University, HMH, Microsoft, Kaplan, Cengage, Pearson, Renaissance Learning, TurnItIn, Carnegie Learning** and others.

Carnegie Mellon is known by the software and technical industries for its interdisciplinary nature, rigor and deep knowledge in learning science, human-computer interaction, psychology, design and computer science.

4 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 university ombudsperson, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-1018. Obtain general information about Carnegie Mellon University by calling 412-268-2000.

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. You can obtain a copy by contacting the Carnegie Mellon Police Department at 412-268-2323. The annual security and fire safety report also is available online at www.cmu.edu/police/annualreports.

Information regarding the applicable grievance procedures for alleged violations of the Statement of Assurance is available at https://www.cmu.edu/policies/forms-and-documents/soa-violations.pdf.

The Office for Institutional Equity and Title IX may be reached at 412-268-7125 or https://www.cmu.edu/title-ix/.

5 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:

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https://www.cmu.edu/student-affairs/theword/
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6 University Policies & Expectations

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

- The Word/Student Handbook:
  https://www.cmu.edu/student-affairs/theword/index.html
- Academic Integrity Policy:
  https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html
- University Policies Website:
  https://www.cmu.edu/policies/
- Office of Graduate and Postdoctoral Affairs:
  https://www.cmu.edu/graduate/policies/index.html
- Additional Policy Resources (e.g. college/department specific policies)

Due to the changing nature of conditions and expectations surrounding public health and safety requirements please visit:

https://www.cmu.edu/coronavirus/

for the most up to date information.

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

7 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.

8 Departmental Information

8.1 Departmental Personnel

This section identifies key people that graduate students should know and will need to interact with at some point throughout their program.

METALS Program

- Ken Koedinger, METALS Faculty Director, koedinger@cmu.edu, NSH 3601, 412-268-7667

- Michael Bett, METALS Managing Director, mbett@andrew.cmu.edu, NSH 2602F 412-268-8616
- Jo Bodnar, METALS Program Coordinator, jobodnar@cs.cmu.edu, NSH 3526, 412-268-6162

HCII Administrative
- Brad Meyers, HCII Director, bam@cs.cmu.edu, NSH 3519

School of Computer Science
- David Garlan, Associate Dean for Master's Programs, garlan@cs.cmu.edu, (412)268-5056

METALS Mailing Address

HCII / METALS

School of Computer Science Carnegie Mellon University 5000 Forbes Avenue

Pittsburgh, PA 15213

8.2 Departmental Resources

Printers are available throughout SCS buildings for your use. Please see https://computing.cs.cmu.edu/desktop/printing for instructions on how to use them.

Conference rooms are available for you use in all libraries and academic buildings. Jo Bodnar can assist you in reserving conference rooms in Wean, Gates and Newell Simon Hall.

The METALS Annex is your shared space. Keep it clean and be respectful of your fellow students. A limited number of office supplies are available for you in the Annex as well as a coffee maker, refrigerator, and microwave.

Please keep the kitchen area clean. Do not leave dirty dishes in the sink.

The microwave and kitchen are cleaned monthly.

For any supplies that you need, please contact Jo Bodnar.

9 Master's Degree Completion and Certification

9.1 Standard Degree Requirements & Degree Certification.

Carnegie Mellon graduate students are expected to complete their degree

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

Early Completion

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

Extended or Longer-than-Standard Competition

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

Master's students who require longer than the standard time to complete their degree requirements are expected to remain in close contact with their graduate program, and will be certified at the end of the semester in which they have completed their degree requirements. Students shall reference CMU Policy on Master's Student Statute of Limitations:

`https://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html`

regarding guidelines and restrictions which place an upper limit on the maximum length of time allowable for master's degree completion and certification. METALS requires students who have matriculated into the program will complete all requirements for the master's degree within a maximum of four years from original matriculation as a master's student, or less.

9.2 Additional Guidance for Students

Program of Study

Students seeking guidance about their program of study and degree requirements

should consult with their academic advisor and/or appropriate associate dean.

Financial Aid and Student Account

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

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

International Students

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

9.3 Statute of Limitations

As outlined in the Master's Students Statute of Limitations:

`https://www.cmu.edu/policies/student-and-student-life/masters-students-statute-of-limitations.html`

Students will complete all requirements for the master's degree within a maximum of **four years** from original matriculation as a master's student, or less. 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.

9.4 Residency Requirements

All students are required to be in person for classes in Pittsburgh for this program.

9.5 Registration Process/Procedures

Students have full responsibility to register for their courses. They should adhere to the academic calendar and register for classes as early as possible. Classes do fill up early. The detailed process for registration can be found here:

https://www.cmu.edu/hub/registrar/registration/index.html

Students are encouraged to meet with their advisors prior to registration.

10 Master's Degree Requirements and Related Policies/Protocols

10.1 Core Courses

Core requirements consist of two prerequisite requirements and six core courses.

 Prerequisite Requirements Two Place-out Courses
Carnegie Mellon's METALS is a rigorous interdisciplinary program. Every student arrives here with his or her own set of talents and skills and we would like to reward you for your prior hard work by giving you the opportunity to "place-out" of required courses.

Matriculating students are expected to have basic knowledge of statistics and programming.

> *Knowledge of Statistics*

Basic concepts, logic, and issues involved in statistical reasoning, such as probability theory, methods for statistical inference, introductory research methods, exploratory data analysis, and the use of some statistical tests in the regression analysis and the contingency table families. Equivalent courses at CMU are 36-220 Engineering Statistics and Quality Control and 36-202 Statistical Methods.

Knowledge of Programming

Proficiency in a programming language such as JavaScript, Python, Java, or C, programming methodology and style, problem analysis, program structure, algorithm analysis, data abstraction, and dynamic data. Normally met through an introductory course in programming that requires the student to write programs of about 300-lines of code from scratch. Equivalent course at CMU is 15-1XX Introductory/Intermediate Programming.

The Managing Director and/or Program Director may determine at the time of admission that some incoming students must successfully complete one or more of the place-out courses by earning an 80% or better prior to matriculating. If required, failure to successfully complete these courses prior to matriculating may result in the student being removed from the program.

We advise students to take advantage of this opportunity to fulfill these requirements as it will give you more time to take electives, independent studies or various other courses that you may find of interest. If you choose not to take advantage of these place-out opportunities, then you may not be able to complete the program on time.

Core Courses

05-823 E-Learning Design Principles - Instructor: Ken Koedinger - Fall

This course is about e-learning design principles, the evidence and theory behind them, and how to apply these principles to develop effective educational technologies. It is organized around the book *E*-Learning *and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning* by Clark & Mayer with further readings drawn from cognitive science, educational psychology, and human-computer interaction. You will learn design principles 1) for combining words, audio, and graphics in multimedia instruction, 2) for combining examples, explanations, practice and feedback in online support for learning by doing, and 3) for balancing learner versus system control and supporting student metacognition. You will read about the experiments that support these design principles, see examples of how to design such experiments, and practice applying the principles in educational technology development.

05-738 Evidenced Based Educational Design - Instructor: Lauren Herckis - Fall

Students will learn to use scientifically based principles and practical strategies for:

1. developing learner models and educational goals based on detailed task analysis of the knowledge, skills, and dispositions required for understanding and mastery,

2. aligning the instructional program and its valid assessment with learners and goals, and

3. considering additional aspects of learning environments that may impact implementation and evaluation.

05-660 Interaction Design Fundamental - Instructor: various - Fall

In this course, the fundamentals of communication and interaction design including layout, typography, color, sketching, storyboarding, and the use of images are presented. Students will become proficient with these skills, and will become comfortable engaging in studio critique, a critical discussion of the strengths and weaknesses of a given design. Course assignments will take the form of several short exercises.

05-840 Tools for Online Learning - Instructor: Steven Moore - Spring

In this course, we will explore issues that pertain to interaction and interface design. The class will focus on elements of the larger interaction design process including basic design principles, information architecture and navigation, planning and brainstorming methods, and techniques for developing rapid sketches and prototypes. Course Requirements: This class will not focus on learning specific software tools. Students are expected to have prior experience using a variety of design and programming tools.

05-681 METALS Project I (15-unit spring course) 05-682 METALS Project II (48-unit summer course)

Experiential learning is key component of the METALS program. Through a substantial team project, students apply classroom knowledge in analysis and evaluation, implementation and design, and develop skills working in multidisciplinary teams. The project begins in the spring semester before graduation and continues full-time through the final summer semester; it must be taken in consecutive spring and summer semesters. The course number for spring is 05-681 and for summer 05-682.

Capstone Requirements: To take the capstone course 05-681, METALS students must pass the following courses with a grade of B- or better: 05-823, 05-692, and 85-738. Students who do not successfully passed these courses will not be permitted to take the capstone course 05-681

10.2 Required Units for Degree Attainment

Required minimum grades

For students who matriculate into the program, the university grading policy is described on https://www.cmu.edu/policies/student-and-student-life/grading.html.

Students earn a letter grade (A, A-, B+, B, B-, C+, C, C-, D+, D, or R) for each course taken. Pass/fail grades are not permitted for courses used to satisfy METALS course requirements, nor are S grades. Neither are counted toward degree requirements. Likewise only graduate level courses (XX600 and higher) are counted towards graduation.

Course work must receive a grade of B- or better to be acceptable and counted toward graduate degree requirements. To graduate, students must have a QPA (Quality Point Average) of 3.0 or better.

Courses in which students do not receive a grade of B- or better may be retaken.

The METALS program typically requires 165 units; however, it may be possible to graduate with a minimum of 150 units in the unlikely event that students are able to take five graduate electives that satisfy the degree requirements and are each less than the usual 12 units for each elective. The average grade of the units applied to earn the degree shall be at least B (QPA of 3.0).

10.3 Electives

You may use the five elective courses to design the program to your individual interests, background and goals. You must choose a minimum of three electives from at least two of the three subject areas (Technology, Learning Sciences Theory & Instructional Design, Methods & Design).

Electives may be cross-listed but can only count in one subject area. Each elective course must be the equivalent of a full-semester (9 or 12 unit) course; two mini (half-semester) courses (6 units each) count as one elective. Elective courses must be different from any that you may have taken as part of the METALS core, and they cannot have counted toward a degree previously awarded by CMU.

As of this printing, currently acceptable elective courses are below. See the METALS website (https://metals.hcii.cmu.edu/curriculum/) for the most up to date list.

Technology

- Applied Data Science (16-791)
- Applied Machine Learning (05-834)
- Cloud Computing (15-619)
- Computational Models of Discourse Analysis (11-719)
- Conversational Machine Learning (10-608)
- Data Science for Product Managers (05-898 A4) (Mini course) *
- Data Visualization (05-619, 05-899 C F21)
- Design & Engineering of Intelligent Information Systems (11-791)
- Design Center: Design for Digital Systems (51-828)
- Design of Educational Games (05-818)
- Gadgets, Sensors, and Activity Recognition in HCI (05-833)
- Human AI Interaction (05-618)
- Human Language for AI (11-624)
- Interaction Techniques (05-640)
- Interactive Data Science (05-839)
- Introduction to Deep Learning (11-685)
- Machine Learning (10-601, 10-701)
- Machine Learning for Text Mining (11-641/11-741)
- Natural Language Processing (11-611)
- Personalized Online Learning (05-832)
- Principles of Software Construction (17-514)
- Practical Data Science (15-688)
- Role of Technology in Learning in the 21st Century (05-838)
- Software Structures for User Interfaces (SSUI) (05-631)
- Visualization in HCI (05-899)
- Web Application Development (17-637)

Learning Sciences Theory & Instructional Design
- Applications of Cognitive Science (85-795, 05-795)

Methods & Design

- Applied Research Methods (05-816)
- Data Science Approaches for Psychology (85-732)
- Design of Artificial Intelligence Products (05-617)
- Design of Educational Games (05-818)
- Designing Experiences for Learning (51-866)
- Document Design (05-899)
- HCI for Startups (05899 A F21)
- Human Factors (05-813)
- Learning in Museums (05-602)
- Learning Media Design (05-691)
- Learner Experience Design (51-886)
- Personalized Online Learning (05-832)
- Research Methods in Human Centered Design (51-744)
- Stats: Experimental Design for Behavioral and Social Sciences (36-749)
- Service Design (05-652)
- Social Perspectives in HCI (05-772) / Computer Science Perspectives In HCI (05- 773)
- Special Topics: Digital Ethnography (49-717)*
- Transformational Game Design Studio (05-899)
- User Centered Research & Evaluation (UCRE) (05-610)**

General Electives
Any two additional courses listed above or choose no more than two of:
- Accessibility (05-899 B F21)
- Analysis of Social Media (11-772)
- Computer-Assisted Language Learning (11- 717)
- Decision Making Under Uncertainty (95-760)
- Designing for Service (51-785)
- Designing Human Centered Software (05-891)
- Digital Service Innovation (05-670)
- Evidence-Based Management (94-814)

• Cognitive Development (85-723) • Human Expertise (85-792) • Learning Analytics and Educational Data Science (05-899) • Learning in Humans and Machines (85-726) • Persuasive Design (05-899 D F21) • Research Methods for the Learning Sciences (85-748) • Role of Technology in Learning in the 21st Century (05-838) • Scientific Research in Education (85-736)	• Fairness, Accountability, Transparency, and Ethics (FATE) in Sociotechnical Systems (05899 A F22) • Human Experience in Design (51-673) • Inventing the Future of Services (11-794) • Independent Study (05-680) • Language Acquisition and Technology (82- 888) • Language and Statistics (11-761) • Machine Learning Text Mining (11-741) • Methodology of Visualization (51-831) • Social Web (05-820) • Other possibilities if approved by METALS Director. To request approval, click here.

*mini course – counts as 1/2 of one elective

Independent studies generally do not fulfill a distributional requirement unless approved in advance by the program director.

Electives other than those listed above must be individually approved by the program director on a case-by-case basis for each student to realize their program goals and future endeavors.

Independent Study

Independent Study courses are designed to provide students with an opportunity for intensive study of a subject that is either unavailable or insufficiently covered in regular course work. Independent/Directed study is not intended to substitute for existing courses, but to provide the opportunity for a specialized educational and research experience. Independent studies cannot satisfy as distributional electives.

Who can supervise? Any METALS faculty member is eligible to serve as the supervisor of an Independent Study course or project. The student must provide a brief prospectus of the project to the faculty supervisor as a basis for an agreement on the objectives of the course.

To Receive Approval. Students arranging Independent Study programs must: Receive approval from their advisor before electing the course.

Complete the form on the METALS website (https://metals.hcii.cmu.edu/student-

resources/metals-documents-and-forms/) with the supervising faculty member that describes in detail the course and its learning objectives, requirements, and week by week schedule. Submit the form to Jo Bodnar for processing.

Restrictions: METALS students may elect the lesser of up to a total of 24 units or two courses of Independent Study towards their degrees.

Sample Plans of Study

3 Semesters: The METALS degree is designed to be earned in three semesters over the course of one year from August to August by those students who have significant previous employment experience. Below is a sample full-time one year schedule from August to August

Fall	Spring	Summer
05-823 E-Learning Design Principles 85-738 Educational Goals, Instruction and Assessment 05-660 Interaction Design Fundamentals Elective 1 Elective 2	05-681 METALS Project I 05-840 Tools for Online Learning Elective 3 Elective 4 Elective 5	05-682 METALS Project II

4 Semesters: The METALS degree may also be earned in four semesters by those seeking a less intense program experience. The following is a sample full-time plan of study that keeps in mind required course sequences.

Fall	Spring	Summer
05-823 E-Learning Design Principles 85-738 Educational Goals, Instruction and Assessment 05-660 Interaction Design Fundamentals	05-681 METALS Project I 05-840 Tools for Online Learning Elective 1 Elective 2	05-682 METALS Project II
Second Fall*	**Second Spring**	**Second Summer**
Elective 3 Elective 4 Elective 5		

*International students must complete a minimum of 36 units per semester.

Part Time Study: Students have the option to complete the program on a part-time basis. Due to the F-1 visa requirement that students be enrolled full time, this option is only open to U.S. citizens and permanent residents. By exercising this option, you will be able to tailor completion of the coursework to suit your needs. You will work with an advisor to set up an appropriate plan of study. Ideally students should be able to complete the degree within a period of two years by taking two courses per semester, including summers. During the summer METALS Project II course, students are expected to be enrolled as full-time students and should make the appropriate arrangements with their employers for leave. Part-time students must also be aware that all HCI core courses are held during the day, so it is not possible to complete the degree as a night student. Also we cannot guarantee that electives will be available during the summer.

The following is a sample part-time plan of study that keeps in mind required course sequences.

First Fall	First Spring	First Summer
85-738 Educational Goals, Instruction and Assessment 05-823 E-Learning Design Principles	Elective 1 Elective 2	Elective 3 Elective 4
Second Fall	**Second Spring**	**Second Summer**
05-660 Interaction Design Fundamentals 05-840 Tools for Online Learning	Elective 5 05-681 METALS Project I	05-682 METALS Project II

10.4 Department Policy on Double Counting Courses

Courses taken at Carnegie Mellon in the 12 months prior to matriculating can satisfy the degree requirements if they are not used to satisfy another degree and they are replaced by a more advanced elective.

10.5 Department Policy for Courses Outside the Department/College

Courses taken at Carnegie Mellon in the 12 months prior to matriculating can satisfy the degree requirements if they are not used to satisfy another degree and they are replaced by a more advanced elective.

10.6 Department Policy/Process for Incompletes

If a student earns an incomplete grade (I) in any course in any semester, they must complete the course work by the end of the following semester. Failure to do so will result in the student earning the default grade (if specified) or an R (failing grade) if no default grade is specified.

10.7 Petition Procedures

Process for Appealing Final Grades: https://www.cmu.edu/graduate/policies/appeal-grievance-procedures.html. Final grades will be changed only in exceptional circumstances and only with the approval of the instructor and the department, unit or program. Grading is a matter of sound discretion of the instructor and final grades are rarely changed without the consent of the instructor who assigned the grade. The following circumstances are the unusual exceptions that may warrant a grade appeal:

(a) the final grade assigned for a course is based on manifest error (e.g. a clear error such as arithmetic error in computing a grade or failure to grade one of the answers on an exam), or (b) the faculty or staff member who assigned the grade did so in violation of a University policy.

10.8 Department Policy/Process for Withdrawing from a course

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.

10.9 Drop/Add/Withdraw Procedures

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

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https://www.cmu.edu/hub/registrar/course-changes/index.html
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There is a separate calendar for doctoral level courses.

10.10 Department Policy/Protocol for Make-Up Exams

The student should notify the faculty as soon as they are able that they will not be able to sit for the exam. The faculty then determines if they will provide the student with an

opportunity to make-up the exam.

10.11 Course Waiver Policy

Courses taken at Carnegie Mellon in the 12 months prior to matriculating can satisfy the degree requirements if they are not used to satisfy another degree and they are replaced by a more advanced elective.

05630 Interaction Design Fundamentals may be replaced with a more advanced design elective if the student indicates mastery of design skills. Request must be submitted to the Managing Director who will seek approval from the Program Director.

10.12 Transfer Courses and Pittsburgh Council on Higher Education (PCHE)

Carnegie Mellon University offers students the opportunity to take courses for credit through a cross-registration program (see Pittsburgh Council on Higher Education (PCHE) and Cross-registration below) and through the receipt of transfer credit from other accredited institutions. The Carnegie Mellon University transcript will include information on such courses as follows: Carnegie Mellon courses and courses taken through the university's cross-registration program will have grades recorded on the transcript and be factored into the QPA. All other courses will be recorded on this transcript indicating where the course was taken, but without grades. Such courses will not be taken into account for academic actions, honors or QPA calculations.

```
https://www.cmu.edu/policies/student-and-student-life/masters-student-status.html
```

NOTE**:** Suspended students may take courses elsewhere; however, they may receive transfer credit only if the college's and department's policies allow this.

10.13 Protocol For Evaluation of Transfer Credit

This program does not accept transfer credit except as noted in the previous section.

10.14 Distance Education

This program does not support distance education.

10.15 Requirements For Those Without A Bachelor's Degree In Discipline

This program does not accept students without a Bachelor's degree.

10.16 Teaching Requirements

Not applicable for this program.

10.17 Research Requirements

Not applicable for this program.

10.18 Internship/Co-op Requirement

Not applicable for this program.

10.19 Thesis Requirement

Not applicable for this program.

10.20 Requirements for entry into Ph.D. program

Not applicable for this program.

10.21 Certification of Degree

After grades are submitted for the student's final semester of Masters of Educational Technology and Applied Learning Sciences (METALS) program, certifying is accomplished by:

1. Running Stellic to identify any missing requirements.
2. Memos are checked in S3 to identify any approved exceptions identified by Stellic.
3. Any remaining issues are discussed with the program director.
4. Degrees that have no remaining issues are certified.

10.22 Leave of Absence

Students who wish to leave their program temporarily (outside of industrial research internships) may request a leave of absence by submitting a request to their program director. If granted, leaves are initially extended for a period of no more than one year. However, 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 approved by the program director prior to returning to the program. Further extensions of leave will not be granted. Students should be in good standing in order to be granted a leave of absence.

Students on leave of absence must contact their program coordinator two months prior to the end of the leave to indicate their plans. While a leave can in principle start at any time, university regulations allow students to return only at the beginning of a semester (usually late August or January).

The university policy can be found here:

https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/

10.23 Withdrawal of Degree

The university reserves the right to withdraw a degree even though it has been granted should there be discovery that the work upon which it was based or the academic records in support of it had been falsified. In such a case, the degree will be withdrawn promptly upon discovery of the falsification. The complete reference to this university policy is available at:

https://www.cmu.edu/policies/student-and-student-life/withdrawal-of-a-degree.html

10.24 Student-Professor Relationship

We expect there to be a professional relationship between graduate students and their advisors as well as other faculty. We refer you to the Sexual Harassment policy: https://www.cmu.edu/policies/administrative-and-governance/sexual-harassment- and-sexual-assault.html.

10.25 Advising

Each student is free to meet with their assigned advisor and/or the program director, Ken Koedinger. Appointments with Ken Koedinger can be arranged through Jo Bodnar.

Students may also meet with the Managing Director.

10.26 Review/Redress of Academic Conflicts

Academic Disciplinary Actions Overview for Graduate Students

"Academic Disciplinary Actions" refers to penalties or sanctions imposed for violation of academic regulations against cheating or plagiarism, or other behavior judged as inappropriate academic conduct. For the current policy, please refer to: https://www.cmu.edu/student-affairs/theword/academic/graduate-academic-disciplinary-procedures.html.

10.27 Summary of Graduate Student Appeal and Grievance Procedures

Please review 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.

11 Grading and Evaluation

11.1 Dept./College Grading Scale/System

Students earn a letter grade (A, A-, B+, B, B-, C+, C, C-, D+, D, or R) for each course taken.

11.2 Department Policy on Grades for Retaking a Course

Students who earn less than a B- in any class may retake the course.

11.3 Department Policy on pass/fail, satisfactory/unsatisfactory

Pass/fail grades are not permitted for courses used to satisfy METALS course requirements, nor are S grades. Neither are counted toward degree requirements. Likewise, only graduate level courses (XX600 and higher) are counted towards graduation.

11.4 Independent Study/Directed Reading

Independent Study courses are designed to provide students with an opportunity for intensive study of a subject that is either unavailable or insufficiently covered in regular course work. Independent/Directed study is not intended to substitute for existing courses, but to provide the opportunity for a specialized educational and research experience. Independent studies cannot satisfy as distributional electives.

Who can supervise? Any METALS faculty member is eligible to serve as the supervisor of an Independent Study course or project. The student must provide a brief prospectus of the project to the faculty supervisor as a basis for an agreement on the objectives of the course.

To Receive Approval. Students arranging Independent Study programs must:

1. Receive approval from their advisor before electing the course.

2. Complete the form on the METALS website (https://metals.hcii.cmu.edu/student-resources/metals-documents- and-forms/) with the supervising faculty member that describes in detail the course and its learning objectives, requirements, and week by week schedule. Submit the form to Jo Bodnar for processing.

Restrictions: METALS students may elect the lesser of up to a total of 24 units or two courses of Independent Study towards their degrees.

11.5 University Policy on Grades

Refer to the University policy on grades:

https://www.cmu.edu/policies/student-and-student-life/grading.html

This policy document details 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.

11.6 Process for Appealing Final Grades

https://www.cmu.edu/student-affairs/theword/academic/appeal-of-grades-and-academic-actions.html

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

11.7 Policy on Grades for Transfer Courses

`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 the college's and department's policies allow this.

11.8 GPA Requirements and QPA Requirements for graduation

For students who matriculate into the program, the university grading policy is described on https://www.cmu.edu/policies/student-and-student-life/grading.html.

Students earn a letter grade (A, A-, B+, B, B-, C+, C, C-, D+, D, or R) for each course taken. Pass/fail grades are not permitted for courses used to satisfy METALS course requirements, nor are S grades. Neither are counted toward degree requirements. Likewise only graduate level courses (XX600 and higher) are counted towards graduation.

Course work must receive a grade of B- or better to be acceptable and counted toward graduate degree requirements. To graduate, students must have a QPA (Quality Point Average) of 3.0 or better.

Courses in which students do not receive a grade of B- or better may be retaken.

11.9 Satisfactory Academic Standing

Students who's cumulative QPA falls at or below 2.6 at the end of a semester will be dismissed from the program. Exceptions may be made for medical emergencies.

Students who's cumulative QPA falls below 3.0 at the end of a semester will be placed on academic probation. Students will be given one semester to bring their cumulative QPA to 3.0 or better. Students who fail to do so may be removed from the program at the discretion of the curriculum committee. Exceptions may be made for medical emergencies.

Minimum QPA and Academic Probation: Students must maintain a cumulative QPA of 3.0 to remain in good standing with the program. Should a student's overall QPA drop below 3.0 during any given semester, he/she will be placed on *academic probation* for the following semester. In probation cases, the student will be required to:

1. enroll in courses as advised by the academic advisor,

2. improve their grades to no less than cumulative 3.0 QPA in the following semester, and

meet any other goal set by the advisor during that period (e.g. fulfilling a core course requirement).

11.10 Regular Reviews and Evaluations by Department

The METALS program conducts an academic progress review at the conclusion of each semester in order to monitor individual students' progress towards graduation regarding the fulfillment of curricular requirements, course grades, and academic integrity. Should a student's effort fall below the acceptable level of academic performance and/or fail to meet standards and policies established by Carnegie Mellon University, the student may be dismissed from the program.

11.11 Academic Integrity

The Academic Integrity (12.11) subsection is required by university policy.

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.

12 Safeguarding Educational Equity

12.1 Assistance for Individuals with Disabilities

`http://www.cmu.edu/education-office/disability-resources/`

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical, digital, and programmatic access to ensure that students with disabilities have equal access to their educational experience. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources' secure online portal:

`https://rainier.accessiblelearning.com/cmu/`

or email access@andrew.cmu.edu to begin the interactive accommodation process.

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

12.2 Sexual Misconduct Policy

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

The University's Sexual Misconduct Policy is available at:

`https://www.cmu.edu/policies/administrative-and-governance/sexual-misconduct/index.html`

The University's Policy Against Retaliation is available at:

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

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

- Office for Institutional Equity and Title IX

`http://www.cmu.edu/title-ix/`
412-268-7125
`institutionalequity@cmu.edu`

- University Police

`https://www.cmu.edu/police/`

412-268-2323

Additional resources and information can be found at:

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

12.3 Gestational and Parental Accommodations

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

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

Students seeking any of the Parental Accommodations described below must register with the Office of the Dean of Students by contacting the office for an appointment by calling 412-268-2075.

Students are encouraged to register with the Office of the Dean of Students ninety (90) days in advance of the anticipated arrival of the child as applicable in the individual circumstance. At the time of registering, students will have the opportunity to consult about resources, procedures, funding options and preparation for discussing academic accommodations with the student's academic department. Students should also consult with their academic advisors either before or in conjunction with registering with the Office of the Dean of Students.

Accommodations for Gestational Parents

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

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

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

Financial Assistance for Student Parents

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

Interest Free Loan – Any student who becomes a parent is eligible to apply for an interest-free parental loan (https://www.cmu.edu/student-affairs/dean/loans/) from the Office of the Dean of Students.

12.4 Consensual Intimate Relationship Policy Regarding Undergraduate Students

https://www.cmu.edu/policies/student-and-student-life/consensual-relationships.html

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

13 Additional Department and University Policies and Protocols

13.1 Verification of Enrollment

Enrollment Services is the only University office that can provide an official letter of enrollment, official transcript and enrollment verification.

Enrollment verification can be requested online through The HUB at:

https://www.cmu.edu/hub/registrar/student-records/verifications/enrollment.html

13.2 Change of Address

Students are encouraged to keep their current local address up-to-date in SIO. This

supports a university initiative to have accurate living information for students for official program/department/college/university notices, the ability to facilitate wellness checks, ensure international students are in compliance with visa requirements, etc.

13.3 Requirement for Providing Personal Computing Resources

Students are required to provide their own personal laptops, monitors, keyboards, mice, and any other associated computer hardware. Generally, most late model Apple and Windows laptops are sufficient. Linux laptops are generally not supported.

If software or hardware is required for a course or for a project and it is not available by the University or Department, then the students are expected to purchase it at their own expense.

The program does not provide any hardware or software. However, loaner computers may be available through the SCS Help Desk for a two week period if your computer is broken.

Students are strongly encouraged to save all their work on the cloud using either Box or Google Drive. Both of which provide unlimited storage for CMU students.

13.4 Graduate Student Reimbursement Policy

Purchasing Procedure

All purchases of goods, services, and equipment using University funds, including restricted accounts and research grants and contracts, must receive prior approval from the Managing Director or the Program Director.

If you use your own cash, check or credit card to make a purchase over $20, it may not be possible to reimburse you for the expenditure. Since the University is a tax-exempt institution, under no circumstances will sales tax be reimbursed with the one exception being on travel expenses. All purchases must have prior approval of the Managing Director or the Program Director.

Itemized receipts and packing slips for all purchases are to be submitted promptly for reconciliation and purchase documentation. Credit Card receipts will not be accepted.

Master's Student Handbook > Additional Department and University Policies and Protocols

Office supplies are available for purchase at the University Store and are not provided by the department.

Capstone Expenses

Pre-Approved legitimate business expenses can be reimbursed by the department. Jo Bodnar will help you claim reimbursement provided you have the following:

- Itemized receipt indicating item purchased and proof of payment

- Business purpose for purchasing item

- Account to be charged for reimbursement

- Approval by the Managing Director or the Program Director and subsequent signature for reimbursement

- Signed expense report

Please consult with the Director or the Managing Director prior to incurring the expense for additional instruction.

Travel Expenses

Pre-approved legitimate travel expenses can be reimbursed by the department. Our program administrator will help you claim reimbursement once you provide the following:

- All receipts must be itemized and specify the items purchased. Credit card slips are not acceptable receipts.

- Hotel receipts must show a zero balance with proof of payment and your name

- Students may only reserve lodging through AirBnB with prior approval from the Program Director.

- Receipts for meals must be collected, you cannot claim per diem meals.

- Personal car mileage is calculated at the current IRS rate per mile; mileage covers gas, but not tolls.

- Business purpose for travel

- Account to be charged for reimbursement

- Approval (by faculty member) and subsequent signature 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 Tartan 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.

13.5 New Policies / "Grandfather" Policy

Any new policies in this Handbook only affect those students who are matriculating in Fall 2023 or later.

13.6 Time Away from Academic Responsibilities

Emergency Absences

Emergencies happen. So we can best assist you, when you are able to, please contact campus police (412)268-2323 and/or Angie Lusk, Director of Campus Wellness via email alusk@andrew.cmu.edu, or by phone (412) 268-7117 or via Office of the Dean of Student Affairs (412) 268-2075

Non-emergency absences

For non-emergencies, the HCII views attendance as an individual student responsibility. Students are expected to attend classes, task and team meetings, presentations, seminars, and so forth. For meetings where the student's absence could hinder the performance of the group, such as task meetings, team meetings and group presentations, it is the student's responsibility to provide satisfactory evidence to the METALS Director to substantiate the reason for the absence.

Among the reasons absences are considered excused by the program are the following:

- Death or major illness in a student's immediate family. Immediate family refers to: mother, father, sister, brother, grandparents, spouse, or child. If unclear, check with the Managing Director or Program Director in advance of your absence or as soon as you are able.

- Illness of a dependent family member.

- Illness that is too severe or contagious for the student to attend (to be determined by Health Center or off-campus physician).

Leaves of Absence

Students who wish to leave their program temporarily (outside of industrial research internships) may request a leave of absence by submitting a request to their program director. If granted, leaves are initially extended for a period of no more than one year. However, 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 approved by the program director prior to returning to the program. Further extensions of leave will not be granted. Students should be in good standing in order to be granted a leave of absence.

Students on leave of absence must contact their program coordinator two months prior to the end of the leave to indicate their plans. While a leave can in principle start at any time, university regulations allow students to return only at the beginning of a semester (usually late August or January).

University Breaks

Refer to this policy https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/

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

typical week day, this should be specified.

Students should expect to remain on campus between the Spring and Summer semesters to continue work on their capstone projects.

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

13.7 Employment Eligibility Verification

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

- Every individual receiving a stipend from CMU or employed by CMU must comply with the I-9 Policy by completing the Form I-9 within three business days following the first day of stipend start date/employment.

- Individuals who expect to work on a federally funded project are further responsible for submitting an E-Verify Processing Request Form to the Office of Human Resources if required.

- For more information, please see CMU's **Guidance for Completing the Form I-9 and E-Verify Requirements at CMU [pdf]**, or visit the Human Resources Service website to learn more about Form I-9 and E-Verify and to schedule an appointment to complete the Form I-9.

- Students who fail to complete the Form I-9 in a timely manner may have stipend payments suspended. If employed by the university, an individual who fails to timely complete the Form I-9 may be subject to disciplinary action up to and including termination of employment.

14 Financial Support

14.1 Statement of Department Financial Support

The department does not provide any financial support.

14.2 Awarding and Continuation of Funding

The program provides merit scholarships to all students who remain in good standing (Cumulative GPA is 3.0 or above).

14.3 Types of Department Funding

Conference Funding is a funding application process provided by GSA and the Provost's Office for students, student work groups or groups to attend a conference, whether as a participant or as a presenter. The process is managed by the Office of Graduate and Postdoctoral Affairs. Students can find more information about the application process and deadlines at:

    https://www.cmu.edu/graduate/professional-development/index.html

14.4 Funding Payment Schedule

Merit scholarships are made available at the start of each semester in accordance with the terms in the offer of admission.

14.5 Additional Sources for Financial Support

Master's students may work up to 20 hours a week in one of the following roles: grader, teaching assistant, lecturer, research assistant, office support staff.

14.6 Research Funding

Research funding is generally not available to students in this program.

GuSH Research Funding 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:

    https://www.cmu.edu/graduate/professional-development/research-funding/index.html

14.7 Outside Funding, Fellowship and Scholarship Opportunities

Students are encouraged to seek outside funding, fellowship, and scholarship opportunities.

14.8 Availability of Summer Employment

Internships and summer employment is not part of this program. Students are

expected to work on their capstone project over the summer.

14.9 Department Policy on Outside Employment

Outside Employment is discouraged for full-time students given the intensity of the program. Furthermore, International students must contact the Office of International Education (OIE) regarding their ability to hold employment.

14.10 Tax Implications of Financial Support

Students are responsible for any taxes associated with their financial support.

14.11 Procedure for Written Notification of Change in Financial Support

If there is a change in the financial support for a student offered by the program, they will be notified by email at least 7 days prior to the start of the semester.

14.12 Lost Funding

International Students must notify the Office of International Education (OIE) if they lose their funding.

Reference the Office of the Dean of Students Emergency Student Loan Program: Graduate students who find themselves in need of immediate funds for emergency situations should contact the Office of the Dean of Students:

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

...to inquire about an Emergency Student Loan

14.13 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.

14.14 Office of the Dean of Students Emergency Support Funding

Graduate students who find themselves in need of immediate funds for emergency situations should contact the Office of the Dean of Students:

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

to inquire about the types of emergency funding available to enrolled students.

Appendix A
2023-2024
Highlighted University Resources for Graduate Students

Note: The following pages are meant to broadly include only some of the resources available to graduate students. It is not an exhaustive appendix of resources, and students are strongly encouraged to visit the various websites linked below for the most up-to-date information.

Table of Contents

Key Resources for Graduate Student Support

Office of Graduate and Postdoctoral Affairs

https://www.cmu.edu/graduate

graded@cmu.edu

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

- Website with university resources, contact information for CMU programs and services, possible financial assistance and potential funding opportunities, and various procedural and policy information

- Newsletter to all graduate students with information on activities, resources, and opportunities

- Professional development seminars and workshops, and various programming and events for the graduate student community

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

Office of the Dean of Students

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

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

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

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

The Division of Student Affairs

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

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

Center for Student Diversity & Inclusion

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

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

development that changes the world.

The Center offers resources to enhance an inclusive and transformative student experience in dimensions such as access, success, campus climate and intergroup dialogue. Additionally, the Center supports and connects historically underrepresented students and those who are first in their family to attend college in a setting where students' differences and talents are appreciated and reinforced, both at the graduate and undergraduate level. Initiatives coordinated by the Center include, but are not limited to:

- First generation/first in family to attend college programs

- LGBTQ+ Initiatives

- Race and ethnically focused programs, including Inter-University Graduate Students of Color Series (SOC) and PhD SOC Network

- Women's empowerment programs, including Graduate Women's Gatherings (GWGs)

Assistance for Individuals with Disabilities

`https://www.cmu.edu/disability-resources/`

The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical, digital, and programmatic access to ensure that students with disabilities have equal access to their educational experience. The Office works to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources' secure online portal or email access@andrew.cmu.edu to begin the interactive accommodation Process.

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

Eberly Center for Teaching Excellence & Educational Innovation

`https://www.cmu.edu/teaching/`

The Eberly Center offers a wide variety of confidential, consultation services and professional development programs to support graduate

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

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

Graduate Student Assembly

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

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

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

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

Office of International Education (OIE)

`https://www.cmu.edu/oie/`

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

Veterans and Military Community

`https://www.cmu.edu/veterans/`

Military veterans are a vital part of the Carnegie Mellon University community. Graduate students can find information on applying for veteran education benefits, campus services, veteran's groups at CMU, and non-educational resources through the Veterans and Military Community website. There are also links and connections to veteran resource in the Pittsburgh community. The ROTC and Veteran Affairs Coordinator can be reached at `urovaedbenefits@andrew.cmu.edu` or 412-268-8747.

Carnegie Mellon Ethics Hotline

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

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

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

Policy Against Retaliation

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

Additional details regarding the Policy Against Retaliation are available at:

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

Key Offices for Academic & Research Support

Computing and Information Resources

`https://www.cmu.edu/computing/`

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

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

Student Academic Success Center

`https://www.cmu.edu/student-success/`

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

University Libraries

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

- Locating and obtaining specific resources

- Providing specialized research support

- Advanced training in the use and management of data

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

Research at CMU

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

Office of Research Integrity & Compliance

The Office of Research Integrity & Compliance (ORIC) is designed to support research at Carnegie Mellon University. The staff work with researchers to ensure research is conducted with integrity and in

accordance with federal and Pennsylvania regulation. ORIC assists researchers with human subject research, conflicts of interest, responsible conduct of research, export controls, and institutional animal care & use. ORIC also provides consultation, advice, and review of allegations of research misconduct.

Key Offices for Health, Wellness & Safety

Counseling & Psychological Services

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

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

Health Services

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

University Health Services (UHS) is staffed by physicians, advanced practice clinicians and registered nurses who provide general medical care, allergy injections, first aid, gynecological care, and contraception as well as on-site pharmaceuticals. The CMU Student Insurance Plan covers most visit fees to see the physicians and advanced practice clinicians & nurse visits. Fees for prescription medications, laboratory tests, diagnostic procedures and referral to the emergency room or specialists are the student's responsibility and students should review the UHS website and their insurance plan for detailed information about the university health insurance requirement and fees.

UHS also has a registered dietician and health promotion specialists on staff to assist students in addressing nutrition, drug and alcohol and other healthy lifestyle issues. In addition to providing direct health care, UHS administers the Student Health Insurance Program. The Student Health

Insurance plan offers a high level of coverage in a wide network of health care providers and hospitals. Appointments can be made by visiting UHS's website, walk-in, or by telephone, 412-268-2157.

Campus Wellness

`https://www.cmu.edu/wellness/`

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

Religious and Spiritual Life Initiatives (RSLI)

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

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

University Police

`https://www.cmu.edu/police/`

`x2323`

The University Police Department is located at 4551 Filmore Street. The department's services include police patrols and call response, criminal investigations, fixed officer and foot officer patrols, event security, and crime prevention and education programming as well as bicycle and laptop registration. Visit the department's website for additional information about the staff, emergency phone locations, crime prevention, lost and found, fingerprint services, and annual statistic reports. Carnegie Mellon University publishes an annual campus security and fire safety report describing the university's security, alcohol and drug, sexual assault, and fire safety policies. The report also contains

statistics about the number and type of crimes committed on the campus and the number and cause of fires in campus residence facilities during the preceding three years. Graduate students can obtain a copy by contacting the University Police Department at x2323. The annual security and fire safety report is also available online at:

`https://www.cmu.edu/police/annualreports/`

Shuttle and Escort Services

`https://www.cmu.edu/parking/transport/`

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

The WORD

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

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