

**CARNEGIE
MELLON
UNIVERSITY**

**Department of
Engineering and Public Policy
Graduate Student Handbook**

August 2019

Preface

To our new students, we are delighted that you have chosen to pursue graduate studies in the Department of Engineering and Public Policy. We want to help make your stay here as enjoyable and productive as we can.

To our returning students, welcome back to the start of a new semester. Please take the time to read the handbook as some of the policies and procedures have changed since last year.

This handbook is designed to help guide you through some of the ins and outs of doctoral studies in EPP and at Carnegie Mellon. While it is specific to your academic experience in the department, there are several other resources and offices doctoral students are encouraged to consult during their tenure at Carnegie Mellon University. Information about The Word (Carnegie Mellon's online student handbook), the Office of the Assistant Vice Provost for Graduate Education, the Office of the Dean of Student Affairs, and others are included in Appendix 5 of this handbook.

As EPP has grown, we've had to develop more policies and procedures. While college and university policies and protocols are binding, we try to be as flexible as possible with EPP policies and procedures while striving to be fair and equitable among students. Thus, if you encounter a problem that just doesn't seem to fit a particular situation you find yourself in, please come see one of us. We may be able to help you find a solution. If an EPP policy changes from the time of your matriculation, where possible we will allow you the option of being governed by the older policy.

Peter Adams, Interim Department Head
Vicki Finney, Graduate Program Administrator
Peter Luetkehans, Business Manager

Carnegie Mellon University Statement of Assurance

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

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

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

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

www.cmu.edu/policies/administrative-and-governance/statement-of-assurance.html

The Carnegie Mellon Code

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

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

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

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

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

The Carnegie Mellon Code can be found on-line at: www.cmu.edu/student-affairs/theword/.

University Policies & Expectations

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

- The Word/Student Handbook: www.cmu.edu/student-affairs/theword//index.html
- Academic Integrity Website: www.cmu.edu/policies/student-and-student-life/academic-integrity.html
- University Policies Website: www.cmu.edu/policies/
- Graduate Education Website: www.cmu.edu/graduate/policies/index.html

Please see Appendix 5 for additional information about The Word and University resources

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1. Introduction

Engineering and Public Policy (EPP) is a unique department in the College of Engineering (COE) at Carnegie Mellon University. It was established in 1976 and is concerned with problems in the field of technology and public policy. EPP is different from most other university programs in this field because it is strongly engineering based. Its research focuses exclusively on that set of public policy problems in which a detailed treatment of the technical issues is central to producing a satisfactory policy solution.

EPP offers exciting opportunities for growth and continued educational innovation. At the same time, because of the unconventional interdisciplinary nature of the EPP Program, aside from a set of core requirements, each student fashions his or her path through the program. Along with the freedom of choice, this approach sometimes brings a feeling of insecurity and uncertainty. The EPP Faculty are very approachable and helpful in dealing with questions as they arise. You should feel free to approach Peter Adams, the Interim Department Head; Parth Vaishnav, the EPP Graduate Ombudsperson; your academic advisors; or any of the EPP faculty to seek assistance and advice.

This booklet is a compilation of facts, policies, guidance, and organizational details useful to a doctoral student in the Department of Engineering and Public Policy. The first part deals with academic affairs, and the second with general administrative and policy matters. Support and administrative policy matters are handled primarily by Vicki Finney, the Graduate Program Administrator; and Peter Luetkehans, the Business Manager. Appendix 1 provides a list of relevant university and department contacts. We hope you will pay careful attention to the details here, but feel free to discuss problems with the faculty and staff at EPP. Copies of this handbook will be available upon request, and will be posted on the EPP website under Student Resources.

At the undergraduate level, the primary degree offering is a joint BS in EPP with the five engineering departments as well as a joint BS in Science, Technology and Public Policy with other science and humanities departments. Between 6-8% of all undergraduate engineers at CMU participate in these additional-major programs. The department also offers a minor in Technology & Policy.

At the graduate level, we offer an EPP masters degree and a research-oriented PhD. Joint PhD degrees with all of the traditional engineering departments and several other departments across campus are available.

The PhD program is over 40 years old. As of May 2019, we have produced 361 PhDs, 61 terminal MS graduates, and 3 fifth-year MS graduates. As of September 2019 there are 72 PhD students currently enrolled, and 2 masters students.

EPP is also home to the Engineering & Technology Innovation Management (E&TIM) masters program. ETIM is a one-year (two semester) interdisciplinary professional program offered by the College of Engineering. In addition, ETIM has a two-year (four semester) Dual Degree program option with students from Biomedical Engineering, Chemical Engineering, Civil & Environmental Engineering, Electrical & Computer Engineering, Materials Science Engineering, and Mechanical Engineering. As of May 2019, E&TIM has graduated 258 MS students, including a few alumni who have gone on to pursue a PhD in EPP. Additional information on the ETIM program can be found at www.cmu.edu/engineering/etim/index.html.

Major areas of graduate research in the department include energy and environmental systems, information and communication technology policy, risk analysis and communication, and technology innovation policy.

There are currently 51 faculty in EPP including tenure-track, research-track, teaching-track and special faculty. A few of our faculty have full-time appointments in EPP, but the majority have either a joint, affiliated, or courtesy appointment. CMU offers a unique environment in which interdisciplinary research is encouraged and these types of appointments work. For a listing of the EPP faculty go to: www.cmu.edu/epp.

EPP graduates go into consulting, academic and corporate positions, and also government offices, such as the U.S. Environmental Protection Agency, U.S. Government Accountability Office, Congressional Research Service, and National Labs.

2. Academic Affairs

This section describes the general academic framework of the program and facilities and your orientation to them. The official procedures regarding registration and enrollment are discussed later in Section 7.

The rules and procedures put forth in this booklet are applicable to students at the time they enter the program.

2.1. Grandfather Policy

As noted in the Preface, while college and university policies and protocols are binding, we try to be as flexible as possible with EPP rules and procedures while striving to be fair and equitable among students. Thus, if an EPP policy changes from the time of your matriculation, where possible we will allow you the option of being governed by the older policy.

2.2. Academic Integrity

Please review the University Policy on Academic Integrity 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 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.

Plagiarism is a very serious offense and will not be tolerated by the Department. It can result in immediate loss of support, a failing course grade, and potential removal from the degree program. If you are unsure of how to cite a source or not sure if you need to cite a source ask your advisors or other faculty for guidance. Appendix 2 is a memo from Granger Morgan regarding proper attribution. Please review it carefully.

We require that all students in EPP complete both the Responsible Conduct of Research (RCR) education training as well as an online plagiarism session.

The RCR training is web-based and offered by the Collaborative Institutional Training Initiative (CITI). Students only need to complete the 'Physical Sciences' module¹. This training session will take a few hours to complete, but students will be able to log in and out over a period of time to complete the training. The first step is to visit the CRC website and create an account: www.citiprogram.org/Default.asp.

The online plagiarism session is offered by the University of Indiana and can be found at: www.indiana.edu/~tedfrick/plagiarism/.

Both of these training sessions will offer a confirmation certificate at the end that you will need to print out and submit to the EPP graduate program administrator. Note that the research ethics session will indicate that you can send the confirmation certificate directly to CMU electronically, but unfortunately this does not work. You must download the certificate and submit it in paper form. The deadline for completion of both sessions is September 30.

2.3 Resources for Exceptional or Challenging Situations

Ombudsperson

Parth Vaishnav serves as ombudsperson for EPP graduate students to assist with difficult academic or personal situations where a confidential sounding board and/or intermediary can be helpful.

What situations can the ombudsperson help in?

- Anything that affects an EPP PhD student's well-being and academic progress, and which they feel unable to take up directly with their advisors, or the associate department head or department head
- Important exceptions:
 - Title IX (anything related to sexual harassment): you can tell ombudsperson if you are experiencing problems, but they are obliged to inform the Title IX office, who will then approach you to figure out how best to address the situation
 - Legal advice of any kind

What can the ombudsperson do to help?

- Act as a sounding board

¹ If you have completed a different Responsible Conduct of Research Training module, inform the graduate program administrator. Most likely what you have done will be acceptable and you will not have to complete the physical science module.

- listen objectively but with empathy
- draw on their own experiences as a graduate student to offer support
- point to existing departmental or college policies that offer guidance
- identify resources that can offer more help
- Act as a neutral resource between a student and a faculty/staff member, if appropriate, and always with the student's permission to:
 - facilitate communication
 - mediate informally

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

2.4 Summary of Graduate Student Appeal and Grievance Procedures

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

3. Masters Program Requirements

3.1 Degree Title

The degree title awarded to candidates in Engineering and Public Policy is the Master of Science in Engineering and Public Policy.

3.2 Coursework

Candidates for the MS degree must complete a minimum of 96 units as follows.

EPP core courses -- 24 units

- 19-701 – Introduction to the Theory and Practice of Policy Analysis
- 19-702 – Quantitative Methods for Policy Analysis

Quantitative methods -- 24 units

- Courses with advisor approval that address quantitative methods appropriate for the student's course of study, such as Probability and Statistics, Applied Data Analysis, Multi-Criteria Decision Making, Quantitative Entrepreneurship, among others.

Social Analysis methods – 24 units

- Courses with advisor approval that address social science or analysis methods appropriate for the student's course of study, such as Microeconomics, Managerial and Engineering Economics, Energy Policy and Economics, Organizational Behavior for Engineers, among others.

Elective – 24 units

- Courses or research units with advisor approval appropriate for the student's course of study. These may include courses in specific topical areas (e.g., energy systems or information systems, climate issues, cybersecurity, technology innovation) or additional quantitative or social science courses.

In addition, they must meet the following criteria:

- A minimum 3.0 QPA is required for graduation.
- A grade of C (2.0) or better is required for a course to count toward graduation, but no more than two courses with a grade of C can be used to meet course requirements.
- At least 84 units must be graduate-level courses (course numbers XX-600 or above).
- A maximum of 12 units of undergraduate courses can be counted towards the 96 units required for the degree. Undergraduate courses must be at the 300-level or above to count towards the degree.

- A minimum of 60 units must be in EPP, 19-xxx courses.
- No more than 18 units of research, 19-690 MS Project, can be counted toward the degree.
- Courses used for current or prior Undergraduate or MS degrees may not be used for the EPP MS.

3.3 Keeping Track of Progress

In addition to working with your advisor to tailor your course of study, you will be responsible for monitoring your academic progress through Student Information Online (SIO) to ensure that you are satisfying program requirements. Students will use a Curriculum Progress Sheet (CPS) to chart their courses, and submit the CPS to the MS advisor, and graduate program administrator. The CPS is shown in Appendix 3 and is available on the EPP graduate studies canvas site.

3.4 Master Program Length

It is expected that masters students will complete the degree in three semesters. Students who are qualified and interested may elect to take a heavier course load and complete the degree in two semesters. Students that are able to satisfy the MS degree requirements in two semesters (nine months) will be deemed as graduated and will be unable to continue to the third semester.

3.5 Part-time Masters Student

If you are enrolled as a part-time MS student, you are required to enroll for a minimum of 12 units each semester.

Part-time students are encouraged to complete the degree program as quickly as possible. International students seeking part-time status may be limited due to visa restrictions.

3.6 Statute of Limitations - Master of Science

All units required for a MS degree, whether earned in residence or transferred from another institution, must be recorded on your transcript within six years of the date on which you are enrolled in the program.

The College of Engineering's Associate Dean for Graduate Students and Faculty can extend this statutory period if you have special circumstances that do not allow you to complete the degree requirements within the statutory period. The EPP department head and College of Engineering's Associate Dean for Graduate Students and Faculty must approve this waiver. The waiver request must explain the exceptional circumstances that warrant an extension. For cases in which a waiver is granted, the waiver will cover specific courses and will specify a time period for completion of the program.

3.7 Masters Students with Unsatisfactory Academic Performance

At the end of each semester, after final grades have been posted, the academic performance of each EPP student is reviewed. Students with a cumulative QPA of less than 3.0, or who have earned a QPA of less than 3.0 in the most recent full semester completed, will be placed on academic probation. Students placed on academic probation will be notified in writing and should meet with their advisor to determine an academic plan of action.

Academic probation includes the following consequences:

- Students on academic probation may have any scholarships, research assistantships and/or financial awards rescinded.
- Students on academic probation cannot be selected to receive awards.

For a student on academic probation, this status will be automatically removed during the next academic review if the semester and cumulative QPA are 3.0 or better. Students with a cumulative QPA lower than 3.0 at the end of two consecutive semesters may be removed from the EPP program. The student will be notified in writing and should meet with their advisor as soon as possible to discuss their academic situation. The student will then meet with the Department Head. If a decision for removal from the program is made, the student will receive the decision in writing. When an informal resolution cannot be reached, a graduate student who seeks further review of the matter is to follow the formal procedures outlined in Section 2.4 above.

3.8 Leave of Absence

A student may need to take a temporary leave of absence for many reasons. Students are required to file a Leave of Absence form with the HUB, after securing the appropriate signature approvals. Return from voluntary leave of absence requires program approval through a Request for Return from Leave of Absence form. Students in good standing in all courses, and on no academic action when taking a Leave of Absence, will be reinstated with the same standing as prior to the leave. Students in poor standing, or on academic probation at the time they request a Leave of Absence, must submit a written request asking for re-instatement to the program which will be evaluated by Department Head and Associate Department Head.

All requests for reinstatement must be submitted within the time limit imposed by the 6-year student statute of limitations described in the College of Engineering Graduate Student Handbook. <https://engineering.cmu.edu/files/documents/graduate-students/college-of-engineering-ay-2018-19-graduate-handbook.pdf>.

3.9 Applying for an EPP PhD

If students wish to apply for an EPP PhD, they should plan to do so after their second semester by the December application deadline. They will need to complete a new online application, and the application fee will be waived. They should consult with the EPP admissions coordinator for further guidance on the procedure to follow.

4. PhD Program Requirements

The point of a PhD is to learn to structure and to conduct research. Hence, the doctoral program in EPP is heavily research-oriented and students are encouraged to identify and begin to work on a research problem as soon as possible. The time for the completion of a PhD depends upon the rate of progress in research. The average length is between four and five years. Students maintaining good progress in coursework and research are generally supported financially from research grants, so long as the funds are available in the student's area of research. After they have identified a research area and advisor, students are expected to work with the advisor in generating continuing or new proposals for funding as appropriate. We encourage students to apply for fellowships and provide information on availability, application deadlines, etc., on the graduate studies canvas site. Another resource to find information on available fellowships is at the CMU Fellowships and Scholarships Office www.cmu.edu/fso.

4.1 Degree Title

The official degree title will be Doctor of Philosophy in Engineering and Public Policy. For students who are currently pursuing joint PhD degrees, the home department is always listed first in the degree title as follows:

- Doctor of Philosophy in Engineering and Public Policy and Civil and Environmental Engineering
- Doctor of Philosophy in Engineering and Public Policy and Mechanical Engineering
- Doctor of Philosophy in Engineering and Public Policy and Materials Science and Engineering

4.2 Getting Started

Students in EPP are expected to take an active role in the selection of their courses and research areas right from the start. The student helps shape his or her interdisciplinary research problem with the advice of suitable faculty members from EPP and other departments. Because a research paper is required for the qualifying examinations after the third semester, it is up to the student to start meeting with faculty members early in the first semester. The student then has the time to discuss possible research areas and problems with individual faculty members and to begin to explore his or her interests in those contexts. It is expected that the student begin focused research toward the qualifier paper -- which would ideally be the starting point for the PhD dissertation research -- by the middle of the second semester, at the latest.

4.3 Meeting the Faculty, Academic Advisors, and Research Advisor

Upon arrival, you should contact your advisors. You are also welcome to initiate contacts with other faculty members as well. You can read about faculty research interests on the department website.

Academic advisors are responsible for assisting students with course selection, guiding research, and providing help with other academic matters. It is likely that your academic advisor will also be your thesis advisor and the chairperson of your thesis committee. The thesis advisor is expected to provide guidance relevant to research and progress towards completion of the dissertation. It is common for PhD students in EPP to have multiple research advisors. Any student who feels that they need a new advisor should make a request to the department head or associate department head and the issue will be discussed with the student.

4.4 Coursework and Teaching Practicum

The coursework and teaching practicum requirements for a PhD are designed to provide students with a common core of knowledge and techniques useful in policy problems, as well as to give each student a mastery of a body of knowledge in the disciplines relevant to his or her individual area of research. The curriculum requires core courses, quantitative methods courses, one microeconomics course, technical elective courses, social science elective courses, and a teaching practicum. The following outlines the courses, each are described in detail further on.²

²Carnegie Mellon University course credits are counted in terms of units. Three units are equivalent to one semester hour. Most undergraduate courses are 9 units. Graduate courses are 12 units or 6 units (mini-courses running for half a semester). Full-time student status requires registration for a minimum of 36 units. EPP graduate students generally take a course load between 42 and 48 units.

An overall 3.0 grade-point average is expected throughout the course of your studies. No more than two courses with a grade of C (2.0) can be used towards meeting course requirements. Courses receiving pass/fail grades cannot be counted towards degree requirements, with the exception of 19-705. Any student with a cumulative QPA of less than 3.0, or with a QPA of less than 3.0 in the most recent full semester completed, or with a research course grade less than B (3.0) in the most recent full semester completed, is automatically and immediately placed on academic probation. See Section 4.7 for more information on inadequate progress and probation.

Students in the PhD program can elect to receive an EPP MS degree along the path to PhD. They will need to complete the MS requirements as outlined in Section 3 and submit a curriculum progress sheet to the graduate program administrator. Students who entered the EPP program before 2019, have the option of following the old MS rules if they desire. Students should inform the graduate program administrator if they wish to follow the old rules.

CORE (Courses on policy research and problem-solving skills)

- 19-701 Intro to the Theory and Practice of Policy Analysis 12 units
- 19-702 Quantitative Methods for Policy Analysis 12 units
- 19-703 Applied Data Analysis or 36-607 Modern Regression 6 units or 9 units
- 19-705 Workshop in Applied Policy Analysis (Prep for Part B Qualifier) 6 units (optional)

QUANTITATIVE METHODS

18 units

Courses on probability and statistics, optimization, machine learning, game theory, and other quantitative methods. It is strongly recommended that at least 6 units should be oriented to probability and statistics. Recommended courses include:

- Probability and statistics: 12-704, 19-704, 90-905, 36-749
- Machine learning: 05-834
- Optimization: 19-785, 36-725, 21-690, 45-751

ECONOMICS

12 units

Courses on microeconomics and application of economic analysis in markets. Recommended courses include:

- 19-706 Microeconomic Analysis 6 units
- 90-908 PhD Microeconomics 12 units

Students completing 19-706 are required to complete an additional 6 units of economics coursework. 19-706 is appropriate for students seeking an applied treatment of graduate level microeconomics and is tailored to the analyses that EPP PhD students use in their research. 90-908 is calculus-based and provides a theoretical treatment of microeconomics. Students with a weak calculus background and no previous courses in economics may request to first take 19-681 Managerial & Engineering Economics, but are encouraged to take 19-706 or 90-908 after as a social science elective.

TECHNICAL ELECTIVES (Courses in engineering, science, applied math and statistics)

- Technical courses in area of focus 36 units

SOCIAL SCIENCE ELECTIVES (Courses in social science and social analysis)

- Courses in social science and social analysis in area of focus, with at least 6 of the units in the area of political science, regulation or law. 24 units

TEACHING PRACTICUM

Students are required to serve as a Teaching Assistant or Project Manager for one or two approved EPP courses. Details on the practicum requirement are discussed in Section 4.4.5

4.4.1 Core Course Requirements

The principal component of the EPP core curriculum is a sequence of courses on perspectives and tools for policy analysis and data analysis: 19-701, 19-702, and 19-703. Our core courses have been arranged to allow completion of the core sequence by the time students take their qualifying exams in the beginning of their fourth semester.

“Introduction to the Theory and Practice of Applied Policy Analysis” (19-701) is a lecture and discussion course that reviews and critically examines a set of problems, assumptions, and analytical techniques that are common to research and policy analysis in technology and public policy. The objective is to look critically at the strengths, limitations, and underlying assumptions of key policy research and analysis tools and problem framing, and to sensitize students to some of the critical issues of professional responsibility, ethics, and values that are associated with policy analysis and research.

“Quantitative Methods for Policy Analysis” (19-702) is a course that provides a broad introduction to analytical and computational methods commonly used to address technical policy issues. Particular emphasis is placed on methods for decision analysis and simulation.

An additional, optional course offered in the policy sequence is “Workshop in Applied Policy Analysis” (19-705). This course is designed to provide experience in setting up, analyzing, and writing about policy problems of the type that are used in the Part B qualifying exam (described below).

Students are also required to take 18 units of quantitative methods courses. It is strongly recommended that at least 6 units be oriented to probability and statistics. 12-704 Probability and Estimation Methods for Engineering Systems is also recommended, especially for students without prior coursework in probability. However, students may also take courses in statistics, optimization, machine learning, econometrics, game theory, or other quantitative methods.

Students are also required to take a course in microeconomics. 19-706 Microeconomic Analysis or 90-908 “PhD Microeconomics” are recommended for most students, even those without prior economics coursework. Students with a weak background in calculus and little to no economics coursework may take 19-681 “Managerial and Engineering Economics” but are encouraged to also take a PhD level microeconomics course.

The remaining course work required is determined by the student and a faculty advisor. The determination is made based on the student’s background and preparation, the requirement for a firm grounding in the tools and techniques of policy analysis, and looking at the student’s research area.

While specific courses are listed, alternative CMU courses or graduate level coursework taken prior to entering the EPP PhD program may be acceptable substitutes. Generally, students will NOT be permitted to substitute prior coursework for the core courses unless they have taken required core courses at CMU prior to entering the EPP PhD program. Prior graduate-level coursework taken at CMU or elsewhere and receiving a grade of B or better may be used to waive non-core course requirements with approval of the student’s advisor and the associate department head. In such cases the unit requirements do not need to be met from replacement coursework. A maximum of 48 units taken outside of CMU may be used to waive course requirements.

In their first semester, students will take 19-701 “Introduction to the Theory & Practice of Policy Analysis,” and usually either a microeconomics course, and/or a statistics course, and/or an elective suggested by your advisor. Students should also register for 6 units of research (19-700). Course selection for the first semester is made in consultation with your assigned advisors and other faculty members as appropriate. In selecting courses, the student and advisor(s) should keep in mind that it is advisable to select courses that would define a core area of specialization for the student.

Students who have already identified a research problem and an advisor take Project Research (course 19-750). 19-700 is expected to be a circumscribed research effort on a topic, while 19-750 is seen as a continuing research project over a number of semesters. Students who have passed the Qualifiers register for research under PhD Thesis Research (course 19-799). During the first 3 or 4 semesters, students typically take 6-12 units of research each semester. As students take fewer courses they increase their research credits, registering for 36 units of research each semester after they have completed their coursework.

Students will take 19-702 in their second semester (spring), and/or 19-706 Microeconomic Analysis, and/or 19-703 Applied Data Analysis (preferred option) and other social science/survey statistics courses. In their 3rd semester, students take 19-705 (though 19-705 remains optional, virtually all of our students take it to prepare for the qualifying exams) and any other remaining required coursework or elective courses in support of their research. Following these guidelines, students should be finished with core courses by the time they take their qualifying exams in the beginning of their 4th semester.

4.4.2 Technical Elective Requirements

Technical courses are in areas such as engineering, science, applied mathematics, and statistics. Students should confer with their advisors to choose technical electives. There are two motivations for this requirement. First, before one can extend the perspectives and tools of engineering, one must develop a firm notion of what these perspectives and tools are. Second, the technical dimensions of the policy problems that are addressed by students pursuing graduate studies in EPP cannot be treated as a “black box,” where there is no appreciation of how the system works. EPP graduate students must develop the skills to deal with the technical aspects of these problems. It is intended that students develop a level of mastery in their technical area of focus similar to that obtained in a traditional program of graduate study in that area.

4.4.3 Social Science Elective Requirements

Social science courses are non-technical in nature. Several courses in quantitative research methods in the social sciences are available. Courses in political science and social processes are also encouraged, and it is intended that students will develop a healthy

sense of cultural relativism, a notion of the way in which values and social organizations shape our thinking, and an understanding of the way in which these factors have changed and can change with time. Such notions are difficult to characterize in quantitative terms, but are fundamental to a proper understanding of many of the problems that EPP graduate students address.

At least 6 social science elective units must be in political science, regulation, or law.

4.4.4 Notes on Elective Courses

Note that units for certain courses spanning multiple areas may be split and counted partially for social science and technical course requirements (e.g., count half the units in each category). Similar flexibility may apply to other courses as well, for example certain courses in econometrics may be categorized as either social science or technical courses. If you have questions about such practices, check with your advisor or the Associate Department Head before registering.

Our students commonly take courses in the Heinz College, the Department of Social and Decision Sciences, the Department of Statistics, the School of Computer Science, and the Tepper School of Business. Students may also cross-register to take one free course per semester at a participating local university. Details on cross-registration are discussed in Section 7.

While students may take undergraduate courses with their advisor's approval, these courses may not be used to count towards degree requirements. CIT policy does not permit counting courses below the 300 level for graduate program credit. If a student and their advisor wish to use an undergraduate course to count towards their curriculum progress sheet units, they must first receive the approval of the Associate Department Head.

4.4.5 Teaching Practicum

EPP PhD students will be required to serve as a Teaching Assistant (TA) or Project Manager (PM) for an approved EPP course one or two times in order to fulfill the teaching practicum requirement. Students are expected to complete the teaching practicum requirement by the end of their 6th semester. Ideally, students would serve once as a PM for a project course taught in the department and serve as a "traditional" TA for a course taught in the department. However, teaching practicum assignments will depend on several factors: demand, student program progress, career interests, and advisor input.

Teaching practicum requirements for students pursuing a joint degree with another department where they also have to serve as TAs will be negotiated between departments on a case-by-case basis but may only be required to serve once as either a TA or PM. Students receiving department funding may be required to serve as TA or PM more than twice as a condition of this funding.

Students will be expected to attend a TA/PM training session taught by the associate department head for undergraduate affairs to help prepare them for their upcoming assignment. Students should also consider using the resources available from the Eberly Center for Teaching Excellence (referenced in Appendix 5) and attending the graduate student instructor seminars provided by the Eberly Center. See seminars.eberly.cmu.edu.

Project Management Assignment

Students will have the opportunity to serve as a PM for EPP project and other relevant project courses offered in the department (like the Quantitative Entrepreneurship course). The PM requirement allows students to develop research and project management skills, team coordination skills, and personnel management. The PM experience involves considerable interaction with both students and outside experts who serve as consultants and reviewers for the project.

Teaching Assistant Assignment

Students will also serve as a TA in an assigned undergraduate or graduate EPP course. Teaching assistantships afford graduate students the opportunity to learn about the art of teaching and develop skills that can support their professional careers. For example, teaching may offer an opportunity to gain deeper knowledge about a subject. Teaching can also improve communication skills, help graduate students learn how to lead group discussions, and learn how to evaluate the work of others. Students serving as TAs are not merely graders. TAs in EPP should be responsible for assisting the course instructor in preparing content prior to the start of the semester, administering the course website, handling course IT needs, preparing and grading homework and test questions, attending and perhaps giving lectures, meeting weekly with the course instructor to plan recitation sessions, conducting recitation sessions, assisting in assigning grades, and being available outside of class to assist students and answer questions.

Evaluation and Certification of English Fluency for Instructors

Non-native English speaking graduate students are required to have a certain level of fluency in English before they can instruct in Pennsylvania, as required by the English Fluency in Higher Education Act of 1990. Through this Act, all institutions of higher education in the state are required to evaluate and certify the English fluency of all instructional personnel,

including teaching assistants and interns. The full university policy can be reviewed at: www.cmu.edu/policies/faculty/evaluation-certification-english-fluency-instructors.html. The fluency of all instructional personnel will be rated by the ICC to determine at what level of responsibility the student can TA.

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

4.5 Joint Degrees

Joint PhD degrees within COE are possible. If an EPP student wishes to pursue a joint PhD with another COE department, they must first receive the approval of their primary advisor, then follow that department's application procedure. Students in a COE department wishing to pursue a joint degree with EPP must apply to EPP within the first academic year of PhD study. They will need to complete the EPP online application and provide a new letter of recommendation, preferably from a faculty advisor in their home department. They will also need to provide test scores (GRE, TOEFL) and transcripts, copies of these documents may be sent directly to the EPP admissions office from their home department.

Students pursuing joint degrees are expected to complete the qualifying examinations and teaching requirements in both departments unless otherwise documented and approved by COE College Council. Typically one defense committee is formed that satisfies the requirements of both departments. As students near degree completion, they should follow their home department thesis submission rules and deadlines. Students should refer to the COE policy on joint degrees with EPP for more information, engineering.cmu.edu/education/academic-policies/graduate-policies/degrees.html.

4.6 Keeping Track of Course and Research Progress

A record of the student's progress is kept in the form of the Curriculum Progress Sheet and the online graduate student audit system (discussed below). Appendix 3 shows the Curriculum Progress Sheet to be completed by the student each semester with the help of their advisor to ensure that course requirements are being met and to enable the student to document progress in the program. Curriculum Progress Sheets for students in joint programs with special requirements are available from the graduate program administrator and on the EPP graduate canvas site.

Students will receive an email reminder from Enrollment Services when it is time for the next semester's registration. The student should meet with their advisor prior to registration week to review course selection and update their Curriculum Progress Sheet.

In May students will be asked to submit a copy of their curriculum progress sheet to the graduate program administrator to be used to record the course information in the online gsaudit system.

While you should always be discussing your progress with your advisors, you must consult with the associate department head for graduate affairs several times during your graduate studies. You may consult with the associate department head via email or arrange for a meeting. You should consult with the associate department head about the following situations:

- If you have prior course work you would like to count towards your EPP degree, first discuss with your advisor and get their approval, and then consult with the associate department head.
- You are uncertain about whether courses you plan to take will meet EPP Requirements.
- When you believe you have completed all required coursework as outlined on your Curriculum Progress Sheet, consult with the associate department head to make sure your course requirements are complete.
- Any other time you want!

If, as part of the PhD thesis proposal, the student's thesis committee believes that additional coursework is needed for the student to achieve an acceptable level of mastery of their area of research, then up to two additional courses (beyond the standard EPP PhD course requirements) may be specified and required by the thesis committee, with approval of the EPP Department Head.

In addition to Curriculum Progress Sheets, as noted, EPP also uses a web-based student data system (gsaudit.cs.cmu.edu) to track course and research progress. Students write self-assessments of their academic and research progress near the end of each semester, and advisors provide feedback. These interactions factor into grading for research units and help to assess whether students are making sufficient progress. They are also intended to facilitate dialogue with advisors on areas for improvement.

4.7 Inadequate Progress and Probation

Due to poor performance in courses or inadequate progress on research, the faculty and administration of the department will in all cases work with the student to try and overcome these difficulties and try to help the student improve their performance. If, however, inadequate performance and progress continues to the point where the improvements needed for successful completion of the degree program appear highly unlikely, students will be dropped from the program.

If the student feels that they might be “in trouble” either with their coursework or research progress, they should alert their advisor right away and should also talk with the associate department head for graduate affairs, the department head, or the EPP ombudsperson. They should not wait until the problem becomes insurmountable.

At the end of each semester, after final grades have been posted, the academic performance of each student is reviewed. Any student with a cumulative QPA of less than 3.0, or with a QPA of less than 3.0 in the most recent full semester completed, or with a research course grade less than B (3.0) in the most recent full semester completed, is automatically and immediately placed on academic probation, which includes the following additional conditions:

- Students on academic probation may have any scholarships and/or financial awards rescinded;
- Students on academic probation cannot be selected to receive awards;

A student on academic probation will automatically be removed from probation during the next academic review if the student's semester and cumulative QPAs, and research grade, at that time, are 3.0 or better.

If an EPP student has a core or cumulative QPA lower than 3.0 at the end of two consecutive full semesters, the student will be dismissed from the EPP program. If a decision for removal from the program is made, the student will receive the decision in writing. The student may request reconsideration of the decision by sending a letter stating the basis for reconsideration to the EPP Department Head within 10 days from the end of the semester. When an informal resolution cannot be reached, a graduate student who seeks further review of the matter is to follow the formal procedures outlined in Section 2.4 above.

The judgment as to when poor course performance or inadequate progress on research is sufficient to stop funding will be made by the department head following input from the student's advisor(s).

4.8 A General Progress Schedule for Most Students

A typical student in a typical semester will take 48 units composed of 12-36 units of coursework and the remaining units for research. Generally students take more coursework in the first two years and more research credits thereafter. Students in joint and special degree programs should refer to their specific curriculum progress sheet. A sample schedule is shown on the next page.

Sample Schedule for Graduate Studies in EPP			
Semester 1:	<ul style="list-style-type: none"> •19-701 "Theory & Practice of Policy Analysis" •12-704 "Probability & Estimation for Engineering Systems" or equivalent statistics. • Microeconomics (90-908 or with approval 19-681) •19-700 "Directed Study" (EPP) – minimum of 6 units •An optional technical elective 		
Semester 2:	<ul style="list-style-type: none"> •19-703 and 19-704 or other approved course in Social Science/Survey Statistics •19-702 "Quantitative Methods for Policy Analysis" •19-706 "Microeconomic Analysis" •Elective courses •19-750 "Project Research," aimed at starting work on qualifier problem •Identify and pursue funding for research if necessary 		
Summer:	<ul style="list-style-type: none"> •Continue research in preparation for Part A •Preliminary Abstract for Part A due in late June •Receive initial faculty feedback on abstracts 		
Semester 3:	<table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 150px;">Optional:</td> <td> <ul style="list-style-type: none"> •19-705 "Workshop in Applied Policy Analysis" (Serves to help prepare for Part B of PhD Qualifying Exam) •Elective courses •Quantitative methods course •Write Qualifier Paper -- Preliminary oral presentation in early October for faculty feedback </td> </tr> </table>	Optional:	<ul style="list-style-type: none"> •19-705 "Workshop in Applied Policy Analysis" (Serves to help prepare for Part B of PhD Qualifying Exam) •Elective courses •Quantitative methods course •Write Qualifier Paper -- Preliminary oral presentation in early October for faculty feedback
Optional:	<ul style="list-style-type: none"> •19-705 "Workshop in Applied Policy Analysis" (Serves to help prepare for Part B of PhD Qualifying Exam) •Elective courses •Quantitative methods course •Write Qualifier Paper -- Preliminary oral presentation in early October for faculty feedback 		
Semester 4:	<ul style="list-style-type: none"> •Qualifying Examinations: January/February •Completion of course work (check w/Assoc. Dept. Head for verification of completion of coursework) •Start preparation of thesis research proposal 		
Semester 5:	<ul style="list-style-type: none"> •Thesis proposal (if not completed already). •Concerted effort towards thesis work. •Teaching Practicum 		
Semester 6 & on	<ul style="list-style-type: none"> •Continue and complete PhD thesis work •Teaching Practicum 		

4.9 The Qualifying Examinations

The Qualifying Examinations are conducted once a year, and must be taken by the time students have been in the program for three semesters. Only students registered for 6 or more units in the current semester can take qualifying exams. The objective is to assess the student's ability to do interdisciplinary research based on sound knowledge of technical and social processes, good analytical methods, and the ability to structure and analyze problems in engineering and policy in a way that appropriately integrates the required knowledge, methods, and judgment. The levels of synthesis and evaluation to be demonstrated in these examinations go beyond those expected in most courses, although the core sequence (19-701 through 19-705) are aimed at developing and exercising this level of problem solving.

The Qualifiers consist of two parts discussed below: a research paper (Part A) and an extended take-home examination on an applied problem in policy analysis (Part B). All students will be expected to submit both Part A and B of the exam at the regular time (January) unless they have successfully petitioned the associate department head for an exception by the end of the first month of their third semester. Students in the SETChange and joint EPP/Statistics degree program have the option of taking 19-705 for a letter grade or participating in the Part B exam. If the latter is chosen, then 19-705 remains optional. If the former is chosen, then 19-705 is required. Students are expected to communicate their choice to Adam Loucks. For students in the joint Chemistry degree program, the Part A exam is replaced with the Chemistry Research Progress Report. The Part B exam and thesis proposal together replace the Chemistry Original Research Proposal. For specifics students should refer to the EPP/Chemistry joint degree information.

Each year, a qualifier schedule will be sent at the beginning of the summer to students taking the qualifier that year.

4.9.1 Part A – Research Paper

For the EPP Part A Qualifier, the student must prepare and present an original research paper that addresses a problem in technology and policy in which the issues of technology play a central role.

Student performance is assessed based on the written paper, the presentation, and the responses to questions by a subcommittee of the faculty. Faculty are given the following guidelines when they assess the paper:

The paper is expected to demonstrate the student's ability to structure and perform research on problems in engineering and policy, including the ability to apply formal analytical tools in such research. The typical paper requires approximately one year of preparation, in parallel with regular course work. In preparing this paper, students are expected to seek the assistance and supervision of their faculty advisor and other members of the faculty. Considerable student initiative is expected in this process. To pass at the PhD level, a student must demonstrate the ability to write a first-authored technology policy paper in the appropriate scientific style. Generally, this will be a Part A paper that, with some additional work, will soon be ready to submit for peer-reviewed publication.

Each student should submit a qualifier research plan that is approximately 2 pages (single spaced, 12 point font), and should include the following elements: Title, author, advisor(s); research question; background and motivation; methods; risks; hypotheses and/or anticipated results; preliminary results (if any); research and writing schedule. There will be a June deadline for research plans.

All research plans will be distributed to all EPP faculty for review. Each student, with his or her advisor, should select at least four faculty members, including the student's advisor(s), and ask them to provide a thorough review of the research plan. The names of the selected reviewers should be included at the end of the research plan. The selected reviewers and any other faculty who choose to review the research plan should send their comments to the department. (Faculty members are also welcome to share comments directly with the student and/or advisor, in addition to sending them to the department.) The associate department head and department head will review the comments, add, their own, and send them back to each student and their advisor(s). They may ask some students to redo their research plan in response to this feedback and resubmit by the resubmission deadline.

Students are required to give pre-qualifier practice presentations in the fall. In addition, students are encouraged to participate in student-run practice pre-qualifier presentations. Presentation skills training from GCC will be arranged in 19-705 and students are encouraged to attend GCC presentation workshops and sign up for one-on-one communication tutoring and rehearsal video recording. Students are encouraged to practice their qualifier presentation with their advisor before their presentation.

The final Part A paper must be less than less than 25 pages and less than 5,000 words in length (excluding abstract and acknowledgements) and must be submitted to the department for distribution to the faculty on a prescribed date in January, a

few weeks prior to the oral examination date. Students should list all faculty who served as their advisors for the paper on the cover page (not just their primary advisor).

At the 90-minute oral examination, the student will make a 20-minute oral presentation of the paper and then be questioned by the faculty. Faculty questions may relate to the specifics of the paper, as well as to related but more fundamental material that forms the basis of the paper topic or the methods used. Students are not permitted to attend other students' qualifier presentations.

4.9.2 Part B – Policy Analysis

Part B of the Qualifying Examinations occurs soon after the Part A paper is submitted in early January. The objective of Part B is to examine a student's ability to structure an unstructured policy problem on their own and to select and apply appropriate problem-solving techniques. Students are presented with a problem in technology and policy, an extensive set of reference materials in English, and given five days to prepare a 20-page written synthesis. Examination problems are carefully constructed so as not to give a significant topic area advantage to any particular student. Student performance is assessed by a subcommittee of faculty based on the quality of the written paper according to the following rubric:

- Recognition and coverage of key issues (responsive to charge)
- Problem formulation and approach (rigor, creativity)
- Analysis (did the right analysis, did the analysis right, provided substantive support for arguments.)
- Written presentation (organization, language and grammar, graphics and tables)

4.9.3 Outcomes and Timing of Qualifying Examinations

Several outcomes of the Qualifying Examinations are possible. These are:

1. The student passes both parts of the examinations at the PhD level.
2. The student passes one or both parts at the MS level, but not at the PhD level. In this case the student is eligible to leave the program with an MS degree. However, the option is also open to retake the examination(s) one more time. Students receive individual guidance on whether they should plan to retake the examination or graduate with an MS. Students leaving with an MS degree must have a final version of the Part A examination paper approved by their advisor or the department head.
3. The student fails one or both parts. Such students are almost always advised to withdraw from graduate studies in EPP. They may, however, elect to retake the failed examination(s) one more time when next offered.

Since qualifying examinations are broadly offered in January of each year, students will typically retake exams in that timeframe. However, students who need to retake Part A can submit their retake paper and schedule a presentation any time up to the date when Part A papers are due in the next qualifier cycle. They must present to a committee with at least 3 of the 4 members from the original committee plus 2 extra readers assigned by the department. The committee members, advisor, and any other faculty attending the presentation will confer with each other as soon as possible after the presentation to determine whether the student passes at the MS or PhD level. There is no early retake policy for Part B exams.

As timelines for the qualifying examinations are known months in advance, extensions on due dates are provided only in exceptional circumstances. Similarly, time extensions in accommodation memos (e.g., applicable to students with learning disabilities) are generally not applicable. However, students who believe that extenuating circumstances are interfering with taking qualifying exams on the usual schedule are encouraged to discuss the matter with either their advisor, the department head, or the assistant vice provost for graduate education. Together, the advisor and the department head will determine alternative arrangements, where appropriate. These arrangements are made on a case by case basis. Examples of extenuating circumstances include physical illness, mental illness, and family emergency.

Students who retake the qualifiers must do so within a year after the first attempt. Students who have failed one or more parts of the qualifying examination normally do not receive graduate assistantship support while working to retake the examination.

While it is expected that students take both qualifying exams at the end of their third semester, no student will be permitted to take either of the qualifying examinations for the first time later than the end of their fifth semester. Waiting beyond this time creates too long of a timeline before a student receives acknowledgment of their progress in the program.

Students who wish to postpone or defer a qualifying exam (either or both parts) must first discuss this with their advisor. If the advisor agrees, they must then write a petition to the department head and associate department head. Approval is not guaranteed. If approved, the department may count a deferment as their first attempt, e.g., if they are already well into their

studies and deferring would otherwise lengthen the time until a first decision or create the possibility of a second attempt at a time too late in the program.

Failure to submit a paper or appear for qualifiers at the scheduled time will be considered a forfeit and will count as a failed attempt.

4.10 Thesis Proposal and PhD Committee

Once the Qualifiers and course work are completed, students spend full time on their thesis research. The proposal for the PhD thesis and a tentative schedule for the completion of the dissertation are to be presented to the student's PhD Committee.

Within six months of passing the qualifying examinations at the PhD level, the student should begin to formulate a written thesis proposal. The written proposal must be given to the student's PhD committee at least one week before the oral presentation of the proposal. Once the proposal date has been finalized, the student must email the graduate program administrator with the following details: date, time, and location of the proposal; the names of the thesis committee, noting the visitor's affiliation, and noting who is chair. The graduate program administrator will produce a committee signature sheet for the student to present to the thesis chair prior to their proposal. It is the responsibility of thesis chair to indicate pass or fail on the form and obtain the signatures of the committee members. For the committee members participating remotely, the thesis chair will need to obtain their approval via email and forward it to the graduate program administrator along with the signature sheet. When the proposal is accepted by the PhD Committee the committee signature sheet is sent to the associate dean by the graduate program administrator to signify the completion of the qualifying process for acceptance to PhD candidacy.

The PhD committee is appointed jointly by the student's thesis advisor and the department head with the advice and consent of the student. The committee must have a minimum of four members, at least two of whom must be EPP faculty members and at least one of whom does not have any appointment with EPP (this precludes affiliated faculty). The committee composition must also meet the guidelines set forth by the College of Engineering, which additionally imposes that two of the committee members be full time CMU faculty members. The function of the PhD Committee is both evaluative and supportive, but primarily the latter. The committee should be made up of individuals who have the necessary knowledge, and who will be able to provide timely advice, feedback, and support. The EPP members of the thesis committee are also responsible for certifying that departmental course requirements have been met, including the selection of courses to fulfill the student's particular core area of mastery. The student should look at the different facets and disciplines involved in their work and choose the committee members to represent that cross-section. If circumstances require it (i.e., a committee member requests to be removed or can no longer serve or the student and their advisor(s) no longer believe that a committee member is making a constructive contribution to the thesis committee), then the student and their advisor(s) may submit a request to the EPP Department Head to replace the committee member with a new (appropriately qualified) member.

The written thesis proposal is a document that describes in detail the thesis problem statement and proposed plan and method of research, as well as a brief review of the background of the topic. The proposal should include a tentative schedule for the completion of the development phases of the work. The proposal presentation to the PhD committee serves also as an occasion for a detailed discussion of the proposed research between the student and their committee. Ideally, the student should consult with all the committee members on a regular basis throughout the development of the thesis in order to benefit from the varying backgrounds of the committee members. Thesis proposal copies are submitted to the graduate program administrator on a voluntary basis by the students. You are encouraged to ask colleagues for copies of previous thesis proposals as a guide.

EPP thesis proposals may be open to members of the CMU community or closed having only the student and their committee in attendance. If the student and advisor choose to have an open proposal, they should inform the graduate program administrator that an announcement will need to be published. The length of the thesis proposal presentation can vary but is usually about 30 to 40 minutes long, followed by questions from the committee and other audience members. The student and any others not on the committee leave the room while the committee members confer and determine the results of the examination.

Students will be informed of the results of their thesis proposal examination immediately after the oral proposal. Possible results include: i) pass, in which case the student becomes a PhD candidate; ii) potential pass, in which case the student must redo the thesis proposal within one year, and the proposal date is changed to reflect the second proposal examination; or, iii) fail, in which case the student will be dropped from the program at the end of the semester in which the failed thesis proposal took place.

4.11 PhD Research and Dissertation

PhD thesis research is expected to be professional research of the highest caliber and must contribute to advancing the body of knowledge in the field. It is the student's responsibility at all times to ensure they are communicating with their advisors and making decisions that allow them to make academic and research progress. If a student is not making satisfactory progress in their research, and/or is not regularly meeting with their research advisor, and/or is not identifying or meeting

agreed upon goals, their advisor should be communicating their view of the student's under-performance through feedback and research grades, and also has the right to terminate their funding.

The PhD dissertation, which describes the research and results in detail, must be a scholarly work in the substantial content as well as in the presentation. The contribution of the thesis must be considered significant and original by the research community in the field, represented by the student's thesis committee.

The University's regulations governing research including human subject research, conflict of interest, export controls, and research misconduct are found on the Office of Research Integrity's website: www.cmu.edu/research-compliance/.

The dissertation document must contain, in addition to details of the main work, the context and placement of this work in the general field of study. The document should be a coherent presentation consistent with standards and documentation requirements (such as references) expected of scholarly work.

The student's advisor and thesis committee are the final judges of the quality and quantity of research and writing required to complete the dissertation. They judge the quality of contribution including the analysis and originality of the work to the field. The work is usually equivalent to that which would result in three or four publishable papers. In certain cases, when the student's research has led to the publication of a number of significant peer-reviewed journal articles, the manuscripts for these papers (either published or accepted for publication) may be directly submitted as the major text for the thesis along with brief introductory and concluding chapters describing the overall theme and context of the papers. Approval by the student's thesis committee is required for this type of dissertation.

The dissertation must be complete in all details when submitted to the committee. The changes requested or recommended by the committee should be made and a final PDF version must be submitted to the thesis advisor along with four signature sheets. It is very important to acknowledge all of the financial support you have received during your graduate studies on your acknowledgements page.

Instructions on completing your dissertation requirements, including templates, formatting guidelines, and thesis submission deadlines are available on the EPP website student resources page and on the graduate studies canvas site. Students should refer to these guidelines as they begin to produce their dissertation and should meet with the graduate program administrator.

The deadlines posted on our college website for thesis submission are outlined below. Again, students should refer to the guidelines on canvas for the most current information.

Submission of Dissertation to the Department—by the following due dates: May graduates, 10 days before the Final Grades for Graduating Students Due date; August graduates, two days before the Final Grades Due date; December graduates, two days before the Final Grades Due date.

4.12 Dissertation Defense

The completed dissertation must be sent your PhD Committee at least one month prior to the defense date. The student should schedule the date and time of defense suitable to his or her committee members and reserve the room by contacting any of the EPP support staff. Schedule your defense so that you have enough time to make the necessary changes to be able to submit your thesis by the deadline. If available, use one of the EPP Conference Rooms (Baker Hall 129 or Wean Hall 3701).

For committee members participating remotely, students will need to set up a Zoom connection and should do a test prior to the actual defense. Information on setting up Zoom is available on the Computing Services website: www.cmu.edu/computing/services/comm-collab/web-conferencing/zoom/how-to/host-meeting.html

College rules dictate that a public oral defense notice be sent to the Dean's Office and all COE Departments at least two weeks prior to the date of your defense. Accordingly, students will need to complete a defense announcement template and submit it to the graduate program staff for dissemination. The template is available on the graduate studies canvas site.

The length of your presentation (defense) should be about 40 to 45 minutes. It is best to concentrate on your research and not on a big introduction.

Students will be informed of the results of their thesis defense within two days of the oral presentation (in most cases feedback is provided immediately following a brief deliberation by the thesis committee at the conclusion of the defense). As part of the feedback to the student, the committee specifies any changes that must be made prior to submission of the final written dissertation. Possible results of the dissertation defense include: i) pass (usually contingent on completion of any final changes to the written thesis specified by

the committee); ii) potential pass, in which case the student must redo the thesis defense within one year; or iii) fail, in which case the student will be dropped from the program at the end of the semester in which the failed thesis defense took place.

4.13 Dissertation Submission

After the defense and once the final dissertation has been approved by the thesis committee chair, a pdf of the dissertation will need to be submitted to the graduate program administrator and uploaded to the ProQuest/UMI website by the student. Degree completion and dissertation submission procedures are provided on the Student Resources page of the EPP website and on the graduate studies canvas site. Students should meet with the graduate program administrator soon after the defense to review these procedures. www.cmu.edu/epp/current/index.html.

4.14 Thesis Binding and Copying

Once the dean's office has approved the final dissertation, you will need to present two double-sided, unbound copies to the graduate program administrator for binding. One copy will be given to you and one will be kept for the department archive. Additional copies may be ordered directly by the student on the ProQuest/UMI website. Students should meet with the graduate program administrator after the final dissertation has been submitted to ProQuest to review these procedures.

4.14.1 Copyrighting the Dissertation

Except in unusual circumstances, you will automatically hold a U.S. copyright in your thesis. You may also choose to register your copyright with the U.S. Copyright Office. For a fee ProQuest/UMI will register your copyright. Additionally there are alternative free services available for copyright, such as Creative Commons licensing www.creativecommons.org.

Carnegie Mellon University Libraries provides guidance and answers to questions on copyrighting your thesis (such as determining copyright ownership, copyright permissions, registering copyright). For more information see: <https://www.library.cmu.edu/datapub>.

4.15 Student Status: All But Dissertation

4.15.1 Full-time and All But Dissertation In Residence Status (ABD)

Upon completion of their thesis proposal and required coursework students are to be regarded as ABD and will need to complete an All But Dissertation Status Agreement to change their student status from 'doctoral' (DOC) to 'all but dissertation' (ABD or one of the Portugal equivalents).

ABD students are expected to be enrolled full time (no less than 36 units), with full tuition being paid to the university. Under exceptional circumstances, and ONLY if they are one or two semesters from defending, ABD students who are self-supported and can demonstrate financial hardship may petition the college dean through their department for permission to register for 5 units of research. If approved, they may only remain as ABD for 5 units for two consecutive semesters, with summer counting as a semester. After that, they must either register for 36 units or change status to All But Dissertation In Absentia (ABS).

Students may remain on campus with ABD 5-unit status and will be considered a full-time student, but they may not receive a stipend, compensation, or any form of tuition payments from the department or CMU. They are considered self-supporting students and must pay the reduced tuition amount from their own funds.

4.15.2 All But Dissertation In Absentia Status (ABS)

All But Dissertation In Absentia (ABS) is a status for students who choose to leave the university with the intent of completing their dissertation but are not actively engaging with the university and do not require substantial use of university resources as outlined in the CMU doctoral student status policy. The six-year time limit will continue to pertain to students registering In Absentia. Students In Absentia should also be mindful of the Student Statute of Limitations, discussed in Section 4.16. It has been our experience that students who choose to complete their dissertations In Absentia will often take years to finish. So while this may be an option for ABD students, it is not the recommended option.

To be eligible for ABS students must meet the following criteria:

1. Have completed all degree requirements except for the dissertation.
2. Have been enrolled full-time for two years (including summers).
3. Do not require substantial use of university resources.
4. Do not receive any financial support that is paid or administered by the university.

ABS is not a legal status for international students holding F1 or J1 visas. If a student chooses to become ABS they will not be billed for tuition until the final semester in which degree requirements are completed. In that semester, they will need to register and pay for 5 units of tuition. They will be assessed health insurance unless they complete the waiver form found on the University Health Services website. As with ABD status, these units must be paid by the student. They cannot be paid by the department or by a research grant. The graduate program administrator will help with final semester registration. Note that while on ABS status, the technology fee will be assessed to the student's account for each academic semester. This fee will allow the student to keep their CMU email account and also allow access to university licensed software until the time of official graduation or lapse of doctoral candidacy, whichever comes first.

Students on ABS status will not be permitted to retain a desk in EPP. When a defense date has been set, they must contact the graduate program administrator who will help with final semester registration.

For additional information and rules on ABS status, students should refer to the official university Doctoral Student Status Policy: www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html.

4.15.3 Final Semester Tuition

The doctoral student status policy indicates that ABD students in residence who are registered full time (36 units or more), receiving financial support tied to their doctoral program that is paid or administered by the university, and submit their completed thesis and required documentation to the department in September may qualify to have their tuition readjusted to zero. They will be considered a December graduate and will need to pay all of the corresponding fall student fees. Currently in EPP, the date in September for this final thesis submission is September 25, 2019. Likewise, ABD students in residence who are registered full time (36 units or more), receiving financial support tied to their doctoral program that is paid or administered by the university, submit their completed thesis and required documentation to the department in February, and are officially certified for graduation by the department may have their tuition readjusted to zero. They will be considered a May graduate and will need to pay all of the corresponding spring student fees. Currently in EPP, the date in February for this final thesis submission is February 18, 2020. In each of these cases, paperwork will need to be completed both by the student and the graduate program administrator. The final thesis submission dates will vary from year to year, so students should refer to EPP student resources website and the graduate studies canvas site for the most current thesis submission deadlines. Students should also check with the graduate program administrator when they are ready to defend.

There is no tuition adjustment for students who carry reduced tuition, part-time tuition, or those who those who carry ABS status. More information regarding ABD in residence and in absentia, is found in the official university Doctoral Student Status Policy: www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html.

4.16 Statute of Limitations

As outlined in the university doctoral student status policy (excerpted in part below), there is a time limit to degree completion as follows:

Students will complete all requirements for the PhD degree within a maximum of ten years from original matriculation as a doctoral student, or less if required by a more restrictive department or college policy. Once this time-to-degree limit has lapsed, the person may resume work towards a doctoral degree only if newly admitted to a currently offered doctoral degree program under criteria determined by that program.

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

In COE students have 6 years from completion of the qualifying exams (in EPP this includes thesis proposal) to complete all formalities for the PhD, including final thesis submission to the department. COE policy states: "If, at the end of this six-year period, the PhD has not been awarded, the student must reapply for admission to the graduate program and will be judged competitively with other students applying at the same time." These statutes of limitation are designed to make sure that the student's knowledge in the field is current when he or she receives the degree.

More information on degree statutes of limitations can be found on the COE policy website: engineering.cmu.edu/education/academic-policies/graduate-policies/index.html, and in the university's doctoral student status policy: www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html.

4.17 Leave of Absence Process

For a PhD student, making progress in courses and research is a critical step in completing qualifying exams, proposals, and dissertations. If a student feels that they need to take time off from graduate studies, they should first consult with their advisor, and then with either the Department Head or Associate Department Head. Leaves of absence may be requested by students during periods of financial, personal, or academic problems in order to ensure a successful return to campus.

While we endeavor to ensure that all PhD students have adequate financial support, students who go on leave should understand that sources of support that may have been available at the time of going on leave, may no longer be available when they choose to return. Further, normal faculty turnover or sabbaticals may mean the student's previous advisor also may no longer be available.

Students desiring to request a leave of absence will need to complete a Leave of Absence form found on the Hub's website and submit it to the department's graduate program administrator. It is important to note that a tuition refund may be in order depending on when the student began the leave process. The date on the form indicating when the "student began the leave procedure" is the date the Enrollment Services will use to determine whether a refund is due. The earlier the procedure begins, the greater chance of a refund. Beginning the leave procedure date is not necessarily the date that the form was signed. It can be when the student first seriously considered taking a leave and/or when they discussed it with their advisor.

Students taking a leave may not leave behind any personal belongings. The department will not store personal belongings, including books, and will take no responsibility for them. Therefore students should make arrangements to remove all of their items from the EPP office they occupied, and return department keys to the graduate program administrator before they leave.

If a student wishes to extend their leave beyond two years, they should notify the department one month before the end of the second year that they wish to remain on leave as opposed to being considered to have withdrawn at the end of two years. Such notification should be made annually thereafter. Note however, that College policies set a limit of six years to completion of the degree after qualifying exams, and the University sets a limit of 10 years from first matriculation to completion of the degree.

Students who remain on leave longer than two years will be readmitted to the PhD program subject to space constraints and academic performance review.

To return from leave, the student should contact their advisor and let them know they intend on returning. This discussion should involve completion of milestones, funding status, and research opportunities. To begin the return from leave process paperwork they will need to contact the department's graduate program administrator and complete the Return from Leave form also found on the Hub's website.

More information on the University's Leave of Absence Policy and associated forms can be found on the Hub's website: www.cmu.edu/hub/registrar/leaves-and-withdrawals/

4.18 Publishing Student Work

An emerging trend in publishing scholarly work is to provide "open access" at no cost to potential readers. To enable this, authors are typically required to pay an upfront fee at the time of acceptance of a paper to offset costs. Such costs are not generally funded by the Department. However, various possible sources of funding include:

1. The CMU Libraries offers funding to help students publish open access articles, see: library.cmu.edu/datapub/sc/oa/apc/funding
2. Faculty research grants
3. Faculty discretionary funds
4. If the sources above have provided most but not all of the funding needed, then students may petition the department to pay for the remainder.

Students should inquire about funding availability from the first three sources before submitting to journals that will charge such fees, so as to manage expectations on available funds and to avoid surprises.

4.19 Intellectual Property Policy and Relevant Websites

Students involved in projects could in some cases be involved in the development of intellectual property with commercial value. In such cases, the student should refer to the University policy governing intellectual property that can be found at: www.cmu.edu/policies/administrative-and-governance/intellectual-property.html

Other policy websites that should be noted are:

- University Policies: <https://www.cmu.edu/policies/index.html>
- CMU Graduate Education Policies: www.cmu.edu/graduate/policies/
- Office of Research Integrity and Compliance: www.cmu.edu/research-compliance/
- Office of Community Standards & Integrity: www.cmu.edu/student-affairs/ocsi/academic-integrity/index.html
- The Word/CMU Student handbook: www.cmu.edu/student-affairs/theword/index.html

5. Funding for Doctoral Studies

5.1 Graduate Research Assistantship (Stipends), Tuition and CMUWorks

The majority of EPP doctoral students are supported by research funding for their studies. These awards are generally paid via the department office, but do not use departmental funding sources. Departmental funds are typically only used as a funding source of last resort.

Graduate Research Assistantships are semi-monthly awards for support of full-time graduate study. They are not a salary, and carry no employee benefits. A Graduate Research Assistantship is a taxable stipend that can only be awarded to FULL-TIME students and is subject to federal tax withholding and a small regional tax. A student receiving a stipend may NOT work for other remuneration either on or off campus.

The department awards a milestone stipend increase for successful completion of the thesis proposal. These increases are made three times a year as follows: in January for students who pass thesis proposal during the period September 1-December 31; in June for students who pass thesis proposal during the period January 1-May 31; and in September for students who pass thesis proposal during the period June 1-August 31. Students will need to inform the graduate program administrator that they have passed this milestone and are due to receive the payment increase.

Tuition payments are set up on a nine-month payroll deduction plan August to May. Students on payroll deduction will see nine semi-monthly credits applied to their student account beginning August 16 for the fall semester until their tuition is paid in full. Then beginning in January, students will see nine more semi-monthly credits applied to their student account until their spring tuition is paid in full. Should you receive any amount of pay greater than your usual stipend, an error has occurred and the overpayment must be returned to the department immediately. Likewise if an underpayment occurred, students need to report this as quickly as possible to the EPP business manager or graduate program administrator. Please note that it is student's responsibility to verify that you have received the correct amount of stipend each pay period.

Students may be eligible to contribute to the CMU employee retirement plan through Workday. For information on eligibility and steps to follow, contact the CMUWorks Service Center at 412-268-4600 or online at: www.cmu.edu/cmuworks/index.html.

5.1.1 Summer Support

While summer support is not guaranteed, in many cases students who are receiving Graduate Research Assistantships (stipends) during the academic year are able to continue receiving this support through the summer if they plan to remain in the department and work on their research. Summer support depends on advisor approval and availability of funds. To this end, students should be meeting with their advisors to discuss their summer plans and whether their current support can continue through the summer. Students should not assume availability of summer support without first having discussed this with their advisors. A good time for students to check with their advisor about summer support will be in April when students receive an email from the graduate program administrator explaining summer support, and requesting information on funding for the summer and upcoming Academic Year. College rules dictate that students receiving a stipend (regardless of semester), must be officially registered for full-time (36 or more units).

5.1.2 Restrictions on Graduate Research Assistantships (semi-monthly stipends)

There are restrictions attached to students with Graduate Research Assistantships. Namely, research assistants are not permitted to work outside of the Department, except in very special circumstances and with the prior written permission of the Department Head (e.g., you may be permitted if it is work directly related to your research and you have the approval of your advisors).

As noted in a previous section, international students receiving a stipend, **must** be sure that their work authorization form (usually the I-20 or DS-2019) is up-to-date at the CMUWorks Service Center. Students cannot receive a stipend payment from Carnegie Mellon University with an expired work authorization. It is the responsibility of the student to ensure that the CMUWorks Service Center has the most current document on file. Additionally, the student must present the updated document to the Service Center in person, they are not permitted to have a friend or staff member do so on their behalf. Students are informed by OIE and will receive notice ahead of time that their documents are going to expire. Do not ignore these emails, and do not leave the country without ensuring documents are updated with the Service Center.

5.1.3 Employment Beyond Doctoral Research

It is expected that PhD students are focused on completing the course and dissertation research components of the program.

As stipulated by the College of Engineering,

“Full time graduate students within the College of Engineering are ordinarily expected to devote their full attention and energies to their educational and research endeavors. Classwork and research assignments are planned to completely occupy full time students, thus effectively precluding outside employment and consulting. All full time students are generally advised to decline such work and concentrate on their graduate studies. In exceptional cases, there may be opportunities for outside consulting or employment which would provide helpful experience in addition to financial remuneration. Before assuming such commitments, all full time graduate students are urged to consult their academic advisors and/or department heads about such opportunities. Students receiving financial aid in the form of research or teaching assistants or fellowships are required to obtain consent from both their academic advisor and department head for any such outside employment or consulting.”³

It is thus the policy that in EPP that while paid work beyond your research is discouraged, in exceptional circumstances it may be permitted for a full-time EPP student in good standing. Such a student must obtain permission from their advisor to take on any additional paid work that would be in addition to their stipend; the intention of a stipend, when paid, is that it is a full support commitment from the department in support of living expenses during the program.

Students should avoid any such additional work in the first two years of their PhD.

For paid work that is from another internal University source (such as teaching a course or supporting another faculty member’s research project), the student must obtain approval from both their advisor and from the EPP department head.

Students should realize that approval may be based on whether this additional work will occur during a semester or during the summer, and whether the additional work can be viewed as having positive effect on their academic progress (e.g., teaching experience that is relevant to a future academic career or an internship experience that is directly related to their research).

Students receiving partial or full funding from CMU internal departmental or institutional funds, such as a Dean’s or President’s Fellowship, may not personally receive additional financial remuneration from additional work, as any additional funds earned will be first used to offset such support (sponsored external research projects are not internal sources). Students receiving such institutional funds must receive the approval of both their advisor and the department head for all instances of additional work during their studies.

International students must first check with OIE to see if they are eligible to receive additional remuneration.

This policy is not intended to supersede constraints from funding sources like external fellowships (which may preclude additional work).

5.1.4 Payment of Health Insurance and Student Fees

Students are responsible for paying health insurance, the student activities fee, and the transportation fee each semester by the due date noted in their SIO account. Students may enroll in the TMS payment plan offered by the university to pay these fees on a monthly bases versus lump sum before the posted due date. See Section 5 for more information on paying health insurance and TMS.

The University’s technology fee will be paid for students who are receiving tuition and/or stipend support (whether full or partial) that is paid from EPP department funds or EPP research grant funding. Technology fee payments will, in most cases, be handled through the payroll deduction plan described in Section 5.1 above and appear as semi-monthly credits on your student account throughout the fall and spring semesters until the fee is paid in full at the end of each semester. Students in the Portugal program physically located in Portugal will see a lump sum scholarship posted to cover the full amount of the technology fee each semester.

Students who are not eligible for the technology fee payment are students who are self-supporting, receive external funding that covers fees, are part-time, are on reduced tuition (such as ABD 5 or 18 units), or are In Absentia. These students must pay the technology fee in addition to the fees noted above.

³ <https://engineering.cmu.edu/education/academic-policies/graduate-policies/general-policies.html>

Students who receive scholarships administered by CMU that cover fees (such as the NSF, EPA Star) will have their fees paid in a lump sum by scholarship posting each semester. They are responsible for paying their health insurance.

Students in the Portugal program are responsible for paying the student activities fee and transportation fee when they are officially located at CMU. When they are officially located in Portugal, these fees will not be assessed.

There are no student fees assessed in the summer. Students should contact the graduate program administrator if they have questions.

5.1.5 Time off

All students who are currently enrolled are expected to read and respond to email in a timely matter. They should not just disappear or be unresponsive.

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

University Holidays: New Year's Eve, New Year's Day, Martin Luther King Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day, Memorial Day, Independence Day

Due to federal regulations governing graduate student support, paid time off for personal business and vacations is not provided. If you are receiving support and are interested in taking a one week or week long break in the summer, you will need to get approval from your faculty advisor beforehand. You will also be expected to make up that weeks' work in the other three weeks of the month. Decisions on breaks and time off can be affected by foreign travel destination. Students supported by federal funds may be required to forego stipend during such trips.

If you need to take a longer period of personal time off you will need to have your research advisor approve your request a minimum of four weeks prior to when you would like to take your time off. Extended periods of time off are taken without pay. Students should inform the graduate program administrator to suspend your support for that period. International students will also need to check with OIE before leaving the country.

5.1.6 Research Funding

As noted earlier, the majority of EPP doctoral students are supported by research funding for their studies. During admissions, the department attempts to match available faculty funding with the student's research area of interest. It is the responsibility of the faculty and the students to explore funding sources for both tuition and stipends and for any additional operating expenses. If the department can help with the application process, such as writing letters of recommendation, etc., please don't hesitate to get in touch with us.

Research grants and contracts are the most common funding sources, and are usually applied for by a faculty member who serves as the Principal Investigator. If their research would be applicable to the graduate student's interest area, the students may be funded in this manner. These research projects can run from one to four years, but it remains the student's responsibility to be informed of the duration of the funding and to look into new funding sources before the grant or contract has ended. Foundations can provide another source of funding through fellowships that are applied for either by the individual student or by the Department as mentioned above.

It is the responsibility of the graduate student to take the lead in knowing the status of their available funding sources by communication with their advisors, and in pursuing alternative funding opportunities. Refer to the business manager for assistance with administrative matters about proposals, and the graduate program administrator for fellowship applications.

5.1.7 Student Conference Funding

If a student has a paper/talk accepted to a competitive conference, then that student should first request funds from the conference organizers and/or from their advisor(s). It is also expected that the student will seek funding using campus resources such as the CMU Fellowships and Scholarships Office and GSA prior to submitting a request to the department.

The department request should include details about the travel including organization, dates, location, a budget, funding that will be provided by other sources and information about funding applications submitted. The student's advisor must review and approve the request before it is submitted to the department. EPP may be willing to commit partial support in circumstances where an advisor is unable to cover the expenses. The department will only cover half of the expenses and not

exceed \$500. A student may only make one request to the department per year and submit the request to the graduate program administrator. The student will be expected to submit original receipts to the department for determining reimbursement.

Funding sources:

- 1) Conference organizers
- 2) Advisor
- 3) Campus
 - CMU Fellowships and Scholarships Office (FSO) www.cmu.edu/fso/
 - Fellowship holders (such as NSF GRFP, EPA, etc.) should check to see if they may apply for additional funds to cover conference travel
- 4) Netra and Rahul Walawalkar Student Travel Fund (see graduate studies canvas for information and guidelines)
- 5) EPP Department and CMU GSA and Graduate Programs Office (GUSH conference travel grants)
www.cmu.edu/graduate/professional-development/conference-funding/index.html

5.2 Incentive-Based Policy on External Scholarships

In Section 5.1.3, it states that additional funds received would be first used to offset existing departmental or institutional support. It is intended to be related only to funding from additional employment.

We have created the following policy related to additional scholarships to clarify our intentions and to incentivize students to pursue additional scholarships. Scholarships come in different forms and with various restrictions. They may be funded by groups on or off campus, and may make awards directly to the student, or to the university. Some scholarships can only be used for tuition or stipend expenses, while others are flexible and could be used for appropriate research expenses like computers or conference travel.

It is in everyone's interest for students to pursue such scholarships. In cases where students are mostly funded by project (not department or other internal) funds, and when the advisors do not expect tuition or stipend offsets from their own funds, the department would have low expectations on scholarships being used to offset tuition or stipend expenses. On the other hand, when students are significantly funded by department funds, the department would expect that much (but not all) of the funds from these scholarships be used to offset department-paid tuition and/or stipend expenses.

Student Role: For students interested in pursuing additional scholarships, please follow this process as early as possible before applications are due:

- 1) Check with advisors and the department staff to verify the sources of your funding for the current and next year.
- 2) With your advisor, discuss your current and future funding, verify the expense constraints of the scholarship, and agree upon research expenses beyond tuition and stipend for which you seek funds (e.g., computing, conference travel, etc.).
- 3) Propose and justify a reasonable budget of research expenses to the Department Head for approval before submitting the application.

Advisor Role: Advisors may seek to have such scholarships offset some of a student's tuition or stipend expenses, which is why you should discuss with them before proposing a budget to the department.

Department Role: The department will seek to be flexible in sharing scholarship funds with awardees, given appropriate budgeted expenses, and across personal expenses and tuition and stipend expenses when needed.

It is our hope that this advance negotiation phase will lead to more open discussions about funding sources, as well as manage expectations and incentivize students to seek and win more external scholarships that lead to more funding for your own research expenses.

Scholarships paid to the university on behalf of a student will receive a financial account (Oracle) that can be tracked to verify expenditures in line with the original plan.

6. University Financial Aid

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

Graduate students who find themselves in need of immediate funds for emergency situations should contact the Office of the Dean of Student Affairs (see Appendix 5), www.cmu.edu/student-affairs/index.html, to inquire about an Emergency Student Loan.

7. Registration and Enrollment

7.1 Registration

Each semester, students must go through the process of enrolling (registering for courses) for the next semester. CMU has streamlined the process of enrollment by creating The Hub, located in the lower level of Warner Hall. The Hub includes the Registrar's Office, Cash Operations, and the Student ID Center. The Hub's webpage contains pertinent information on a variety of issues such as cross-registration, grading policies, financial aid, etc. Their website is www.cmu.edu/hub, phone x8-8186. If you encounter trouble with enrollment or have difficulty in dealing with the Hub, please see the graduate program administrator. The COE liaison in the Hub is Melissa Skasik (skasik@andrew.cmu.edu).

Enrollment Services will send an email indicating when it is time to register for the upcoming semester (in April for the fall semester; and in November for the spring semester). All students intending to continue in the following semester SHOULD register at their scheduled time as courses fill quickly. Registration is handled online via at the Hub's website. If you are not enrolled by the tenth day of class in a given semester, you will be administratively withdrawn and will not be able to register.

To be considered full time students must be registered for 36 or more units. For students receiving a stipend, failure to register full-time may result in additional taxation. For international students, anything less than full time registration is considered a violation of visa status.

To register online, simply go to the Hub's website www.cmu.edu/hub, click SIO Registration, and go from there. If you have any problems, see the graduate program administrator.

EPP students may take courses in any of CMU's departments or schools. If there are courses you may want to take but are unsure, we recommend that you register for all of them, attend the courses and make a decision on which you want drop before the course drop deadline. Course add and drop deadlines can be found on the Hub's website. It should be noted that the Heinz College and Tepper School have a much earlier course drop deadline than the rest of the University. Students should refer to these departments for specific deadline information.

7.1.1 Summer Registration, Tuition, and Internships

There is no tuition charge for the summer if you register for a designated EPP reading & research course. These courses use Section R, or for students in the Portugal program Section PP. All of this information will be outlined in a memo that will be sent to you in April by the graduate program administrator. Please note that if you take summer courses other than an EPP reading and research course, there will be a tuition charge that the Department will NOT pay.

The Department offers an internship course 19-995 "Internship in EPP" for PhD students. This course was developed so that students may register for the summer semester while working outside of CMU without being assessed tuition. For international students an additional benefit of this internship course is that they are able to work without losing OPT time. Students must first receive the approval of their advisor and the department head, and inform the graduate program administrator. Upon completion of the internship, students must submit a 2-3 pages report with supervisor signature detailing the work experience and including how the internship was related to EPP. International students interested in this opportunity will need to follow the Curricular Practical Training procedure provided on the Office of International Education (OIE) website. Since course registration is necessary, a grade will be required from the student's advisor. Questions on this procedure should be directed to the graduate program administrator.

7.1.2 Cross-Registration (PCHE) and Transfer Credits

Carnegie Mellon University offers students the opportunity to take courses for credit through a cross-registration program (see Pittsburgh Council on Higher Education (PCHE) and Cross-registration below) and through the receipt of transfer credit from other accredited institutions. The Carnegie Mellon University transcript will include information on such courses as follows: Carnegie Mellon courses and courses taken through the university's cross-registration program will have grades recorded on the transcript and be factored into the QPA. All other courses will be recorded on this transcript indicating where the course was taken, but without grade. Such courses will not be taken into account for academic actions, honors or QPA calculations. (Note: suspended students may take courses elsewhere; however, they may receive transfer credit only if their college's and department's policies allow this.). Additional information can be found on the CMU website:

www.cmu.edu/policies/student-and-student-life/transfer-credit-evaluation-and-assignment.html

It should be noted that students must be registered at CMU for full time units before they can cross-register. Thus, the cross-registered course cannot be counted towards a student's full time enrollment. If a student is cross-registered for a course and drops below full time at any point during the semester, the cross-registered course will automatically be dropped from the student's record, even if a grade has been recorded.

7.1.3 Auditing a Course

To audit a course is to attend the lectures, but not submit homework assignments or sit for the exams. It is not the same as periodically attending lecture. It is an official process that must be run through Enrollment Services. You will receive a grade of "O" on your transcript. To audit you must first register for the course online, then submit a Course Audit Approval form to the Hub by the deadline specified in the University's academic calendar. The audit form is available under Forms & Documents on the Hub's website. Very important: If you submit the audit form to the Hub and are not registered for that course, the Hub will not process your form, but will instead mail it back to you through campus mail. In most cases, by the time you receive the 'unprocessed' form from the Hub the audit deadline will have passed.

Courses that are audited do not count towards degree requirements.

7.1.4 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.

7.1.5 Grades and Grading

EPP follows the grading policy used by COE, engineering.cmu.edu/education/academic-policies/graduate-policies/registration-grading-credit.html. COE follows the University's grading policy: www.cmu.edu/policies/student-and-student-life/grading.html. As noted earlier, students in EPP are expected to carry an overall 3.0 grade-point average throughout the course of their studies. The department does not allow credit for more than two courses with a grade lower than a B- (2.67).

All of our research courses are given letter grades.

7.1.6 Process for Appealing Final Grades

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

7.1.7 Policy on Pass/Fail courses

As noted earlier in the handbook, the department does not give credit for courses receiving pass/fail grades. The exception to this rule is course 19-705, which, while optional, most students will take in preparation for the qualifying Part B exam. This is the only pass/fail course that is listed on the curriculum progress sheet for which students will receive 6 units of credit.

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

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

7.3 Change of Address

Departments are asked to encourage students 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.

7.4 Enrollment Verification

Periodically, students will need official enrollment or degree verification letters to send to prospective employers, loan agencies, scholarship committees, or for visa purposes. 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 www.cmu.edu/hub/registrar/student-records/verifications/enrollment.html

7.5 Degree Convocation and Commencement Events

The University confers degrees three times a year – in May, August and December. However, there is only one University-wide Commencement event that is held in May. Students who have graduated during the prior August or December and those graduating in May are invited to participate in this event. Commencement is typically held the third Sunday in May. For the doctoral students, the University also holds a special Doctoral Hooding Ceremony the day before Commencement. Participation in all of these events is voluntary. The graduate program staff will disseminate information prior to the events.

In the past, students who just missed the May graduation deadline have asked if they could still participate in the May Commencement events. University protocol is that you will be allowed to attend the main ceremony, but you will not be permitted to participate in the Doctoral Hooding Ceremony. PhD students who have been officially certified for graduation in the previous August, December, or that current May are eligible to participate in the Hooding. In order to participate in the EPP Commencement Breakfast, your defense should be successfully completed before Commencement and a reasonable target date set for final changes in response to the defense. All of this should be included in a memo from the student and his or her advisor to the Associate Department Head by the third week in March asking to be included, pending a successful oral defense.

8. International Students

8.1 Office of International Education (OIE)

The Office of International Education is the liaison to the University for all non-immigrant students and scholars. If you are enrolled at CMU and are planning to leave the country, you must check with OIE to make sure you complete the necessary documentation for exiting and re-entry into the U.S.

International students receiving a stipend, **must** ensure that their work authorization form (usually the I-20 or DS-2019) is up-to-date at the CMUWorks Service Center. Students cannot receive a stipend payment from Carnegie Mellon University with an expired work authorization. It is the student's responsibility to ensure that the Service Center always has the most current document on file. In addition, the student must present the updated document to the Service Center in person, they are not permitted to have a friend or staff member do so on their behalf. Students are informed by OIE and will receive notice ahead of time that their documents are going to expire. Please do not ignore these emails. More information on OIE is available in Appendix 5.

8.2 Intercultural Communication Center (ICC)

The Intercultural Communication Center (ICC) is a support service for nonnative English speakers. They offer workshops, seminars, and one-on-one tutoring.

As discussed earlier, in order to TA non-native English speaking students are required to meet a certain level of proficiency and will need to take an International Teaching Assistant (ITA) test prior to teaching. This means that international students should be working with the ICC as early as possible, as soon as their first or second semesters to ensure the best chance of success in passing the ITA test. Students are expected to take advantage of this excellent university resource. More information on the ICC and all they have to offer is found in Appendix 5.

8.3 Postgraduate Work in the U.S.

The Department of Homeland Security (DHS) has very strict guidelines that must be adhered to for non-U.S. students who wish to work in the United States after graduation. Work includes all university postdoctoral positions (even those at CMU). If it is your plan to work in the U.S. you will need to make an appointment to talk with an OIE counselor at least one full semester (4 months) in advance of completing your thesis. You will not be able to hold postdoctoral status or collect a pay until your new visa is issued, and you have met the department guidelines for graduation. Unfortunately, there is no flexibility in this matter and if you do not plan for this well in advance, there is nothing the department can do to expedite the process. To begin the process, you must secure a position, have the offer letter in hand from your prospective employer, and make an appointment to talk to an OIE advisor. They will explain the options that are available to you and will have the paperwork necessary to begin the process. Once DHS receives the paperwork it can take up to 3 months for a visa to be issued. Optional Practical Training (OPT) is also an option for non-U.S. students who wish to work in the U.S. after graduation. Again, you would need to meet with an OIE advisor to begin the paperwork. It can take up to 4 months for the OPT paperwork to clear DHS. For more information on this, visit OIE's website: www.cmu.edu/oie.

9. General Office Procedures

Upon arrival at EPP all students will receive a key that will open the door to the EPP 129 suite. This key will also open the door to the fax and mail room, and the Baker Hall conference room. Please do not lose the key because the security of the EPP offices would be compromised. If keys are lost, there is a \$10 per key replacement cost. The front door and the Baker Hall conference room door should be locked after normal working hours (8 A.M. to 5 P.M.) and also ALL weekend. It is the responsibility of the LAST person in the office to close and lock all doors and to turn off the lights. In addition, all students will have swipe card access (via their student ID card) to the EPP graduate student office located in Hamburg Hall A204.

Upon graduation, all keys must be returned or a \$10 per key charge will be assessed.

The Baker Hall sink/kitchen area has a microwave oven, toaster oven, a refrigerator, and an ice machine for the use of EPP faculty, staff and graduate students. It is the responsibility of **all** EPP members to keep this area neat and clean. Please do not keep food in the refrigerator longer than 5 days and place your name on the food container. Do not cook food with a strong odor, especially during normal work hours. Do not keep food in the ice machine. When cooking, please cover food to prevent splattering. Wipe up any splatters or spills immediately. The office staff are not "wait staff." Unlabeled food and dirty dishes left in the sink will be thrown away. Please be sure to wash and put away your cup and utensils.

Do not leave food in or around your desk area. Office trash bins are only emptied once a week. Place all food waste in the hallway trash bins. Unfortunately we are susceptible to visits from furry little friends (such as field mice) and bugs. This has become an increasing problem for the campus.

Hamburg Hall and Scott Hall residents must be sure to close and lock the door upon leaving their office. Unlocked doors in unoccupied offices leave the area vulnerable to theft. While Carnegie Mellon campus is relatively safe, we have had office thefts over the years. Please be diligent!

9.1 Office Space & Lounge

9.1.1 Graduate Offices

The graduate offices are located in Baker Hall 128C, Hamburg Hall A204, and Scott Hall 6008. Each student will have a desk or desk module with several drawers, chair and half of a bookcase or equivalent. No other furniture is permitted in the offices. Only students enrolled full time and officially located in Pittsburgh will be permitted to have a desk in the EPP student offices. You will be expected to keep the office areas clean and in good condition. Graduate Student Offices are to be kept quiet at all times so that students can pursue their studies and research work. Talking and disruptions should be kept to a minimum. If you wish to work on homework together, do not do so in the offices -- please feel free to reserve our conference rooms for that purpose. The regulations for the graduate student office space are found in Appendix 4.

Bicycles are not permitted in graduate student offices. No exceptions.

All new students will be assigned a desk in Hamburg Hall A204 during the EPP new student orientation session. For all others we adhere to a 'seniority system' for office selection, which is, as spots become available an email will be sent to all students giving them a chance to bid on those spots. The senior students who bid will be allowed to select first, then next in seniority will select, and so on. Seniority is determined first by date of entry (beginning with first academic semester attended), then proposal date, then a lottery by class for those equal in seniority. Part-time and special student seniority will be determined by level of program completion and availability of space.

Students who are officially located in Portugal, but who need to visit campus for short duration during the semester may request a temporary space by contacting the graduate program administrator prior to their visit.

9.1.2 Hamburg Hall Student Lounge, Study Areas, Meeting Rooms, and ETIM Office

There are two meeting rooms and a lounge area located in Hamburg A204 available to all EPP doctoral students. EPP students also have access to the Heinz student lounge areas located on the A-level and first floor of Hamburg Hall. There is a refrigerator in the West Wing, Room A110, specifically designated for EPP student use (A204 residents only), and there are microwaves and a shared sink in that area. This refrigerator is cleaned every Saturday night by an outside contractor, and all food left in the refrigerator after 10PM on Saturday will be thrown away. There are also mini refrigerators in A204 that are available for all students seated in that area to use.

Students also have access to the ETIM Office sink and microwave located across the hall in A206. Please note that use of the ETIM Office facility is restricted to the sink and microwave only. The refrigerator and meeting rooms in that area are for ETIM use only.

There are study areas available for student use in the University libraries. Students may also reserve small group study rooms. For more information or to reserve a study room visit their website www.library.cmu.edu/using/study.

9.1.3 Wean Hall Kitchenette

The Wean 3701 Conference Room has a refrigerator, sink, microwave, and cleaning supplies available. Students housed in our Wean Hall graduate offices will receive a key to the conference room. Students housed elsewhere may request a key from Adam Loucks. It is the responsibility of everyone who uses the kitchenette and appliances to clean up after themselves. If you spill something, please clean it immediately. Students using the Wean kitchen are responsible for keeping the area clean.

Do not keep food in a refrigerator longer than 5 days, and place your name on the food container. Do not cook food with strong odors, especially during normal work hours. When cooking, please cover food to prevent splattering. Wipe up splatters and spills immediately. Unlabeled food and dirty dishes left in the sink will be thrown away. Please be sure to wash and put away your cup and utensils.

Please be sure to turn off the lights and close and lock the door when you are finished.

9.2 Telephone Calls

In order to dial an outside line you must dial 9 for area codes 412 and 724. For all other area codes you will need to dial 9-1. With the exception of Scott Hall, graduate student offices have a telephone with the following corresponding telephone numbers.

Hamburg Hall A204 (student desk space)	412-268-7948
Hamburg Hall Meeting Room A204B	412-268-3376
Hamburg Hall Meeting Room A204C	412-268-7735
Scott Hall 6008	-
Baker Hall 128C	412-268-9919

The department has one fax machine in the Baker Hall copy/mailroom, the number is 412/268-3757.

9.3 Copying

A large printer/copier/scanner is located in the EPP main office and is available for you to use. Please conduct large printing and copying jobs outside of business hours. Scanning is also available on Funk in Hamburg A204. Please see EPP office staff for directions on scanning documents.

Occasionally the copier will jam or have a problem. If you are unable to correct the problem, please DO NOT force it. See the office staff regarding the machine in Baker Hall or send an email to aloucks@andrew.cmu.edu if there is a problem elsewhere.

9.4 Mail

The front desk handles the incoming and outgoing mail. Incoming mail is processed and sorted in the Baker Hall 129 mail/copy room. Graduate student mail is filed alphabetically by last name. Packages may be shipped to the EPP main office. For further information see the office staff. Outgoing campus and U.S mail is picked up daily from the EPP main office. Mail must have proper postage and be in the basket by 8:00 A.M. to be picked up by the post office. Any mail that goes in the basket during the day is not guaranteed to go out until 8:00 A.M. the following day. Campus mail can be placed in the basket behind the front desk or mailed in any of the campus mail boxes.

A full service branch of the U.S. Postal service is located in the lower level of the Cohon University Center. Additionally outgoing stamped mail can be placed in the U.S. Postal mailboxes located on Frew Street and Forbes Avenue. UPS services are available at Tartan Ink located on the lower level of the Cohon University Center.

Students studying in Portugal should make arrangements to have all mail forwarded to your new address. Non-first class mail and journals received will be thrown out. First class and other mail may be forwarded at the department's discretion. If you have questions or concerns, please contact the office staff.

Upon graduation, please make arrangements to have all mail forwarded to your new address. Non-first class mail and journals received will be thrown out. First class and other mail may be forwarded up to 6 months following graduation at the Department's discretion.

9.5 Miscellaneous Office Equipment

EPP has equipment that may be used by students. Data projectors are kept in the Baker Hall conference room and in Hamburg A204. Tablets, iPads, projectors, microphones, recorders and other equipment are available for borrowing from the University Libraries tech lending group www.library.cmu.edu/using/techlending.

10. Computing: Andrew Network, EPP Computer Cluster, and Department Printers

Connecting to CMU's Andrew Network

By the time you arrive, you will have received your new computing user ID that will allow you access to the Andrew Network System. If you have any questions on computing or getting your computer set up on the Andrew Network you should email Carnegie Mellon Computing Services at it-help@cmu.edu or call x8-HELP (412/268-4357).

For information on computer/network registration for wired and wireless connections, visit: www.cmu.edu/computing/services/endpoint/network-access/.

Department Printers

The following machines in EPP may be used for printing:

Peggy – (ip: 128.2.64.235) Color printer. Location: EPP main office, left hallway

EPPKonica – (ip: 128.2.67.93) Black & White printer and copy machine, color scanner. Location: EPP Baker Hall 129 copy/mailroom

Inscription – (ip: 128.2.67.98) Laser printer. Location: back of the EPP main office

Fred – (ip: 172.21.17.65) HP Color LaserJet CP2025dn. Location: Hamburg Hall A204

Funk – (ip: 172.21.17.64) Black & White printer, scanner, copy machine. Location: Hamburg Hall A204

PITA – (ip: 172.21.17.63) Black & White printer. Location: Hamburg Hall A204

Installing printers via print drivers

Note: There is no need to manually download drivers for basic printing functions.

Instructions for Windows (EPP Konica):

1. Download the Copier Driver (<https://cmu.box.com/v/eppkonica>)
2. Double click on the downloaded zip file located in your Downloads directory
3. Double click through the Drivers folder and then double click **Setup** to launch the installer
4. When it launches, click **Agree** and then **Next**
5. Select **Specify the Printer/MFP**
6. Click the **Refer to...** button, select **IPv4,IPv6 Address/IP Host Name** and enter eppkonica.andrew.cmu.edu
OR Click **Find Nearby Printers** and select the printer with the IP address 128.2.67.93
7. Select **KONICA MINOLTA 754SeriesPCL** and click **Next**
8. Click Install button

Installing printers via network

Instructions for Windows 10:

1. Go to Windows **Settings**→**Devices**→**Printers & Scanners**
2. Click **Add a printer or scanner**.
3. Windows will perform a search, then **"The printer I want isn't listed"** should pop up. Click that. (You might need to scroll down to see the option.)
4. For **"Hostname or IP address:"** type in the IP Host Name or IPv4 Address. "Port name:" should auto-populate. Click **Next**.
5. Windows will ask you for a printer name. Choose whatever name you like. Click **Next**.
6. Windows will ask you for Printer Sharing settings. Click **Do not share this printer**. Click **Next**.
- 7.

Instructions for Mac:

1. Go to system preferences
2. Go to printers and scanners
3. Go to Add (+)
4. Click IP and input IP Host Name or IPv4 Address
5. Click configure
6. Select duplex printing
7. Click okay

Printing to Konica and Inscription in Baker 129:

Since both EPPKonica and Inscription are located in the EPP main office suite, and are used by the administrative staff, do not print large jobs during business hours. Please monitor your print jobs and refill the paper if it runs out.

10.1 Free Software

More than 170 Microsoft software packages are available at **no charge** for all CMU engineering students and faculty. Microsoft calls this the DreamSpark program and entry to the DreamSpark site is available from this user guide:

userguide.its.cit.cmu.edu/services/software/dreamspark-software/

Students and faculty may access this site using their Web ISO (andrew ID and password).

10.2 Not-Free Software

We are not able to provide students with Microsoft OS, Microsoft Office, Mac OS, or Office for Mac software for free. Please contact the Computer Store for these items, which are available at a deep discount versus their regular commercial prices. If you require software for a research grant or project you are working on with a faculty member, you must first obtain the approval of the research grant's Principal Investigator, then contact the EPP Business Office for the proper procedure to follow.

11. Purchasing and Travel Reimbursement Policies and Procedures

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 Peter Luetkehans, Business Manager; and, in the case of research grants and contracts, the faculty principal investigator must pre-approve expenditures for sponsored research awards. Please check with the EPP Business Office before purchasing. Only authorized department staff are able to confirm an order with an outside vendor. Please plan ahead. Rush orders for pick-up or delivery and orders are difficult to accommodate.

Department Travel Card

When you travel for University business, please contact Debbie Scappatura BEFORE you make your travel arrangements. The EPP Department has a department travel card which can be used for:

- Airfare
- Lodging
- Car rental and ground transportation
- Conference registration

You are strongly encouraged to arrange travel by utilizing the EPP Department Travel Card. It is beneficial for numerous reasons:

- Compliance with [Business and Travel Expense \(BTE\) Policy](#)
- Access to university contracted relationships and pricing
- Better university negotiated terms
- Increased safety and tracking for faculty, staff and students
- Students don't have to use personal funds

Business and Travel Expense Reimbursement Policy

A Reimbursement Form is to be completed and submitted for ALL business expenses such as domestic or international travel, or for any purchases made to support your research. All expenses being submitted will require the signature of the

Advisor or Principal Investigator (PI), along with the charging account information. Email approval from the Advisor or PI in place of a physical signature is permitted. **Please obtain the proper permissions prior to submitting this form.**

Requirements for ER processing:

- Please submit all requests for reimbursement as soon as you return from travels, and no later than 30 days after incurring the business or travel expense
- List the business purpose and travel dates for the submittal
- You must submit ORIGINAL/ITEMIZED receipts
 - Itemized receipt and charge receipt must be submitted for meals. **(PER DIEM REIMBURSEMENT FOR MEALS IS NOT PERMITTED FOR STUDENTS)**
- Reimbursement for expenses when attending a workshop or conference must be accompanied by a copy of the workshop/conference agenda
- All charge receipts must include your name and method of payment. Please note that any receipts that do not possess this information **MUST** be accompanied by a copy of your credit card statement with sensitive information redacted (i.e. account information)
- Alcohol charges will **NOT** be reimbursed
- When using a personal car for business travel, calculating mileage will begin and end at “5000 Forbes Avenue, Pittsburgh, PA 15213”
- When renting a vehicle, only the cost for a **COMPACT** car is reimbursable.
 - **DO NOT** accept the additional insurance that the rental company offers. Rental cars are covered by the University policy when traveling for business.
 - **PLEASE NOTE** that under University policy, GPS costs cannot be reimbursed
- The **FLY AMERICA ACT** states that all University travelers must use US flag carriers to the maximum extent possible when commercial air transportation is the means of travel between the United States and a foreign country, or between foreign countries. This requirement will not be influenced by factors of cost, convenience or personal travel. Please see: www.gsa.gov/policy-regulations/policy/travel-management-policy/fly-america-act
- When booking your flights, if you are traveling outside of the dates of the conference or to/from cities other than Pittsburgh or the conference location for personal or other business travel, you **MUST** also print out a copy of what the flights would have cost for just the dates of business travel the same day that you book your ticket. This is called a “*Constructive Cost*” and must be included with your reimbursement. If the constructive cost is higher than the actual ticket price, you will be reimbursed the value of the actual ticket purchased. If the constructive cost is lower than the amount of the actual ticket, you will only be reimbursed the amount of the constructive cost.
- **Please note that the IRS states that any receipts that are processed for reimbursement 90 days past the payment/purchase date are considered taxable to your reimbursement.**

For full university travel policy visit: www.cmu.edu/finance/controller/bte/files/bte_policy.pdf

If you work with the following EPP Faculty, please contact the corresponding staff member for questions prior to business and travel expenses:

- Lucas Valone (<mailto:lvalone@andrew.cmu.edu>): CEDM, Inês Azevedo, Meagan Mauter, and Paulina Jaramillo
- Deb Scappatura, ds73@andrew.cmu.edu: Daniel Armanios, Jared Cohon, Alex Davis, Erica Fuchs, Granger Morgan, Ed Rubin, Doug Sicker, and Katie Whitefoot
- Kim Martin, kamartin@andrew.cmu.edu: For all other business and travel expense inquiries.

11.1 Computer and Equipment Purchases with CMU Funds

Equipment such as computers, printers, servers, etc., purchased with CMU funds are the property of CMU. They may be used by students for a period of time, but they belong to CMU and must be returned once the work has been completed and/or before the student leaves EPP.

12. Hygiene

Practicing good hygiene matters not only to your office mates but also to prospective employers. First impressions go a long way in the interview process, and poor body odor and bad breath can be very strong deterrents. Poor hygiene gives an impression of being sloppy – not taking the time to keep oneself clean. While you may not think anyone notices, people do. So please, make it a habit to shower regularly and practice overall good hygiene.

13. Business Cards

PhD students may order business cards through Adam Loucks. The department provides \$14 toward the total cost. The current rate for business cards is \$28 for 100 cards and \$2 for each addition 50 cards. Please allow 2 weeks for delivery.

14. Career and Professional Development Center

The Career and Professional Development Center (CPDC) at Carnegie Mellon University provides career and professional guidance and resources to doctoral students. A career consultant can assist you with your resume, cover letter, job search, job fair preparation, interviewing strategies, and many other career-related topics. Contact the CPDC to schedule an appointment by calling 412.268.2064, or by visiting the CPDC in person on the ground floor of the University Center. You can also visit the CPDC's website for more information: www.cmu.edu/career.

15. Departmental Green Practices

EPP is committed to becoming a green department. In an effort to reduce our carbon footprint we use compostable plates, bowls, cups, napkins, and flatware. We use 100% recycled copy paper, provide recycle bins, compost in the Baker Hall kitchen and A204 lounge, and collect items for TerraCycle. Composting is provided for most seminars and we request that attendees bring their personal reusable cup, plate, and flatware.

See CMU's Green Practices Committee Website for more information about initiatives for Campus energy, recycling, green history, and events: www.cmu.edu/environment. If you have questions or suggestions for EPP Green Practices, please contact Adam Loucks (aloucks@andrew.cmu.edu or x8-1090).

Remember to recycle! On campus recycling includes: Paper and Cardboard – in all hallways & rooms; Plastic/Glass/Metal – in all hallways & rooms; Computers – through Facilities Management Services; Batteries and fluorescent light bulbs -- in Baker Hall 129; Other Materials – (like scrap metal from furniture & equipment + more) through Facilities Management Services.

Visit the EPP Copy Room to see the Terracycle collection. Products such as chip bags and energy bar wrappers are upcycled to create new products.

16. Personal Webpage, LinkedIn

If you have a website or profile information you want to add to the EPP department website, contact the department's website coordinator, Lucas Valone, lvalone@andrew.cmu.edu. As a CMU affiliate, you receive free space for a personal website. You can visit Computing Services for support publishing your site with the Andrew Publishing System at the following sites:

www.cmu.edu/computing/services/comm-collab/websites/
www.andrew.cmu.edu/server/publish.html

In lieu of or in addition to a personal website, please keep your LinkedIn (or other publicly-facing professional profile) up-to-date. EPP has staff dedicated to collecting and promoting department news and we'd like to link to your profile or website to promote your work.

If you have news, events, or published papers to share with the EPP community please submit it through the EPP website: www.cmu.edu/epp/news/submit.html. Please send our media coordinator, Lucas Valone, photos of EPP students and faculty at professional events.

17. Graduate Student Canvas Website

We have created a Canvas site for posting information relevant for EPP graduate students. The site includes information on fellowship opportunities, dissertation submission guidelines, curriculum progress sheets, this handbook, and relevant templates. All EPP students will be given access to the site, the link is: canvas.cmu.edu/courses/2159.

18. Professional Behavior as an EPP Graduate Student

Graduate students in EPP have the opportunity to be part of the diverse and vibrant community that is Carnegie Mellon University, and in particular, the close-knit EPP community of fellow graduate students, faculty, and staff. Maintaining this productive, broad-minded, collegial, and exciting community is a responsibility of all its members. As stated in 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...

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.⁴

Graduate school provides unique challenges when it comes to upholding the high standards we set for ourselves. Many will find new friends within this new community, friends who are also colleagues. It is important to remember that in the workplace, we must model workplace-appropriate behavior; what might be appropriate while among friends off-campus may not always be appropriate in the workplace. We must all strive to maintain an atmosphere that is safe and inclusive, and keep in mind the diversity of our workplace in all of our interactions.

19. Safeguarding Educational Equity: Policy Against Sexual Harassment and Sexual Assault

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

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

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

20. Maternity Accommodation Protocol

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

Students are encouraged to consult with relevant university faculty and staff as soon as possible as they begin making plans regarding time away. Students must contact the Office of the Dean of Student Affairs to register for Maternity Accommodations. Students will complete an information form and meet with a member of the Dean's Office staff to determine resources and procedures appropriate for the individual student. Planning for the student's discussion with her academic contact(s) (advisor, associate dean, etc.) will be reviewed during this meeting. Doctoral students who receive an academic stipend funded by Carnegie Mellon are eligible to continue to receive stipend funding for up to six (6) weeks during a Short-Term Maternity Accommodation or a Formal Leave of Absence. Continued academic stipend funding may be extended by two (2) weeks, for a total of eight (8) weeks, if an absence longer than six weeks is medically necessary. To receive this support students must be registered with the Office of the Dean of Student Affairs for a Maternity Accommodation.

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

⁴ See www.cmu.edu/student-affairs/theword/code/index.html

21. University Libraries

The University Libraries has created an EPP research guide website with information and services relevant for EPP students. The link to this site is: <http://guides.library.cmu.edu/epp>.

EPP Librarians (Sue Collins and Julie Chen) are available to help the EPP faculty, staff and students with their teaching, research, and/or assignments. Along with their colleagues, they offer research consultations by appointment. They monitor the journal and book funds, as well as decide on the books to add to the collections. They also make research guides to help students understand some of the resources available, and can conduct instruction sessions on topics or particular resources upon request. They also inform and/or explain library policies and procedure, and work to keep students informed of new library developments and resources.

Several services offered by the University Libraries relevant for graduate students, are:

- Interlibrary Loan service. This service allows students to borrow materials not available at the CMU libraries. The library will conduct a search to find a library that has the material students need and they will put through a request for the material. Receipt of the material is usually 7-10 days.
- CMU doctoral dissertations can be borrowed from Hunt Library with a CMU ID card. Additionally, the libraries maintain a repository of EPP dissertations <http://repository.cmu.edu/epp/>.

Appendix 1: Department and University Contacts

Department Contacts:

Peter Adams, Professor and Interim Department Head. Location: Baker Hall 129H, 412/268-5624, peteradams@cmu.edu.

Vicki Finney, Graduate Program Administrator. Location: Baker Hall 129G, 412/268-1462, vicki@cmu.edu. See Vicki for all issues that pertain to the graduate program, including matters of EPP & college student policies, stipend and tuition issues, degree completion, and fellowship information.

Deborah Kuntz, Program Coordinator. Location: Baker Hall 126C, 412/268-3303, deborahk@andrew.cmu.edu. Debbie provides administrative support to the Associate Department Head for Undergraduate Affairs and the Graduate Program Administrator. Debbie maintains the graduate studies canvas site, coordinates the graduate admissions process, and helps to coordinate graduate student office moves.

Adam Loucks, Front Desk and Support Staff. Location: Baker Hall 129, 412/268-1090, aloucks@andrew.cmu.edu. Adam will be the one you want to contact for issues pertaining to basic office maintenance (such as if the lights go out in your office, the air conditioning stops working, etc.); incoming & outgoing mail; he handles distribution of office keys, reservations for the EPP Baker and Wean conference rooms and equipment, and administrative details for the PhD qualifying exams.

Peter Luetkehans, Department Administrator and Business Financial Manager. Location: Baker Hall 129L, 412/268-5486, pluetkeh@andrew.cmu.edu.

Deanna Matthews, Associate Teaching Professor and Associate Department Head for Undergraduate Affairs. Location: Baker Hall 126C, 412/268-7889, dhm@cmu.edu.

Kimberly Martin, Financial Assistant. Kim processes expense reimbursements and supports the Business Financial Manager. Location: Baker Hall 129G, 412/268-1987, kamartin@andrew.cmu.edu.

Julie Mull, Administrative Support, Engineering & Technology Innovation Management (E&TIM) master's program. Location: Hamburg Hall A206, 412/268-1420, jmull@andrew.cmu.edu.

Deb Scappatura, Administrative Assistant. Location: Baker Hall 129, 412/268-2532, debbie@ece.cmu.edu. Deb provides administrative support for Patti Steranchak, and Professors Daniel Armanios, Jerry Cohon, Alex Davis, Erica Fuchs, Granger Morgan, Ed Rubin, and Katie Whitefoot.

Patti Steranchak, Assistant to Peter Adams and Granger Morgan. Location: Baker Hall 129G, 412/268-1085, patti@cmu.edu.

Lucas Valone, Support Staff. Location: Baker Hall 129, lvalone@andrew.cmu.edu. Lucas provides administrative support for Paulina Jaramillo, and the Center for Climate and Environmental and Decision Making (CEDM). Lucas also updates the EPP website.

Jimmy Williams, Director, Engineering and Technology Innovation Management (E&TIM) master's program. Location: Hamburg Hall A206E, 412/268-8370, jimmyw@andrew.cmu.edu.

University Contacts:

Jonathan Cagan, Interim Dean, COE. Location: Scaife Hall 110, cagan@cmu.edu.

Shelley Anna, Interim Associate Dean for Graduate and Faculty Affairs, COE. Location: Scaife Hall 110, sanna@andrew.cmu.edu

M. Shernell Smith, Associate Director of the Center for Student Diversity and Inclusion. Location: Cohon University Center, Lower Level, Office E, 412/268-2150, mssmith@andrew.cmu.edu.

Suzanne Laurich-MacIntyre, Assistant Vice Provost for Graduate Education and Ombudsperson. Location: Warner Hall 553, 412/268-7307, suzannel@andrew.cmu.edu.

John Papinchak, University Registrar. Location: Warner Hall 220.

Melissa Skasik, COE Hub Liaison, 412/268-8186, skasik@andrew.cmu.edu.

Appendix 2: Memo on Proper Attribution

Memorandum

TO: EPP Students
FROM: Granger and Peter
DATE: August 2019
SUBJECT: Proper attribution of the work of others

In your time here in EPP, and your subsequent professional career, you will have frequent occasion to draw upon the work of others. While that is clearly necessary and appropriate, it is also critically important that when you do this you include proper citations. Copying other peoples' text or figures, or only slightly modifying it, without identifying the source is called plagiarism and is a breach of professional ethics.

Here are the basic rules:

If you use any text written by someone else in any of your work, you must place it in quotation marks and provide a citation for the source. Thus, for example, you may say:

It has now been demonstrated that: "Large-scale use of wind power can alter local and global climate by extracting kinetic energy and altering turbulent transport in the atmospheric boundary layer." (Keith et al., 2004)

but you may not say:

It has now been demonstrated that large-scale use of wind power can alter local and global climate by extracting kinetic energy and altering turbulent transport in the atmospheric boundary layer.

You can, of course, also use numbered footnotes or endnotes. If you use the (Author, date) form of citation, then these should be paired with full references, sufficient for a reader to find the source, as at the end of this memo. If the reference is a web source, include the web address.

Under the "fair use" terms of U.S. copyright law, it is perfectly fine to quote, with proper attribution, short excerpts from copyrighted works. If you start using very large portions of copyrighted text, you may need to obtain permission from the holder of the copyright (typically the journal, not the author) if you are going to publish the piece or distribute it widely. Obtaining such permission is generally not required for government documents.

If you use someone else's ideas or arguments but place them in your own words, then you must cite the original source. For example you may say:

Because wind turbines efficiently extract kinetic energy from the boundary layer and alter turbulent transport, large-scale use of wind power can alter local and global climate. (Keith et al., 2004)

but you may not say:

Because wind turbines efficiently extract kinetic energy from the boundary layer and alter turbulent transport, large-scale use of wind power can alter local and global climate.

Facts or ideas which are not general knowledge also need to be referenced. For example:

Foreign student enrollments at LaRoche College in the Pittsburgh area dropped by 23.7% between 2002-3 and 2003-4. (Schackner, 2004)

The same goes for figures taken from other sources, including off the Internet. All such figures must carry a citation. For example:

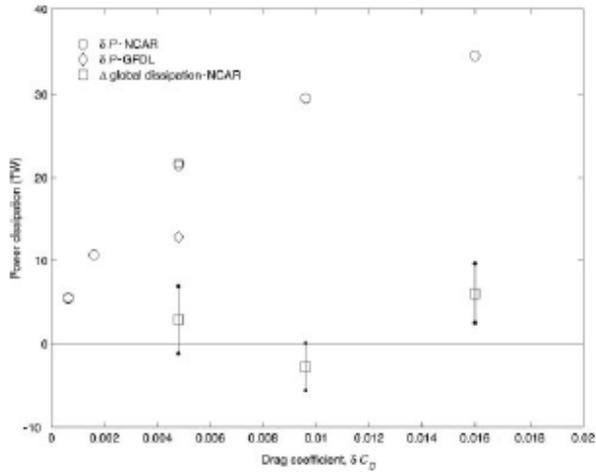


Figure from Keith et al., (2004).

Additionally, if you are actually publishing the figure or placing it in a document that will be widely circulated, you will likely need to obtain reprint permission from the holder of the copyright. For use in papers internal to EPP reprint permission is not necessary, though all other rules regarding attribution and plagiarism do apply to all Carnegie Mellon homework assignments, papers, and examinations.

Similarly, if you redraw a figure you should indicate the original sources. For example:

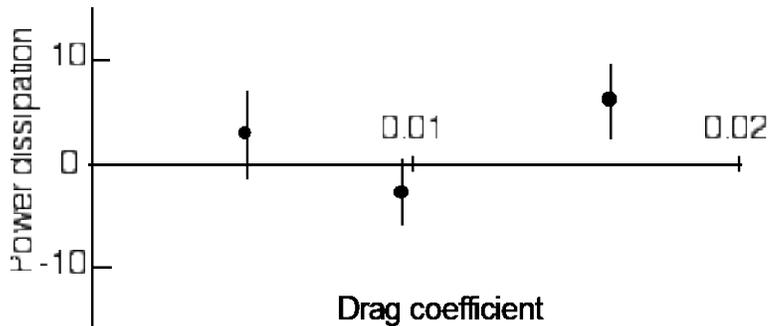


Figure modified from Keith et al., (2004).

The one exception is publicly available clip art used in things like power-point presentations.

The University rules on cheating and plagiarism can be found on the Carnegie Mellon Academic Integrity website:

- <https://www.cmu.edu/student-affairs/ocsi/academic-integrity/index.html>.

There are many different style guides for references. Different professional journals have different rules, which you can usually find at their web sites. The program "EndNote" can handle most of them.

Bottom line: We, and all of the scientific and technical community, take these issues very seriously. Failure to follow proper procedures for attributing the words, illustrations or ideas of others is a very serious violation of the norms of good professional practice. Such activities will not be tolerated in the Department of Engineering and Public Policy and will result in stiff penalties that could include immediate loss of support and/or a request that you leave the graduate program (appeal options are spelled out in the student handbook). These rules apply to all homework assignments, papers, and examinations produced while you are a student at Carnegie Mellon, and of course provide a basis for your subsequent professional practice.

The University of Indiana has an excellent website that provides examples and then gives you a chance to complete a quiz to see if you understand the difference between proper and improper attribution (of text, they don't cover figures). Please take a look and work thru this. It can be found at: <https://www.indiana.edu/~tedfrick/plagiarism/>

References:

David W. Keith, Joseph F. DeCarolis, David C. Denkenberger, Donald H. Lenschow, Sergey L. Malyshev, Stephen Pacala, and Philip J. Rasch, "The influence of large-scale wind power on global climate," *Proceedings of the National Academy of Sciences*, 101(46), pp. 16115-16120, 2004. Available online <http://www.pnas.org/cgi/reprint/101/46/16115>.

Bill Schackern, "Visas, other problems cut foreign student enrollment," *Pittsburgh Post-Gazette*, November 10, 2004.

Appendix 3: Curriculum Progress Sheets

EPP PhD Curriculum Progress Sheet

Name: _____

Year of Entry: _____

Advisor(s): _____

	Graduate Credit Units	Semester	Grade
I. Core Courses			
1. 19-701 Theory & Practice of Policy Analysis	12	_____	_____
2. 19-702 Quantitative Methods for Policy Analysis	12	_____	_____
3. 19-703 Applied Data Analysis or 36-607 Modern Regression	6 or 9	_____	_____
4. 19-705 Workshop in Applied Policy Analysis (Optional, though serves to help prepare students for Part B qualifier)	6	_____	_____
Total	_____		

II. Quantitative Methods (18 units required):

Courses on probability and statistics, optimization, machine learning, game theory, and other quantitative methods. It is strongly recommended that at least 6 units should be oriented to probability and statistics.

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
Total	_____		

III. Economics (12 units required):

Courses on microeconomics and application of economic analysis in markets. Recommended courses include 19-706 Microeconomic Analysis (6 units), and 90-908 PhD Microeconomics (12 units). Students completing 19-706 are required to complete an additional 6 units of economics coursework. 19-706 is appropriate for students seeking an applied treatment of graduate level microeconomics and is tailored to the analyses that EPP PhD students use in their research. 90-908 is calculus-based and provides a theoretical treatment of microeconomics. Students with a weak calculus background and no previous courses in economics may request to first take 19-681 Managerial & Engineering Economics, but are encouraged to take 19-706 or 90-908 after as a social science elective.

1. _____	_____	_____	_____
2. _____	_____	_____	_____
Total	_____		

IV. Technical Electives (36 units required):

1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
	Total	_____		

V. Social Science Electives (24 units required):

1.	Approved course in law, political science, regulation (min 6)			
	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
	Total	_____		

VI. EPP Teaching and Project Management Practicum

Semester
Completed

Practicum I	_____
Practicum II	_____

VII. Milestones

Semester

Part A Completed	_____
Part B Completed	_____
Thesis Proposal Completed	_____
Thesis Committee Members	_____

Thesis Advisor

III. Additional requirements satisfied

- _____ Minimum QPA for graduation 3.0
- _____ Minimum of C (2.0) or better required for any course to count toward graduation.
- _____ No more than two courses with grade of C can be used.
- _____ Minimum of 84 units must be graduate-level courses (xx-600 or above)
- _____ No more than 18 units of research, 19-690 MS Project, can be counted toward the degree.
- _____ Maximum of 12 units of undergraduate courses can be counted towards the 96 units.
Undergrad courses must be at the 300-level or above to count towards the degree.

Notes

Appendix 4: Graduate Student Office Regulations

Comments and suggestions are welcome. You may send them to the Graduate Program Administrator.

With most of our graduate student offices filled to capacity, following are a set of general office rules and regulations that we have adopted to ensure a proper, productive, and pleasant working environment.

1. Offices are to be used for work, not meetings. Therefore it is important that the noise level be kept to a minimum. To meet with others, work on homework assignments in a group (group = 2 or more), or chat on cell phones or computers please find somewhere other than at your desk. There are two student meeting rooms available for use in Hamburg A204, and a lounge area in the center of the office. In addition, the EPP conference rooms in Wean Hall and Baker Hall may be reserved by students. Students may also use any of the lounge areas in the Heinz College.
2. Offices, all equipment, and lounge/meeting areas are provided for the use of EPP graduate students only. At no time should any desk, table, computer or printer be occupied or used by non-EPP personnel.
3. No bicycles or extra furniture are permitted in the offices. Bicycles in offices create an unsafe environment in cases of emergency or fire and, therefore, are not permitted in the offices. It is important that we have everyone's cooperation on this without exception. There are bicycle racks located throughout campus, as well as a covered bicycle rack located in the parking garage.
4. No pets.
5. All students are expected to keep kitchen areas clean, clean any spills or food remains that they are responsible for making. Cleaning products are available in the kitchen areas. If they run out, contact Adam Loucks to reorder.
6. Policing of the rules. The staff are not able to monitor the student areas to ensure the noise level is kept to a minimum, lounge areas and refrigerators are kept clean, and so on. We ask that you monitor the areas yourself. If you are not able to resolve a situation that arises, you may call on the graduate program administrator for assistance.
7. All students have the right to express their personal beliefs without fear of reprisal, intimidation, or censorship, provided they meet the standards set forth in the university's Policy on Freedom of Expression.
 - a. Display of items, signs, statements, or other objects representing political, philosophical, religious, or other beliefs are permitted within the bounds of the student's assigned work space in all EPP facilities.
 - b. No item, sign, statement, or other objects representing political, contentious, or divisive viewpoints shall be displayed in any common area of the student offices, to include windows, conference rooms, common doorways, walls not specifically designated for the sole use of a single student, or the outside section of the end dividers of desk rows. This provision does not apply to official university or department publications.
 - c. If a student wishes to display an item that falls under 7.b., they must first obtain unanimous consent of all individuals occupying that office space. Should a student occupying that office space express opposition to the item at any time, the item must be removed as soon as reasonably possible by the owner.
 - d. Any student has the right to request arbitration under this section by the Department Head or his/her designated representative.
8. Please follow the "reasonable person principle." This principle holds that reasonable people strike a suitable balance between their own immediate desires and the good of the community at large. More generally, the reasonable person principle favors local, unofficial actions over formal administrative ones. It assumes that people will be responsive when reminded of a conflict or asked to re-examine their behavior. It encourages requesting rather than demanding, and it leaves some room for difference of opinion.

Thank you again for your cooperation and please direct any suggestions you have for the office regulation list to the graduate program administrator.

Appendix 5: Highlighted University Resources for Graduate Students and The WORD, Student Handbook

2019-2020

Key Offices for Graduate Student Support

Graduate Education Office

www.cmu.edu/graduate; grad-ed@cmu.edu

The Graduate Education Office provides central support for all Master's and Doctoral students with a focus on their academic experience at Carnegie Mellon. Our goals are to support, advise and guide individual graduate students as they work to complete their degrees and to provide resources which will enhance their professional development experience.

Resources offered through the Graduate Education Office include- but are not limited to:

- Website with university resources, contact information for CMU programs and services, calendar of events related to graduate students
- Bi-monthly email to all graduate students with information on activities, resources and opportunities
- Professional Development Seminars and Workshops
- GSA/Provost Conference Funding Grants
- GSA/Provost Small Research Grants (GuSH)
- Consultations on all issues related to the graduate student experience

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

The Graduate Education Office also works with the colleges and departments by informing and assisting in forming policy and procedures relevant to graduate students and working with departments on issues related to graduate students. Additionally we partner with many other offices and organizations, such as the Graduate Student Assembly, to support our graduate students' advancement.

Office of the Dean of Students

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

The Office of the Dean of Students provides central leadership of the metacurricular experience at Carnegie Mellon including the coordination of student support. Vice President of Student Affairs and Dean of Students Gina Casalegno leads the division of student affairs which includes the following offices and departments (not an exhaustive list):

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

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

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

College Liaisons are senior members of the Division of Student Affairs who work with departments and colleges addressing student concerns across a wide range of issues. College Liaisons are identified on the student SIO page in the Important Contacts list.

Center for Student Diversity & Inclusion

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

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

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

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

Assistance for Individuals with Disabilities

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

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

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

Eberly Center for Teaching Excellence & Educational Innovation

www.cmu.edu/teaching

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

Graduate Student Assembly

www.cmu.edu/stugov/gsa/index.html

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

GSA offers an expanding suite of social programming on and off-campus to bring graduate students from different departments together and build a sense of community. GSA is the host of the Graduate Student Lounge on the 3rd floor of the Cohon University Center- a great place to study or meet up with friends. GSA also maintains a website of graduate student resources on and off-campus. Through GSA's continued funding for professional development and research conferences, the GSA/Provost Conference Funding Program and GSA/Provost GuSH Research Grants are able to run, as managed by the Graduate Education Office. As we move forward, GSA will continue to rely on your feedback to improve the graduate student experience at CMU. Feel free to contact us at <gsa@cmu.edu> to get involved, stop by our office in the Cohon University Center Room 304 or become a representative for your department.

Intercultural Communication Center (ICC)

www.cmu.edu/icc/

The Intercultural Communication Center (ICC) is a support service for nonnative English speakers, both newly arrived international students as well as students who attended high school and/or undergraduate programs in the US. The ICC offers seminars, workshops, and 1-1 consultations that develop the language and cross-cultural skills needed to succeed in academic programs at Carnegie Mellon University. The ICC provides International Teaching Assistant (ITA) testing, a required test indicating a nonnative speaking TA has the language proficiency required to work with students in classes, labs or individual meetings. The ICC also supports International Teaching Assistants in developing fluency and cultural understanding to teach successfully at Carnegie Mellon University.

Office of International Education (OIE)

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

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

Veterans and Military Community

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

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

Carnegie Mellon Ethics Hotline

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

The health, safety and well-being of the university community are top priorities at Carnegie Mellon University. CMU provides a hotline that all members of the university community should use to confidentially report suspected unethical activity relating to areas below:

- Academic and Student Life
- Bias Reporting
- Environmental Health and Safety
- Financial Matters

- High-Risk Incident
- Human Resource Related
- Information Systems
- Research
- Threat of Business Interruption
- Threat of Violence or Physical Harm
- Title IX

Students, faculty and staff can anonymously file a report by calling 877-700-7050 or visiting www.reportit.net (user name: tartans; password: plaid). All submissions are reported to appropriate university personnel.

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

Policy Against Retaliation

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

Additional details regarding the Policy Against Retaliation are available at <https://www.cmu.edu/policies/administrative-and-governance/whistleblower.html>

Key Offices for Academic & Research Support

Academic Coaching/Consulting - The Office of Academic Development

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

The Academic Coaching Program is a student assistance program that supports graduate students in the development and/or improvement of skills, strategies, and processes that are necessary for a productive and successful experience at CMU and beyond. Support for graduate students comes in two forms: Individualized Sessions and Group Workshops. Individualized Sessions are the primary focus and can be best understood as working with a personal consultant.

Academic Coaches/Consultants meet with students regularly, in a one-on-one capacity, in order to assess a student's needs and implement strategies to satisfy those needs, while providing a variety of support throughout the process.

Areas of focus include, but are not limited to:

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

Computing and Information Resources

www.cmu.edu/computing

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

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

Global Communication Center

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

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

- Technical reports

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

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

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

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

Research at CMU

www.cmu.edu/research/index.shtml

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

Office of Research Integrity & Compliance

www.cmu.edu/research-compliance/index.html

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

Key Offices for Health, Wellness & Safety

Counseling & Psychological Services

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

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

Health Services

www.cmu.edu/HealthServices/

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

UHS also has a registered dietician and health promotion specialists on staff to assist students in addressing nutrition, drug and alcohol and other healthy lifestyle issues. In addition to providing direct health care, UHS administers the Student Health Insurance Program. The Student Health Insurance plan offers a high level of coverage in a wide network of health care providers and hospitals. Appointments can be made by visiting UHS’s website, walk-in, or by telephone, 412-268-2157.

Campus Wellness

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

At the university, we believe our individual and collective well-being is rooted in healthy connections to each other and to campus resources. The university provides a wide variety of wellness, mindfulness and connectedness initiatives and resources designed to help students thrive inside and outside the classroom. The BeWell@CMU e-newsletter seeks to be a comprehensive resource for CMU regarding all wellness-inspired events, announcements and professional and personal development opportunities. Sign up for the Be Well monthly newsletter via bit.ly/BeWellatCMU or by contacting the Program Director for Student Affairs Wellness Initiatives, at alusk@andrew.cmu.edu.

Religious and Spiritual Life Initiatives (RSLI)

www.cmu.edu/student-affairs/spirituality

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

University Police

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

412-268-2323 (emergency only), 412-268-6232 (non-emergency)

The University Police Department is located at 300 South Craig Street (entrance is on Filmore Street). The department's services include police patrols and call response, criminal investigations, fixed officer and foot officer patrols, event security, and crime prevention and education programming as well as bicycle 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 and containing statistics about the number and type of crimes committed on the campus and the number and cause of fires in campus residence facilities during the preceding three years. Graduate students can obtain a copy by contacting the University Police Department at 412-268-6232. The annual security and fire safety report is also available online at

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

Shuttle and Escort Services

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

The WORD

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

The WORD is Carnegie Mellon University's student on-line handbook and is considered a supplement to the department (and sometimes college) handbook. The WORD contains campus resources and opportunities, academic policy information and resources, community standards information and resources. It is designed to provide all students with the tools, guidance, and insights to help you achieve your full potential as a member of the Carnegie Mellon community. Information about the following is included in The WORD (not an exhaustive list) and graduate students are encouraged to bookmark this site and refer to it often. University policies can also be found in full text at: <http://www.cmu.edu/policies/>.

Carnegie Mellon Vision, Mission

Statement of Assurance

Carnegie Code

Academic Standards, Policies and Procedures

- Educational Goals

- Academic and Individual Freedom

- Statement on Academic Integrity Standards for Academic & Creative Life

- Assistance for Individuals with Disabilities

- Master's Student Statute of Limitations

- Conduct of Classes

- Copyright Policy

- Cross-college & University Registration

- Doctoral Student Status Policy

- Evaluation & Certification of English Fluency for Instructors

- Final Exams for Graduate Courses

- Grading Policies

- Intellectual Property Policy

- Privacy Rights of Students

- Student's Rights

Research

- Human Subjects in Research

- Office of Research Integrity & Compliance

- Office of Sponsored Programs

- Policy for Handling Alleged Misconduct of Research

- Policy on Restricted Research

Tax Status of Graduate Student Awards

Campus Resources & Opportunities

- Alumni Relations

- Assistance for Individuals with Disabilities Athletics,

- Physical Fitness & Recreation Carnegie Mellon ID

- Cards and Services

- Cohon University Center

- Copying, Printing & Mailing

- Division of Student Affairs

- Domestic Partner Registration Emergency

- Student Loan Program Gender Programs &

- Resources

- Health Services

- Dining Services

- The HUB Student Services Center

ID Card Services
Leonard Gelfand Center
LGBTQ Resources
Multicultural and Diversity Initiatives
Opportunities for Involvement
Parking and Transportation Services
Shuttle and Escort Services
Spiritual Development
University Police
Student Activities
University Stores

Community Standards, Policies and Procedures

Alcohol and Drugs Policy
AIDS Policy
Bicycle/Wheeled Transportation Policy Damage
to Carnegie Mellon Property Deadly Weapons
Discriminatory Harassment
Disorderly Conduct
Equal Opportunity/Affirmative Action Policy
Freedom of Expression Policy Health
Insurance Policy Immunization
Policy
Missing Student Protocol Non-
Discrimination Policy On-
Campus Emergencies Pets
Political Activities
Recycling Policy
Riotous and Disorderly Behavior
Safety Hazards
Scheduling and Use of University Facilities
Sexual Harassment and Sexual Assault Policy
Smoking Policy
Student Accounts Receivable and Collection Policy and Procedures
Student Activities Fee
Student Enterprises
Workplace Threats and Violence Policy