Carnegie Mellon University

Academic Year 2024-2025

School of Computer Science

Software and Societal Systems Department

Doctoral Student Handbook

Degree Programs Covered by This Handbook:

Societal Computing

Societal Computing Joint Portugal Program

Societal Computing/EPP Joint Program

11.25.25

Table of Contents

SECTION 1: Welcome & Introduction

Welcome to the Societal Computing Ph.D. Program!

While this handbook is specific to your academic experience in the department, it is just one element of the Graduate Student Handbook Suite. There are several other resources within the suite that you should consult when needed:

- Societal Computing Program Handbook
- University-Wide Graduate Student Handbook (Office of Graduate & Postdoctoral Affairs)
- The Word Student Handbook

Societal Computing is the branch of computer science concerned both with designing computational technology to shape tomorrow's digital world and with using computational methods to understand the societal challenges a digital world poses.

Our program stems from the recognition that there is an intimate and deep relationship between the design, deployment, and configuration of computing technologies on the one hand, and societal dynamics, goals, policies, and outcomes on the other. As more and more of our daily experiences are lived in and through computers and networks, computing technology shapes the landscape in which people socialize, conduct commerce, play, work, and communicate. It also gives rise to new risks and shapes the tools available to avoid or manage them.

The design choices for these digitized environments have profound consequences. They create behavioral possibilities for acting, knowing, and controlling our social and physical environment. They provide opportunities and de-facto policies, regulations, and norms that shape societies. They create data for understanding the digital world, but at a scale and speed not analyzable by today's methodologies.

SECTION 2: Program Vision, Mission, and Values

2.1: Vision

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

2.2: Mission

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

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

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

2.3: Values

The Societal Computing program is Carnegie Mellon University's response to this challenge.

We bring to bear a wide variety of tools and disciplines to discover the scientific principles and laws governing the relationship between the design of computing technology and the nature of digital society.

Traditional computer science is fundamental to this enterprise, but the multidimensional nature of the questions we address requires cross-disciplinary solutions. In our research and our educational programs, a common foundation is laid not only in current computer science methodologies but also in ideas drawn from sociology, psychology, economics, public policy, cultural studies, machine learning, sustainability, applied statistics, and ethics.

We are shaping an integrated, innovative discipline of Societal Computing that provides the tools, techniques, theories, and research methods to address societal issues and continue to make scientific progress in understanding the deep relationship between computing technologies and the society inhabiting the digital landscape they comprise.

2.4: Ph.D. Community

We are committed to a strong sense of community within S3D as well as the School of Computer Science as a whole. Our community is one of the reasons many students choose to come here. We foster community spirit through close working relationships between students and advisors, among faculty, and among students. Many working relationships turn into friendships for life.

In practice, our students, faculty, and staff volunteer their time, energy, intellect, talent, and other skills to perform many of the tasks that keep our environment running smoothly. These efforts include organizing seminars, serving on departmental committees, grading for graduate courses, planning, and running social activities, giving tours, and hosting visitors. Our Societal Computing Ph.D. students have an impressive record of volunteer leadership not just within the program, but also at SCS and university levels.

Student Leadership-SC Faculty Meetings

An important part of our culture is that students have a voice and a vote in decisions about the Ph.D. community. In general, decisions regarding Ph.D. program policies are made by the Societal Computing Faculty Meetings. The committee is composed of societal computing faculty as well as two Ph.D. student representatives who serve staggered 2-year terms. Decisions in the committee are nearly always made by consensus, but the student representatives are voting members of the committee when consensus is unclear.

Mutual Respect

An essential aspect of our culture is mutual respect among students, faculty, and staff that are highly diverse, not only in terms of professional and research interests, but also in terms of gender, national origin, religion, sexual orientation, and other demographic characteristics. Words or actions that express discrimination, disrespect, intimidation, or harassment based on race, color, national origin, birth sex, gender identity, handicap or disability, age, sexual orientation, religion, creed, ancestry, belief, veteran status, or genetic information are not acceptable within our community. Any violations of these standards should be brought to the Ph.D. program director, Bogdan Vasilescu, Ph.D. Coordinator, Connie Herold, the ombudsperson for the program, or the Office of Student Affairs.

Incidents of Discrimination or Harassment

Our community places great value on mutual respect. However, if you witness an incident of discrimination based on gender, race, religion, or similar characteristics, it is important to know what to do about it.

If you feel comfortable and safe responding to the discriminatory behavior in the moment, we encourage you to do that; such responses, especially from bystanders, reinforce our community standards and can start an educational dialog that leads to reconciliation and prevent similar incidents from occurring in the future.

We encourage you to talk with the Ph.D. program director, any faculty member, the student ombudsperson(s), the Ph.D. program coordinator, or someone in the Office of Student Affairs about any incidents you witness or hear about secondhand. Faculty members, student ombudspersons, and the Ph.D. program coordinator are responsible for forwarding such incidents to the Ph.D. program director (or, when the director has a conflict, to the faculty ombudsperson) for follow-up.

There are a wide range of behaviors that may be concerning; we can help you talk through them and then investigate to come to an understanding of whether there is a violation of community standards. If there is a violation, we will take it seriously and will take action according to the severity of the incident.

One-time incidents that are not very severe may be handled by a conversation with the individual engaged in the problematic behavior. Here, the primary goal is education about our community expectations, a discussion of how to ameliorate the damage caused by the discriminatory incident, and an understanding of the consequences if violations of

community standards were to continue.

Individual or repeated incidents that are severe enough to have a significant negative impact on an individual or on our community will be reported to the Office of Student Affairs or the Office of Title IX Initiatives, which have a processor dealing with them. These more serious incidents, when perpetrated by a student, will also be discussed at the Doctoral Student Review meeting where consequences may be imposed such as required amelioration actions, an N-1 letter, or termination from the program.

SECTION 3: Degrees Offered

Societal Computing Ph.D. (Societal Computing Ph.D. Degree)

Societal Computing Dual Degree with Portugal Ph.D. (Societal Computing Ph.D. Degree)

Societal Computing and Engineering and Public Policy (Societal Computing and Engineering and Public Policy)

SECTION 4: Departmental Personnel

Software and Societal Systems Department-S3D

Name/Title	Role/Interactions	Office	Contact Info
Nicolas Christin Department Head	The Department head is a key member of university leadership who helps shape the department's future. They work with faculty, students, and staff to establish a long-term vision for the department that aligns with the university's mission. They also serve as a liaison between the department and other units of the institution.	TCS 448	nicolasc@andrew.cmu.edu
Victoria Poprocky Administrative Assistant to Nicolas Christin, Department Head Monika De Reno, Deputy Director	Point of contact for Nicolas Christin and Monika De Reno.	TCS 443	poprocky@andrew.cmu.edu
Monika DeReno Deputy Director	Providing guidance in areas such as student learning and resource management.	TCS 449	monikade@andrew.cmu.edu

Bogdan Vasilescu Director of Societal Computing PhD Program	The director controls the vision of the program, provides high-level guidance to students and faculty, is involved in student evaluations and in resolving any program-level disputes.	TCS 326	vasilescu@cmu.edu
Connie Herold Programs Manager	The Program Manager oversees all aspects of the PhD Programs administration, including admissions, personal or professional conflicts, course and faculty concerns, and program management.	TCS 415	cherold@andrew.cmu.edu
Alisha Roudebush Academic Coordinator	Coordinates the PhD Programs. Helps with admission questions, registration, commencement, orientation and general program information.	TCS 415	aroudebu@andrew.cmu.edu
S3D SC Faculty	A list of SC PhD Faculty contact information may be found **online**.	TCS Hall and various other buildings	S3D SC Faculty
S3D IT Services Team	S3D IT Services	TCS 432	s3d-help@andrew.cmu.edu
S3D Video Service Team	Video Technicians for S3D	TCS 246	S3D IT Services Team
Paul Stockhausen Senior Manager, SCS Building Facilities	Handles issues regarding facilities, furniture, electrical issues, and office/room access to space and maintenance.	GHC 4107	building@cs.cmu.edu SCS Building Facilities

SECTION 5: Departmental Resources

Office Assignments

It is departmental policy that no student in TCS will receive less than 40 square feet of space. For any questions regarding office assignments or office space in TCS please contact Connie Herold, Alisha Roudebush or S3D IT Services Team.

Mailboxes

TCS Mailboxes are located on the Fourth Floor in room 430.
CMU main Postal Service is located in Cohon University Center (CUC)

Copy Machines

Copy Machines are available on the third and fourth floor. To create a print account please refer to SCS Computing Facilities.

Keys

General access keys are distributed to each student at orientation.
Building Access Cards are distributed at orientation. Many of the buildings around campus have access control readers on their exterior doors in order to ensure security after hours and on weekends. By default and as members of the campus community, all cardholders, including students, faculty, staff, and sponsored individuals, have access to these buildings:

- University Center
- Cyert Hall
- Newell-Simon Hall
- 311 S. Craig street
- Wean Hall
- Porter Hall
- Baker Hall
- Hamburg Hall
- West Wing Computer Cluster

Students in the CIC building have access to the CIC building.
For questions or issues regarding building access, contact The HUB.

Purchasing and Reimbursement Procedures and Policies

The university has detailed and strict policies relating to the purchase of goods, services, equipment, etc. There are also reimbursement policies, along with tax exempt considerations. Please reach out to your advisor's administrative staff for reimbursements information.

Department Office/Building Security, Repairs and Services

For department office/ building repairs and services please contact Stefan Hadricky.
For security concerns please contact CMU Police.

Department and/or College Graduate Student Organizations/Advisory Committee/Graduate Representatives:

Graduate Student Assembly (GSA) is the branch of CMU's student government that represents graduate students. Please contact Societal Computing student Meryl Ye or Ben Weinshel with any questions regarding GSA.

SECTION 6: Advising

6.1: Role of an Advisor and Advisor Assignments

Each student has a faculty advisor charged with guiding the education and monitoring the progress of the student through the program. This personal student-advisor relationship ensures that every student receives the necessary faculty mentoring.

Throughout the program, the advisor is responsible for guiding the student's research and education. Early in the program, the advisor guides the student along with research initiatives and helps with strategic planning for courses and other educational activities. Later, the advisor helps to focus the student's research interests towards a thesis topic. Toward the end of the program, the advisor chairs the student's thesis committee and helps to select the other members of the committee. The advisor also provides the student with career advice.

How are advisors initially chosen? This is done at admission time. The Societal Computing faculty collegially matches each student with a faculty member, taking into consideration their preferences, interests, and background as revealed in their application materials, as well as interest and funding availability among the potential advisors.

There is flexibility in the kind of relationship a student has with their advisor. While the advisor is a student's primary source of guidance, many students interact closely with faculty other than their formal advisor, for example as part of research collaboration. A few students have two co-advisors. Occasionally evolving research interests and other factors motivate changes in advising relationships. It is acceptable for students to request a change in advisors. Such changes are approved by the SC PhD Program Director with agreement from the new advisor and a consensus about how to gracefully tie up any loose ends in the previous research project. Any non-courtesy Tenure Track or Research Track faculty member in SCS may serve as a sole advisor or co-advisor. In addition, faculty in other tracks, or in other schools, can serve as advisors or co-advisors with permission of the SC PhD Program Director.

6.2 Advisor/Advisee Collaboration

Individual Development Plan (IDP): Individual Development Plans (IDPs) are meant to promote professional and personal growth by formally documenting goals and facilitating dialogue, collaboration, and accountability between advisors and advisees. Carnegie Mellon has developed a set of templates that can be used by doctoral students and their advisors to create an Individual Development Plan. (See link below for template)

As described in Section 6.1, the advisor guides the student in their research and mentors them toward the program goals. Ideally, the student and their advisor set goals jointly and document them in a Individual Development Plan (IDP). In addition to regular advising meetings, students

report progress and receive an evaluation through the semi-annual Doctoral Student Review (DSR) process described in Section 10.7.

6.3: Review of Academic Conflicts

Faculty and Student Ombudspersons

If a student feels the need to reach out to someone other than their direct advisor, or the program managers, or is not sure what avenue to pursue or is appropriate for addressing their problem, the student can turn to the Ph.D. program's faculty ombudspersons.

Currently, the faculty ombudsperson is **Jonathan Aldrich.** The faculty ombudsperson's roles and responsibilities are:

- To meet with students and listen to their problems
- To give advice, perhaps suggesting someone else to talk to or suggesting the next step to take
- To act on any issues where the program director may be conflicted
- To keep conversations confidential

SECTION 7: Doctoral Degree Requirements

7.1: Residency Requirements

The Ph.D. program is a full-time resident program. Ph.D. students must register as a full-time student for a minimum of two academic years in total.

7.2: Expected Timeline Estimates

The SC curriculum ensures all students have a solid foundation in Societal Computing, Computational Thinking, Statistics, and Management/Policy. At the same time, it retains enough flexibility to enable students to further specialize in areas that are more closely relevant to their research interest. The following sample schedules are illustrations of the courses three different sets of students could take.

Students are expected to be working on research every semester with intensity at least 1/2 time throughout their time at CMU. In addition, it is expected that students volunteer within the department and school throughout their time at CMU.

Sample Schedule 1

Fall 1	**Spring 1**
SC Practicum 17-994	SC Practicum 17-994
Star Course (any category)	Star Course (any category)
SC Reading & Research	SC Reading & Research
Fall 2	**Spring 2**
Star Course (any category)	SC Practicum 17-994
Elective Course	Elective Course
SC Reading & Research	TA-ship
	SC Reading & Research
Fall 3	**Spring 3**
Star Course (any category)	Elective Course
TA-ing	
SC Reading & Research	

Sample Schedule 2

Fall 1	**Spring 1**
SC Practicum 17-994	SC Practicum 17-994
Star Course (any category)	TA-ship

Elective Course	SC Reading & Research
SC Reading & Research	
Fall 2	**Spring 2**
Star Course (any category)	SC Reading & Research
Elective Course	TA-ship
SC Reading & Research	
Fall 3	**Spring 3**
Star Course (any category)	SC Reading & Research
Elective Course	TA-ship
SC Reading & Research	

7.3: Registration Process

For registration information please refer to the HUB.

Summer registration will be done by the program coordinator and will be based on the student's response to the Summer Plans form that will be sent in early spring. The deadline for summer plans is May 1st.

Societal Computing courses you must register for Fall and going forward.

17-994	Societal Computing Practicum	9 Units	Fall – First year only
17-994	Societal Computing Practicum	9 Units	Spring – First year only
17-993	Societal Computing Graduate Reading & Research (Section A)	Variable Units	Every Semester
XX-XXX	Any Star or Elective (Check with your advisor or review the handbook of approved courses)		

You must carry 48 units every semester. You will adjust your Reading & Research Course (17-993) to meet these units. For example, in your first semester:

17-994 – Societal Computing Practicum (9 Units)
17-xxx – Star course or elective (12 Units)
Total of 21 Units –

You will then register for your Reading & Research course for (27 Units) = 48 Units total

7.4: Required Units for Degree Attainment

In the PhD program in Societal Computing (SC), each student must complete **108 university units of graduate courses** and receive at least a B- in each course in order to earn a PhD in Societal Computing.

Course requirements are intended to ensure that all program graduates have sufficient breadth in SC fundamentals as well as depth in one or more relevant areas of their choice.

Students must demonstrate breadth in SC fundamentals by completing **48 units** in 4 area star requirements plus a minimum of **18 units** of the SC Practicum. Depth is provided through the remaining **36 units** of elective coursework, which can be fulfilled from a broad selection of relevant electives – as well as research and project work.

Finishing out the **108 units** is the **Societal Computing Pre-Thesis course (6 Units)**. The Societal Computing Pre-Thesis course 17-802 is provided by each Societal Computing adviser to coach the student in preparing, presenting, and passing a thesis proposal.

In addition to course requirements, students must pass the following: **Writing, Speaking, Computation and Teaching requirements.** Details regarding all student requirements are below.

7.5 Core Courses

Societal Computing Practicum 17-994

The Societal Computing Practicum course. Students must take this course in their first year, both in the **Fall (9 units)** and the **Spring (9 units)** for a total of **18 units**.

Practicum Syllabus:

Societal Computing Topics

- Literature review. Write a literature review, working with an advisor to pick a topic and identify research questions. Writing includes critiquing papers being synthesized in the review. This is intended to be a “short form” literature review of approximately 2-4 pages of the sort that typically introduces a conference paper.
- What makes good interdisciplinary research? While each research group focuses continuously on this topic, the practicum will provide a broader view, e.g., by inviting a senior researcher from S3D or SCS to share reflections on their own research strategies, key choices they made in their careers, and advice they can offer budding researchers.
- What is SC about? Hear from and interact with SC faculty members to see the breadth of research topics, methods, and policy concerns within SC.

Skills

- Presentation skills. This includes presenting a literature review, an elevator speech, and talking to a general audience. Senior students should be involved in critiquing & helping younger students.
- Giving feedback and critiquing. Not only is speaking important, but active listening, and skill and constructive critiquing are important skills that the practicum should develop.
- Writing and presentation software. Learning “power user” skills for writing and presentation software used by most academics, such as Latex, Word, PowerPoint.
- Human subjects. Students should go through the process of preparing an IRB application. Senior students can share their experiences with IRB and human subjects in general.
- Time management. There are several possible approaches to this topic including bringing in an outside expert or facilitating a roundtable discussion with senior students.
- Ethics. Students should learn about CMU’s policy on plagiarism, as well as ethical considerations for authorship and author order, and more generally the ethics of their profession.

7.6 Star Courses

Four Areas:

The four-star courses (48 units) provide students with a basic grounding in core skills needed for research. Each student must pass one-star course from each of the areas.

- Societal Computing
- Computational Thinking
- Statistics
- Management/Policy

Students are to take a minimum of one 12-unit course (or two 6-unit courses) from each of the required areas. No course may satisfy more than one requirement in its entirety. In rare cases, the units of a course may be split between two categories such as 6 units in one area and 6 in another.

Students should discuss exactly what courses are to be taken with their advisor. Please note the below list is illustrative, not comprehensive. At CMU new courses are added most years. If there is a course that you feel is appropriate, simply send an email petition (petition instructions are listed below) to the Director of the SC PhD program, Bogdan Vasilescu, and Connie Herold, Academic Program Manager asking to count it. Only letter grades will be accepted for all Star Courses.

Approved Star Courses

Societal Computing: (12 Units)

A 17- PhD level (or masters with permission of instructor) course taught by Core SC faculty

- 10-713 Machine Learning, Ethics, and Society
- 10-743/11-805 Socio-technical Evaluations of Generative AI
- 10-735 Responsible AI
- 10-736 Human-AI Complementarity for Decision Making
- 17-703 Cryptocurrencies, Blockchains, and Applications
- 17-720 Machine Learning and Sensing for Healthcare
- 17-722 Building User-Focused Sensing Systems
- 17-733 Privacy, Policy, Law, and Technology
- 17-734 Usable Privacy and Security
- 17-735 Engineering Privacy in Software
- 17-737 Artificial Intelligence Methods for Social Good
- 17-756 Computational Social Science Research Design & Data Analytics
- 17-759 Advanced Topics in Machine Learning & Game Theory
- 17-781 Mobile & Pervasive Computing Services
- 17-801 Dynamic Network Analysis
- 17-803 Empirical Methods
- 17-821 Computational Modeling of Complex Socio-Technical Systems
- 17-840 Green Computing

Computational Thinking Skills: (12 Units)

Computational Thinking skills courses address issues of how to reason computationally. These courses involve the design and development of core algorithms and not just the application of canned programs.

- 10-601/10-701/15-781 Machine Learning
- 10-715 Advanced Introduction to Machine Learning
- 11-711 Algorithms for NLP
- 11-785 Introduction to Deep Learning
- 14-741/18-631 Introduction to Information Security
- 15-750 Algorithms
- 15-780 Advanced AI Concepts
- 15-830 Computational Methods in Sustainable Energy
- 15-853 Algorithms in the Real World
- 15-892 Foundations of Electronic Marketplaces
- 17-715 Microarchitectural Security
- 17-731/18-734 (Previously 08-604) Foundations of Privacy
- 17-737 (Previously 08-737) Artificial Intelligence Methods for Social Good
- 17-759 Advanced Topics in Machine Learning and Game Theory
- 17-821 (Previous 08-810) Computer Simulation of Complex Socio-Technical Systems

- 17-880 Algorithms for Private Data Analysis
- 18-631 Introduction to Information Security
- 18-730 Introduction to Computer Security
- 18-731 Network Security

Policy and Management (12 Units)

These courses address issues of management and policy. Methods courses are not allowed in this area.

- 17-762 (Previously 08-732) Law of Computer Technology
- 17-733 (Previously 08-733) Privacy Policy, Law, and Technology
- 19-701 Theory and Practice of Policy Analysis
- 19-702 Quantitative Methods for Policy Analysis
- 19-705 Workshop on Applied Policy Analysis (6 units)
- 19-712/18-842 Telecommunications Technology, Policy and Management
- 19-713 Policies of Wireless Systems
- 19-718 Public Policy and Regulations
- 47-888- Organizational Behavior (Micro)
- 47-890 Seminar in Organizational Behavior
- 47-891 Seminar in Organizational Theory (6 units)
- 90-840 Legislative Policy Making

Statistics (12 Units)

These courses address issues of statistical data analysis, and provide methodological skill in statistics.

- 10-708 Probabilistic Graphical Models
- 10-716 Advanced Machine Learning: Theory and Methods
- 17-740: Algorithmic Foundations of Interactive Learning
- 17-757: Modern Techniques in Uncertainty Quantification
- 19-703 Applied Data Analysis I (6 Units)
- 19-704 Applied Data Analysis II (6 Units)
- 36-700 Probability and Mathematical Statistics
- 36-705 Intermediate Statistics
- 36-707 Regression Analysis
- 36-749 Experimental Design for Behavioral & Social Sciences
- 90-906 Intro Econometric Theory
- 94-834 Applied Econometrics I
- 94-835 Applied Econometrics II

7.7: Electives

36 Units Required

All students are required to take a minimum of 36 units of PhD-level electives. These electives provide depth in an area of relevance to the student. This requirement can be filled by a combination of mini courses (6 units) and full courses (12 units). Please note that courses must be at the level of XX-700 or higher to count as an SC elective, unless the exception procedure below is followed. These electives may be drawn from a variety of sources:

- A specialized independent study on a topic for which there is not a regularly offered course. At most 12 units of independent study may count toward the SC elective requirement.
- Additional courses in SC
- Additional courses in SCS
- Additional PhD level courses at CMU or the University of Pittsburgh. At most one course may be a course at the University of Pittsburgh through PCHE

Exception Procedure to Count Courses under XX-700 number:

Students must receive approval from their advisor and Program Director, Bogdan Vasilescu. Please follow the same directions under "Petition Procedures for Requesting New Star Course". A request for an exception must be made at the start of the semester.

7.8: Societal Computing Pre-Thesis 17-802 (6 Units)

The Societal Computing Pre-Thesis course (17-802) is provided by each Societal Computing advisor to coach the students in preparing, presenting, and passing a thesis proposal.

The proposal will generally occur in the semester where this course is taken. If not, an incomplete may be awarded pending the proposal at the advisor's discretion. In that case, in accordance with university policy, the course must be completed (and the thesis passed) no later than the last day of the following semester, or the default grade will be awarded.

7.9: Computational Thinking/Programming

To fulfill the computational thinking and programming requirements for the Ph.D. degree the student must:

- Achieve a high level of competency in designing, implementing, and testing algorithms
- Develop a substantial body of code in association with a research project
- Work collaboratively on a computational thinking project

Typically, this is achieved through research and development by the student as part of a research team under their PhD advisor. Key requirements include computational thinking, acceptable code development, code development as part of a team, and good documentation practices.

Approval is typically determined during the Doctoral Student Semi-Annual Review. It is up to the advisor to determine if the student has the necessary skills.

7.10: Writing Skills

The ability to communicate technical ideas clearly in writing.

To fulfill the writing requirement for the Ph.D. the student must demonstrate a high level of competency in an organization, clarity of writing in English, cohesive argument, and accurate utilization of references by writing a paper that is accepted for publication by a high-quality peer-reviewed conference, journal (or equivalent, as approved by the SC faculty), or acceptable thesis proposal.

Approval is typically determined during the Doctoral Student semi-annual Review.

7.11: Speaking Proficiency

The ability to communicate technical ideas in oral presentations.

To fulfill the speaking requirement for the PhD, the student must:

- Attend and present in the SC PhD Practicum.
- Present, at least once, at a national or international conference (in a paper session, not a poster session or round table).
- Achieve a high level of competency in talk organization, slide development presentation style, eye contact, and question answering skills.

Approval is typically determined during the Doctoral Student semi-annual review.

7.12: Portugal Curriculum

The Software and Societal System Department (S3D) offers a dual degree Ph.D.in Societal Computing in cooperation with several Portuguese universities (“CMU|Portugal program”). The regulations are essentially the same as given in this document, except that some requirements can be fulfilled in an affiliated program in Portugal.

The Dual Degree Program is based on a matching of requirements of both the Carnegie Mellon and the partner institutions PhD Programs. Each student will be co-advised by a S3D-SC/Carnegie Mellon faculty member and a faculty member of the Portuguese Institution.
The student is expected to spend a period of two years at S3D/Carnegie Mellon. In this time, the student shall take star courses (as specified by Carnegie Mellon/S3D SC regulations) and start working on research.

The second period, whose duration is to be determined by the co-advisors but is expected to last typically three years, will be hosted by the partner institution in Portugal where the student is

expected to continue with the research work. The research work will take place in the context of collaborative research activities between the partner institution in Portugal and Carnegie Mellon. The remaining time until completion of the thesis shall be divided between research stays at SC-S3D/Carnegie Mellon and the Portuguese Institution. The schedule should be flexible to fit the needs of the doctoral research project.

By the end of the third or the fourth year the student must present the thesis proposal formally at S3D SC/Carnegie Mellon or at the partner institution. The Portuguese co-advisor should attend the oral presentation and discussion of the Thesis Proposal at S3D SC/Carnegie Mellon or via videoconference.

The public oral thesis defense will take place either at Carnegie Mellon or at Portuguese Institution according to the rules of the SC PhD program. The thesis evaluation committee must include both the Carnegie Mellon and the Portuguese co-advisors, members of the advisory committee, and external reviewers.

Dual Degree Requirements for Portugal

- All 36 units of electives can be satisfied with courses taken in Portugal as long as they generally satisfy our requirements (graduate/PhD level). This will be checked and approved by the program director and using input from at least one other faculty in the relevant subject matter;
- The teaching requirement is brought down to ONE class owing to the fact that students are only here for four semesters (excluding summers);
- 18 units of Societal Computing Practicum 17-994 seminar must be taken in person, in Pittsburgh;
- This leaves 48 units of STAR courses spread over four semesters which seems eminently doable while doing research in Pittsburgh.
- COMPUTATIONAL, SPEAKING, and WRITING requirements are maintained but can be fulfilled without being in residence;
- Proposal, thesis, and defense can be done remotely from Portugal or from Pittsburgh; the choice is the student's and their advisors'.

7.13: Societal Computing/EPP Curriculum

We offer a joint PhD program between Societal Computing and the Department of Engineering and Public Policy. Students interested in this program must independently apply to both the Societal Computing PhD program, and to the Engineering and Public Policy PhD program, and be admitted by both programs to be eligible for the joint PhD.

Joint SC/EPP PhD candidates will be required to complete a comprehensive exam in EPP and satisfy the SC graduation requirements. Candidates will form one defense committee, meeting each department's requirements and will complete one proposal and one final defense, submitting one single dissertation.

Curriculum

The requirements of both programs must be satisfied, but certain courses can count toward both requirements. Specifically,

- The 36 units of electives for the SC program (700-level or above) can be used to satisfy the EPP elective requirements.
- Students will have to pass 19-701 and 19-702. One of these classes can be used to fulfill the SC STAR policy requirement.
- The combination of 19-703 (mandatory in EPP) and 19-704 (usually taken in EPP, albeit not strictly mandatory) can be used to fulfill the SC STAR statistics requirement. 12-704 (Probability and Estimation Methods for Engineering Systems) can also be used to fulfill the SC STAR statistics requirement for students in the joint program.
- The Societal Computing STAR course could count as a technical elective in EPP.
- Some of the courses (e.g., machine-learning classes at the 700-level or above) satisfying the SC STAR computational requirement can be used to fulfill the EPP quantitative requirement.
- Students have to take the qualifying exams (Part A and part B) in EPP. This means the production of a research paper roughly at the end of year 1.
- Students have to take the SC practicum, preferably in the first year of study.
- Students have to meet the computational/writing/speaking requirements in SC. This is independent of EPP requirements but is not contradicting them. Passing the EPP Part A qualifier (at the PhD level) can be used to satisfy both the writing or speaking requirement.
- Students have to perform one teaching internship in EPP and one in S3D.
- Students have two advisors – one in each program – or a single advisor jointly appointed in both programs.
- The EPP Economics core requirement should be taken as an extra course beyond the SC requirements.
- 12 units of SC practicum can count toward the 24 units of social science electives in EPP, leaving only an extra 12 units of social science electives required to fulfill the corresponding EPP requirement.

Comparison chart

The chart below summarizes the requirements of both programs and how they can be achieved by students in the joint program.

EPP Requirements	**SC Requirements**	
19-701 (12 units)	Counts as policy STAR course (12 units)	Both requirements satisfied
19-702 (12-units)		1 extra 12-unit course beyond

		SC requirement
19-703 (6 units) + 19-704 (6 units)	Counts as statistics STAR course (12 units)	Both requirements satisfied
19-705 (6 units) - optional but highly recommended		1 extra 6-unit course beyond SC requirement (but optional)
Quantitative methods (18 units, 6 already satisfied with 19-704)	Computational STAR course (12 units)	Both requirements satisfied as long as SC course is selected to meet EPP's quantitative methods requirement
Economics (12 units)		1 extra 12-unit course beyond SC requirement
Technical electives (36 units)	SC STAR course (12 units) + 2 SC electives (24 units)	Both requirements satisfied
Social science electives (24 units)	1 SC elective (12 units) + SC practicum (18 units)	6-units of SC practicum beyond EPP requirements
2 teaching internships	2 teaching internships	Both requirements satisfied, one TI required in each dept.
Part A qualifier	Speaking and writing requirements	
Part B qualifier		Extra beyond SC requirement
	Computational requirement	Extra beyond EPP
Thesis proposal	Thesis proposal	Both requirements satisfied
Thesis and defense	Thesis and defense	Both requirements satisfied

Thesis Committee composition

The committee must consist of a minimum of four members. Two must be EPP faculty members (this includes affiliated and jointly appointed, but not courtesy faculty) who are also full-time CMU faculty. At least one committee faculty member must be from Societal Computing, and at least two must be from SCS (including affiliated faculty). One must not have any appointment in EPP or Societal Computing (this precludes affiliated faculty, courtesy faculty, or adjunct faculty, even if the latter has a primary affiliation outside CMU). All thesis committees are subject to departmental approval (both in S3D and in EPP).

Adjunct and courtesy faculty can always serve as the fourth (or fifth) member of a committee. Examples of possible committees:

- Prof. W (advisor) is jointly appointed in S3D (Societal Computing) and Engineering and Public Policy, Prof. X is appointed in EPP, Prof. Y is appointed in CSD, Dr. Z is a research staff member at a national lab.
- Prof. A (co-advisor) is appointed in S3D (Societal Computing), Prof. B (co-advisor) is appointed in EPP, Prof. C is appointed in EPP, Prof. D is appointed in HCII, and Dr. E is a researcher working in industry.
- Prof. F (co-advisor) is appointed in S3D (Societal Computing), Prof. G (co-advisor) is appointed in EPP, Prof. H is jointly appointed in EPP and in SC, and Prof. I is a professor at a different university.

7.14: Protocol for Evaluation of Transfer Credit

The Societal Computing Program does not accept transfer credit.

7.15: Protocol for Evaluation of Course Waiver

This program does not accept transfer credit of courses taken outside of CMU.

Students may request to waive up to two course requirements based on equivalent graduate level courses they have already taken. No more than 12 units of star courses can be waived.
Students who have also taken PhD level courses at Carnegie Mellon prior to entering the Societal Computing PhD program may request credit for up to two courses, as long as the course taken would satisfy one of the Star course or elective program requirements.

All grades for course waivers will be recorded as part of the internal Student Record as with CMU courses taken while enrolled in the PhD program. Any course waiver will not show up in the students official student transcript.

To apply for a waiver, a student must submit a petition to the Ph.D. Program Coordinator within **their first year i**n the program. A separate petition must be submitted for each course to be waived.

** Please note that a course waiver will not be granted for equivalent “Professional Experience”. We suggest the student take a different course to enrich their technical background.
The petitioner must make a case for how prior courses are equivalent in substance, submitting a self-contained justification, a syllabus, and a transcript (translated if necessary). As needed, the petitioner can provide additional support for the case by providing slide excerpts, reading lists, homework assignments, work products, or other supporting artifacts. For star courses, the justification must argue why the course(s) match the intent and expectations of the appropriate star requirement, similar to requests for approval for a new star course (described above). To waive a course based on comparable experience, the student should document how the experience demonstrates their systematic knowledge of the relevant material.

Typically, courses may be waived based on rigorous graduate courses taken as part of a master's degree.

These petitions will be considered by the faculty, typically delegated to a faculty member with expertise in the corresponding star area. The outcome of the petition process will be decided based on provided information on the prior course and the petitioner's performance in it. The faculty may ask appropriate instructors for assistance in this decision or reject the petition with a request for resubmission if insufficient information is provided. If appropriate, the faculty may stipulate conditions on the waiver, such as preparing a supplementary project that exposes the student to Societal Computing research in the area of the course, and is roughly equivalent in scope to a final project in a typical PhD-level course.

In order to apply for the course waiver please fill out the Course Waiver Form with all supporting documents and send it to the Director Bogdan Vasilescu, Connie Herold Alisha Roudebush.

7.16: Teaching Requirements/Opportunities

The ability to teach is an important skill for all scientists, not only for those who plan to teach after completing their degrees. Teaching skills include the ability to communicate technical material ranging from elementary to advanced, and to communicate technical material to audiences ranging from general to specialized. Thus, we expect students to develop and exercise teaching skills as part of their graduate education.

To fulfill the teaching requirement for the PhD degree the student must do one of the following:

- Serve as a full TA for two full-length SC Courses (9 or 12 units); or
- Serve as a full TA for one full-length SC Course and one full-length SCS course (9 or 12 units) with the permission of the student's advisor; or
- Serve as a full TA for one full-length SC Course and teach the equivalent amount in the CASOS or IDEAS summer institute (requires substantial teaching over multiple years).

We encourage students to participate in TA trainings such as the Eberly Center's Graduate and Undergraduate Student Instructor Orientation (GUSIO) program prior to TAing.

In the rare event that students desire to fulfill their teaching requirement using the same course twice, then they are expected to accept additional responsibility. The additional responsibility is intended to afford the student an education benefit that is at least equivalent to TAing two different courses. Thus, students should expect to supplement their second TA'ship by assuming the teaching apprentice or co-instructor role in the second course installment, as defined below:

- Teaching Assistant (TA) is the norm and generally consists of assisting with grading, holding office hours and tutoring, teaching recitations if these exist, and developing exam questions.
- Teaching Apprentices fulfill all the TA responsibilities, in addition to some appropriate combination of assisting with lecture design for two or more lectures, managing teaching

staff, if there are staff, course module redesign, and homework design.
- Co-instructors are an official designation assigned by the registrar and individuals in this role will share responsibility for the entire course with a second co-instructor, who is usually a faculty member. This may include lead responsibility for one- to two-thirds of the lectures and a commensurate portion of designing and evaluating homework, in-class assignments, and exams.

The table below summarizes the key differences between teaching assistants, teaching apprentices and co-instructors: the columns correspond to roles, checkmarks indicate that a teaching activity is often expected, question marks indicate the activity may arise and dashes indicate the activity is often absent in the role. The roles for teaching apprentice and co-instructor should be individualized to a level of effort and teaching activities that are appropriate for the student and the course. While the responsibilities are monotonically non-decreasing from left to right, the teaching apprenticeship is not a prerequisite to become a co-instructor. Finally, the differences among roles were developed assuming that the course is conducted in a lecture-style, however, the expectation for increasing responsibility for each role can, and should, be adapted to courses taught in any other style.

Teaching Activity	Teaching Assistant	Teaching Apprentice	Co-Instructor
Grading	Typical	Typical	Typical
Lecturing	Maybe	2 or more	1/3-2/3 lectures
Managing staff	No	If there are staff	Typical
Module redesign	Maybe	Typical	Typical
Major course revision	No	Maybe	Maybe
Office hours, tutoring	Typical	Typical	Typical
Recitations	Typical	Typical	Maybe
Design/refine homework	Typical	Typical	Maybe
Design exams	Contribute	Typical	Typical
Assign grades	No	Contribute	Typical

Key: Typical = typical activity in this role, Maybe = activity may arise for this role, No = activity is often absent for this role

SC PhD students who hope to perform any of the above roles should contact the S3D TA coordinator (currently **Michael Hilton**) in the semester before the TA-ship would begin to get approval for TAing. There are typically two cases:

- Case 1: The student is looking for a course to TA. The coordinator will normally have a list of courses that are looking for TAs and the student should discuss possible options with the coordinator.
- Case 2: The student has some idea of the course to TA, perhaps having already talked to the instructor. In this case the student should send an email to the coordinator requesting to be assigned as a TA for that course. The request should include: (a) the course number and title, and whether it is primarily an undergrad, master's, or PhD course, (b) whether TAing has been discussed with the instructor, and (c) what role the student would have as a TA in the course (e.g., as part of a team, as the sole TA, etc.).

After serving as a teaching assistant, in order to receive credit for the teaching requirement, the student must have the faculty fill out the teaching assistant evaluation form.

Students are encouraged to teach more than twice. At the semiannual student review meeting the faculty give special recognition to those who do an outstanding job as a TA and to those who teach beyond the required load. The School of Computer Science and the CMU Eberly Center offer teaching workshops which we encourage students to take advantage of. S3D also regularly offers a CS Pedagogy course (15-890).

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 here.

The fluency of all instructional personnel will be rated by Language Support in the Student Academic Success Center to determine at what level of responsibility the student can TA. In addition to administering the International Teaching Assistant (ITA) Test (a mandatory screening test for any non-native speaker of English), Language Support in the Student Academic Success Center helps teaching assistants who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon. Visit the Student Academic Success Center website for additional information.

We are committed to supporting students who want to develop their teaching skills beyond the minimal teaching requirements. We encourage you to explore specific opportunities with the faculty. In particular, the S3D TA coordinator (currently **Michael Hilton**) can be a good first contact point. We also recommend considering 15-890 CS Pedagogy as an elective and exploring the Eberly Center's programs, such as the Future Faculty Program and their seminars.

7.17: Research Requirements/Opportunities

During a student's first two years, they should be doing directed research at least half time; and once all coursework is completed and before doing thesis research, they should be doing directed research full time (except when teaching).

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

At each semi-annual doctoral student review meeting, the faculty assess the student's previous semester's research progress and the student's next semester's research plans to ensure that the student is making satisfactory progress. The evaluation of a student's progress in directed research often depends on the student having produced some tangible results. Advisors are individually responsible for adequately supervising this portion.

Students will receive a Pass/Fail grade in Reading and Research 17-993.

Resources and Regulations Governing Research at Carnegie Mellon

- Office of Sponsored Programs
- Office of Research Integrity & Compliance
- Intellectual Property Policy
- Policy on Restricted Research
- Human Subjects in Research Policy

7.18: Internships

Summer Internship Opportunities

The Societal Computing program recognizes that external internships can provide valuable educational and research experiences, particularly when access to proprietary data is required. Ph.D. students may undertake **up to four (4) external internships** over the course of their doctoral program.

Summer Registration Options

During the summer semester, Ph.D. students must choose one of the following options:

- Secure an external internship, **or**
- Continue research with their advisor.

Students are required to:

- **Discuss summer plans with their advisor**, and
- **Complete the Summer Plans Google Form**, distributed in early February by Connie or Alisha.

Your program coordinator will register you based on the form response. **All Ph.D. students will be registered** for either the:

- **Internship course (17-995, Section I)**, or
- **Reading & Research course (17-993, Section R)**
  to maintain full-time student status during the summer.

Note: Both internship and reading & research courses count toward research requirements, but **do not count toward coursework** requirements.

Internships During the Academic Year

Academic year internships are rare. They are only permitted under the following conditions:

- Taking an approved **Leave of Absence**, **or**
- Participating under the **Department's Consulting Policy**.

International Students

Students in F or J visa status must:

- Consult the **Office of International Education (OIE)** before pursuing internships, co-ops, or consulting.
- Obtain **CPT (Curricular Practical Training)** or other valid work authorization **before starting any off-campus employment**.
- Begin the process **early**, as authorization may take **several weeks or months**.

Reminder: International students must remain in compliance with immigration laws. Failure to secure proper authorization may jeopardize visa status.

Advisor Expectations

Advisors may have different assumptions regarding:

- Student availability for summer support, and
- Expectations around internships and research continuity.

Students are encouraged to initiate conversations with their advisors **well in advance** to align expectations.

Internship Extensions

If internship-related research is incomplete at the end of the summer:

- Students may **request an extension** of the internship.
- The extension must follow the **Consulting Policy**, and
- **Does not count** toward the four-internship limit.

Extension Requirements:

- Advisor approval is **mandatory.**
- Requests must be submitted by **August 15** of the same year to Connie or Alisha.
- International students must **Consult the Office of International Education (OIE)** before extending a summer internship.

🌞 Quick Summary: Summer Internship Guidelines

- **Internship Limit**: Max of 4 external internships during Ph.D. program.
- **Summer Options**:
    - Secure internship
    - Continue research
- **Mandatory Registration**:
    - Internship: *17-995 – Section I*
    - Reading & Research: *17-993 – Section R*

- **Summer Plan Form**: Must be submitted in February (distributed by Connie/Alisha).

📆 Academic Year Internships

- Rare
- Only allowed with:
    - Leave of Absence **or**
    - Compliance with consulting policy

🔄 Internship Extensions

- Allowed if research continues
- Requires:
    - Advisor approval
    - Request by **August 15**
    - Compliance with consulting policy

🌍 International Students

- Must consult **OIE** before pursuing internships or consulting
- **CPT** or valid work authorization required
- Start early to avoid processing delays

✅ Additional Notes

- **Internships and Reading & Research count toward research requirements**
- **Do not count toward coursework**

- **Practicum-based directed research** may require additional form submission (contact Connie/Alisha)

- **Early communication with your advisor is essential**

SECTION 8: Dissertation Preparation & Requirements

8.1: Ph.D. Dissertation

The thesis must describe a significant piece of original research work and must describe it well. It is evidence of proficiency, high attainment, and ability to do research in societal computing. It is on this basis that the Software and Societal Systems department certifies the qualifications of the new Ph.D.

Furthermore, it is the most important basis on which the scientific community judges the initial achievement and potential of that individual.

8.2: Thesis Committee

Thesis Committee Guidelines

The student's advisor(s) will serve as the Chair of the thesis committee. All other committee members—including the external member—must be identified and confirmed prior to the thesis proposal presentation.

Committee members are expected to meet regularly with the student to provide guidance and ensure that the research is progressing appropriately.

Committee Composition Requirements:

- The committee must include **at least four members**.

- It must include:

    - **Two (2)** faculty members from the *Societal Computing (SC)* or *Software and Societal Systems (S3D)* departments.

- **One (1)** faculty member from *Carnegie Mellon University (CMU)*, which may overlap with the above.

- **One (1)** external faculty member from **outside of CMU**.

All thesis committees are subject to departmental approval. Please submit your proposed committee to **Connie Herold** or **Alisha Roudebush** for review and approval.

> **Note:** Approved faculty are those officially affiliated with the Societal Computing program or actively collaborating with Societal Computing faculty.

Participation Requirements:

- A minimum of **three committee members (including the Chair)** must be **physically present** for both the thesis proposal and final defense.

Committee Changes:

Any changes to the thesis committee after the proposal must be approved by both the **Committee Chair** and the **Program Director**. A written request detailing the reason for the change and the specific circumstances must be submitted for consideration.

8.3: Proposal

The student submits a written proposal to the thesis committee. The student also orally presents the thesis proposal to interested faculty and students in a public colloquium. The Thesis Proposal must describe a significant piece of original research as described in Section 8.1.

The main purpose of the thesis proposal is to convince the thesis committee that the chosen thesis topic is significant, and that the student's approach has a reasonable chance of success. It also protects the student by providing a more planable path toward completing the degree with the proposed topic. A thesis proposal gives the thesis committee the opportunity to pass such judgment at the start of the work and not at the end. We want to minimize the chance that a thesis will be turned down when almost completed. We expect students to present their thesis proposals as early as possible, ideally soon after establishing the research direction and establishing feasibility. For many students this will be approximately in their third year or at least two years before the defense.

A thesis proposal typically serves the following functions:

- Explain the basic idea of the thesis topic (e.g., the problem to be solved and the approach to solving it)
- Argue why that topic is interesting (e.g., what contributions to the field would be made in carrying out the proposed work)
- State what kind of contributions are expected and what the criteria for success are
- Argue that these contributions are obtainable within a reasonable amount of time
- Demonstrate that the student is qualified to perform the proposed work, as evidenced by an understanding of the area and its literature and by some preliminary results

A thesis proposal should be short, about 15–20 pages of text (in the typical dissertation format, single column, single spaced), and the oral presentation should take about 30 to 40 minutes, not including questions.

A thesis proposal should **not** be:

- A dry run for the thesis
- A summary or abstract of the thesis
- The first chapter or part of the thesis
- A technical report
- A survey of the field
- An annotated bibliography

The thesis committee decides on the outcome of the proposal after the proposal presentation and question-and-answer session as (a) pass, (b) conditional pass, or (c) fail.

When the student has completed all of the program requirements and passes their proposal (including meeting the conditions of a conditional pass, if applicable), they will be asked to complete the *All But Dissertation Status Agreement* (https://www.cmu.edu/hub/docs/abd-status-agree.pdf) form by the program administrator (see Section 8.4).

Like the defense, the proposal should be planned several weeks in advance. There are several recommended and mandatory steps described in Section 8.6.

8.4: PhD Criteria for Advancement to Candidacy

Until the curricular requirements are completed (e.g., core and elective courses, teaching, speaking & writing skills) *and* the thesis proposal is approved *and* all requirements are recorded as completed in DSR the status assigned is *"student."* Upon completion of the curricular requirements and approval of the thesis proposal the student transitions to *"doctoral candidate,"* which is designated formally as having *"all but dissertation" (ABD)* status.

A doctoral candidate with ABD status may choose to continue as a regular student *In Residence*; alternatively, if the residency requirement above is fulfilled; they may choose to be *In Absentia (ABS)*. Most students continue *In Residence* until their defense.

In Absentia (ABS, i.e., off campus): Students who leave CMU but plan to continue working on the thesis will be classified as ABS. These students should not require substantial use of university resources, but are permitted use of the libraries and consultation with faculty or students as necessary. While the candidate is ABS, they are required to pay the university technology fee each semester. No formal enrollment or payment of tuition is required, with the exception of the academic semester in which the degree requirements are completed. A candidate who is ABS can return to campus to defend or defend remotely. For returning to campus, it is required to enroll for a minimum of five units during the academic semester in which the degree requirements are completed. For students defending remotely without returning to campus a Dissertation Completion Fee is charged at the beginning of the final semester. Charges for these units are the responsibility of the candidate.

Since an ABS candidate will not be certified by the University as a "student" for immigration purposes, students who are in the United States on a student visa and who become ABD should not choose to become ABS.

Students are advised to talk to the program administrator and their advisor to understand the implications of ABS status, including fees and immigration status, before making any decisions. For details on fees, see the Doctoral Student Policy, especially section "In Absentia Student Status Including the Final Semester Fees": https://www.cmu.edu/policies/student-and-student-life/doctoral-student-status.html

In residence (ABD, i.e., on campus): Students who receive a stipend based on their status as a graduate student and are paid by or administered by the university (the standard case in S3D) will be required to register for a minimum of 48 units. There are no additional fees for the graduating semester. In exceptional cases, students may be self-supporting and are in ABD status, remaining on campus to complete the thesis; they must register and pay for a minimum of five units each semester.

8.5: PhD Defense

The student's thesis committee decides whether to accept the thesis based on its content and the outcome of the thesis defense, which is a public presentation describing the contributions of the thesis. The presentation is usually about 45 minutes long.

For defenses the possible options for the outcome, to be decided by the committee after the presentation and question-and-answer session, are:

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

If the final copy of the thesis is not submitted within one year of the thesis defense, the faculty may require a second defense before making a final certification.

Your degree title will appear on your diploma as: **Ph.D. in Societal Computing or Societal Computing and Engineering and Public Policy (SC/EPP).**

The logistics for the PhD defense are similar to those of the proposal, as described in Section 8.6.

8.6: Proposal and Defense Logistics

Scheduling: A thesis proposal must be scheduled for a 2-hour meeting. A thesis defense must be scheduled for a 3-hour meeting. To enable the interested public to attend, thesis proposal/defense must be scheduled at a time agreed to by the thesis committee that is (a) during normal business hours and (b) during academic periods – not in the middle of the night, not during weekends, and not on university holidays.

Students should coordinate the proposal/defense date with their committee members and finalize the date as early as possible (usually multiple months in advance) to allow time for travel arrangements, final review, and comments by committee prior to proposal/defense date.

If the student (a) plans to obtain ABS status by a specific deadline after the proposal or (b) plans to graduate by a specific deadline after the defense, the student should talk to the program coordinator about relevant deadlines and provide sufficient buffer for possible revisions and necessary approval steps. For example, students are not allowed to participate in commencement exercises unless the final certification has been made on time, so the Ph.D. defense should be scheduled a few weeks in advance of graduation to allow time for possible revisions and certification.

- For proposals, time may be required after the presentation for revisions.
- For defenses, *in addition* to time for revisions, students should allow for **at least one week** for necessary approvals, including assuring the proper formatting of the dissertation (student's responsibility, see below), the approval of the final version of the thesis by the thesis committee, the Department Head, and the Dean (the program administrator will collect signatures), and the certification of the degree (done by program administrator). That is, **students must** hand in their final version of the thesis document at least one week before the planned graduation date.

Students should coordinate with their advisor's assistant to secure a room for their proposal/defense presentation. The room must be available to the public and must

accommodate the committee and several attendees of the public.

In-person and remote participants: The candidate and at least **three** thesis committee members (including the chair) must be physically present for the thesis proposal/defense, and the thesis proposal/defense must be held at Carnegie Mellon. The only two kinds of routine exceptions are (a) for students in Ph.D. programs offered jointly with other universities and (b) for students in *In Absentia* status who elect not to return to campus for the defense (see Section 8.4). Any other exceptions must be approved by the Program Director. For remotely held defenses, a way to attend the proposal/defense from the CMU campus (usually a Zoom link) must be shared with the usual announcement of the proposal/defense to the public.

If the proposal/defense has a remote component (e.g., Zoom), the student is responsible for setting up the infrastructure, and completing the form "Consent to Publicly Livestream a Presentation".

Formatting requirements: The thesis document must comply with relevant formatting requirements.

1. Thesis must use the department-approved title page layout: Document Template. A LaTeX template can be obtained from Catherine Copetas (copetas@cs.cmu.edu).
2. The title page must include a Technical Report (TR) number that the student should request from Catherine Copetas once the defense announcement goes out and is posted to the SCS Calendar of events.
3. The title page should acknowledge funding sources (grants your advisor may have had which supported your work).

The TR number should be requested as soon as the thesis defense is announced and posted to the SCS Calendar of Events. The correctness of the formatting of the thesis document should be verified with Catherine Copetas prior to final submission.

Deadlines and deliverables:

At the beginning of the final semester: Communicate your intention to propose/defend to the program administrators, so that they can ensure registration requirements are met (if applicable) and can help you through the process.

Several months in advance of the proposal/defense: Schedule a date for the proposal/defense with the committee. For the defense: start preparing the thesis document and request a TR number (see above).

Before the thesis proposal/defense, the entire thesis committee is expected to have read the entire proposal/thesis document; all committee members are encouraged to provide feedback to the candidate before the proposal/defense. To facilitate the process, the student is advised to share a draft of the proposal/defense well in advance of the proposal/defense date with the thesis committee. The student can reach a mutual

agreement with the committee members about an appropriate timeline. We recommend having these conversations as the committee is formed.

Three weeks before the proposal/defense date: The advisor is encouraged to consult with the committee about the readiness of the proposal before announcing the oral presentation.

Ten business days before the proposal/defense date (mandatory): The student must send the following information to the program coordinator Alisha Roudebush aroudebu@andrew.cmu.edu:

1. The student's name as it should appear on the diploma
2. Thesis Title
3. Date, time, and location of the proposal/defense presentation
4. Thesis committee members: names, titles, affiliations, and email addresses
5. Thesis abstract: less than 350 words describing the thesis
6. A link to the proposal/thesis document for any outside faculty who wish to review
7. A PDF of a poster announcing the proposal/thesis presentation (Thesis Poster Template)
8. A zoom link for the proposal/thesis presentation and the completed "Consent to Publicly Livestream a Presentation" form, if applicable

The program coordinator posts the public announcement of the thesis defense.

In addition, the student **must** publicize the proposal/defense, typically by printing and posting 10 posters announcing the proposal to the SCS community (TCS/NSH/Gates).

Days before the proposal/defense: The S3D IT team can help set up the projection and zoom, if needed and asked in advance.

Day of the proposal/defense: The proposal defense starts with a presentation by the candidate (typically 30–40 minutes for a proposal, 45 minutes for the defense), followed by a question-and-answer period. The thesis committee chair(s) determines who may ask questions and in what order and brings the discussion to a close at the appropriate time. The question-and-answer period is followed by a closed-door session attended by only the members of the thesis committee and any interested faculty members, in which the committee decides on the outcome.

Catering is not common nor expected at proposals/defenses.

After the proposal: The student should take down the posters they posted.

The committee chair(s) must return the “Pass form” provided by the program administrator, recording the outcome of the proposal presentation as pass, conditional pass, and fail.

After the defense: The student should take down the posters they posted.

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

After the committee has approved the final version of the dissertation, there are a number of additional required steps before the degree can be certified:

The student must create a PDF of the final version of the dissertation and verify with Catherine Copetas that the title page is correct. The student must then submit the following information to the SC program coordinator:

1. the PDF,
2. the email confirmation from Catherine Copetas about the correct title page, and
3. the Dissertation and Thesis Repository Submission Checklist form with the following information filled out: preferred email, keywords, subject category, funding, and “I want my dissertation/thesis deposited in Kilthub” checked. If you choose the “I require an embargo on my work” section please check with Catherine Copetas prior. Most students DO NOT choose this, it is very exceptional. If you choose to submit to Pro-Quest, there is a fee you must pay.

The thesis committee chair, the Department Head, and the Dean sign a final certification sheet after the student submits the final version of the thesis.

The student must complete the Survey of Earned Doctorates at https://sed-ncses.org/login.aspx and send the confirmation to the SC program coordinator. This is required for graduation.

The student must complete the Graduating Student Data Sheet and return it to the SC Program Coordinator.

Students must contact the S3D IT Services Team <s3d-help@andrew.cmu.edu> and make arrangements to return their key and departmental equipment, including any computers, monitors, keyboards, mice, and headphones purchased with departmental funds. Students must let the IT team know if they have any virtual or physical servers they have sole administrator access to to make arrangements for handover or retirement.

The student must ensure no balance remains on your student account (late fees, insurance fees, etc.)

The student must sign into SIO and update the mailing address for Diploma Delivery.

The SC Program Coordinator will add the student to the S3D alumni page and email list.

8.7: Thesis Binding

It's up to each student to decide if they want to pursue binding.
The two options suggested for binding are:

1. Lulu
2. ProQuest

If you're looking to print and bind your thesis, those would be the go-to platforms. Lulu is often used for self-publishing and custom printing, while ProQuest is commonly used for academic thesis/dissertation submissions and distribution.

Policies:

- University Policy for Doctoral Student Status,
- University-level ABD status &, frequently asked questions

SECTION 9: Department Policies & Protocols

9.1: Petition Procedures- for adding a course to current STAR list

The faculty have selected an initial set of approved courses in each category. These are subject to review from time to time to ensure that, if the course content changes, it remains consistent with the purpose of that star.

SC Ph.D. students may request that the faculty approve an additional course in one of the star categories. In general, if the request is approved, the course will be added to the list for other students to take for star credit. When a request is student-initiated, it is the student's responsibility to make a case supporting STAR status. Students should submit a request to the SC Ph.D. Program Director and the SC Ph.D. Program Administrator using the following template:

A. Your name
B. Name and number of the course
C. Course description or URL to course description
D. Which star requirement you want this course to satisfy
E. An indication of approval by your advisor.
F. Evidence, including quotes from the course description and syllabus with supporting links, to demonstrate that the course:

G. Matches the topic and fulfills the particular requirements of the star course category you have requested. Star courses should have some degree of breadth but are not expected to provide comprehensive coverage of a star category.
H. Assumes an undergraduate background in the relevant area–no more and no less
I. Uses multiple forms of evaluation (e.g., assignments, exams, projects, papers, …)
J. Is appropriate for Ph.D. studies in terms of depth and engagement with research. For example, if a course is primarily designed for master's students, a justification should be given that the course is also an appropriate preparation for Ph.D. studies. Sometimes a course that is missing engagement with research may be adapted for Ph.D. students through additional or replacement assignments that lead PhD students deeper into relevant research topics

Given sufficient information, requests received by the faculty should generally receive a response within 2 weeks if the request is made during a regular academic semester. Star credit should generally be requested at least **2 weeks before the end of the semester before taking a course**, and preferably 2 weeks before the beginning of the registration period. This ensures students can register for a course before it fills up and avoid spending time on a course that is not in the end approved.

Courses will not, in general, be approved in two categories, but instead will be approved in the category that best fits the primary emphasis of the course (if any). If any exception to this principle is made, the student must choose which category to apply the course to and find a different course with which to fulfill the other requirement.

There is a precedent for approving an independent study for star credit, in the rare case where an appropriate independent study suits the student's needs better than any available course. The approval process is the same in this case, but the proposal submitted by the student should identify who would advise the independent study, what the output of the study will be and how it should be evaluated, the match to the appropriate star category, appropriateness of the course for Ph.D. study in terms of depth and engagement with research and should indicate advisor approval.

Course curricula may evolve over time, due to the advancing state of knowledge, the changing background and needs of students, or the strengths that a new instructor brings to bear on a course. Therefore, the faculty may re-examine star courses from time to time to verify the course continues to fulfill the requirements for a star. If it does not, star status may be withdrawn for future offerings of the course.

9.2: Department Policy for Withdrawing from a Course

Students must follow the University deadline for withdrawing from a course.
https://www.cmu.edu/hub/registrar/course-changes/index.html

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 the Hub.

There is a separate calendar for doctoral level courses.

9.3: Process for Completing a Master's Degree en route to a PhD

Ph.D. students in the Societal Computing program may be awarded a **Master of Science in Societal Computing** while progressing toward their doctoral degree. This degree is optional and must be **formally requested** by the student.

Requirements

To be eligible for the Master's degree, students must have completed the following:

- **Core "Star" Courses**: 48 units
- **Elective Courses**: 36 units
- **Practicum**: 18 units
- **One Skill Requirement**: Demonstrated proficiency in **either Speaking, Writing, or Computational** skills

Request Process

Students must indicate their request for the Master's degree on the **Doctoral Student Review (DSR) form** submitted prior to the **semi-annual Student Doctoral Review**. Degrees will not be granted retroactively.

The official degree awarded will be titled:
Master of Science in Societal Computing

9.4: PhD Student Work Hours, Vacations, and Time Off Expectations

S3D strongly supports a healthy work/life balance for students. Being at CMU means being surrounded by individuals who are both driven and ambitious, but getting a PhD is a marathon, not a sprint. We recognize the declining marginal productivity of additional hours invested in a week after a certain point and that the point where returns start to diminish is different for everyone. We

encourage all our students to find a sweet spot that allows them to have sustainably high levels of productivity for the entirety of their program.

The guidelines outlined in the following sections aim to achieve two things: 1) provide guidance and consistency for handling certain academic and life events; and 2) establish a baseline for students to convey to them what the faculty deem reasonable in general as well as when something new or unexpected (e.g., a death in the family) occurs. In some rare cases, stipulations of an external funding source may override these guidelines.

We realize the close nature of student/advisor relationships and strongly encourage ongoing conversations where both parties discuss their preferences and define and continue to develop a healthy work relationship.

Regular Work Weeks

During normal work weeks, SC PhD students generally devote about 40 to 50 hours on average in total to their academic responsibilities, which include coursework, academic research, and serving as a teaching assistant. During semesters when a student is serving as a teaching assistant, they generally spend on average 10-15 hours per week on their teaching assistant responsibilities. If students find the teaching workload is out of line with the average hours as noted, they should first discuss this with the instructor, and if needed contact their advisor or the PhD program director.

In reality, and especially in the more advanced stages of the program, academic life often requires that more time is invested at certain periods to meet specific deadlines. If such situations occur, it is reasonable to take more rest time after the deadline has passed to maintain a healthy work/life balance.

Advisors and students are encouraged to talk about their regular work schedules and respect each other's communication boundaries when not working. Generally, meetings between students and advisors should be scheduled on weekdays during normal business hours unless an alternate time is mutually preferable. It is also expected that students do most of their research work on campus during business hours on weekdays. This is helpful for collaborating with other students and faculty, for avoiding feelings of isolation, and for taking advantage of and contributing to our mutually supportive research and education community. However, if campus presence is not necessary for a project, with their advisor's agreement, students may perform some of their work remotely or outside of normal business hours if that is more convenient or more conducive to their productivity.

When students find themselves struggling to meet their responsibilities, whether due to unexpected life events, having overcommitted themselves, or other reasons, they should discuss the situation with their advisor and consider options such as reducing their course load, asking instructors for extensions on assignments, taking an incomplete in a course, or reducing their research commitments. The department head, PhD program director, or an ombudsperson may also be good resources for students in this situation.

University Holidays

Generally, CMU students are not expected to work on the official university holidays (see https://www.cmu.edu/hr/benefits/time-away/holidays.html for the complete list of official university holidays and “winter break days” when the university is closed) or on other days when the university is officially closed (e.g. weather/emergency closures). Some students may wish to work on these days, and instead take time off on other days. We encourage this kind of flexibility, provided it is clearly communicated and agreeable to advisors.

Expectations for Time Off

Advisors are expected to be flexible in allowing their students to take a reasonable amount of time off as long as they are making good progress and meeting their academic responsibilities. In addition to university holidays and days when the university is closed, advisors are expected to approve, at a minimum, 10 days of vacation per year. This includes long weekends, short vacations, and religious holidays that are not one of the official university holidays.

The seasonal pattern of every research group is different, so it is impossible to state general rules regarding timing of vacation. With the exception of an unexpected emergency situation, students should coordinate time off with sufficient advance notice to minimize impact to individual or research group progress. In the unusual circumstance of a conflict regarding vacation between a student and advisor, the department can mediate.

The department does not keep track of graduate student work schedules.

Advisors may ask students who wish to take more than the typical amount of time off to make up work time or to take an unpaid leave of absence. With agreement from their advisors, sometimes students make up work by working remotely part time while traveling or by working on evenings or weekends before or after their time off. As research assistants, PhD students are expected to work on all days when the university is open for business even when classes are not in session, including Spring Break, Fall Break, in the summer months, and during the weekdays of the winter semester break period when the university is open (the university generally is closed for approximately seven or eight weekdays over the winter semester break period – see https://www.cmu.edu/hr/benefits/time-away/holidays.html for the list of days when the university is closed). However, many students arrange with their advisor to take most of their time off from academic activities during the times when classes are not in session.

Personal Issues

When students need to stay at home to take care of personal, family, or household responsibilities, they are encouraged to work from home. Generally, working from home due to personal issues should be temporary. Examples include working from home to care for a sick family member, to attend a routine medical appointment, to address a household maintenance issue, and due to weather affecting the ability to safely commute. Students are expected to communicate and discuss with their advisors such circumstances in advance.

Students who are not meeting their responsibilities due to extenuating or distressing circumstances should inform the department and/or seek help through CaPS or the appropriate means.

Absences Due to Illness

For minor illnesses such as a cold or the flu, students should stay home and rest if needed, and are encouraged to do so to not infect others. When illness may impact a student's research schedule or other CMU responsibilities, they should reach out to their advisors to inform them about their expected timeline for recovery and how their research or other activities may be affected. Advisors are expected to allow students extra time off to recover (beyond the typical 15 days away from academic responsibilities).

Students with a serious illness, chronic illness, or a disability should contact the Office of Disability Resources to request accommodations. The Office of Disability Resources may require medical documentation of the condition.

Civic Duties

Advisors are expected to be flexible in allowing students reasonable time off (in addition to the typical 15 days) to fulfill civic duties and obligations, such as jury duty and participating in elections. Advisors should be notified when these obligations occur so adaptations to research schedules can be made if necessary. Jury service that extends beyond two weeks may require a leave of absence. Students should inform the court that they are full-time students if called for jury duty.

Bereavement and Similar Personal Events

In the case of loss of a loved one, all students should have the opportunity to take time off work (in addition to the typical 15 days) and spend it with their families and loved ones to grieve. Advisors are expected to allow students extra time off in these circumstances, including allowing time for students to travel to be with their families. Students are expected to communicate their needs and plans to their advisors when it is practical to do so.

Birth or Adoption of a Child

See the university policy on student parental accommodation, which provides accommodations for students who are gestational parents as well as all doctoral students who are new parents.

Leave of Absence

In case of a protracted leave of absence, students must inform their advisor and the department and potentially initiate the formal process of taking extended leave from the PhD program. Students considering a leave of absence should discuss the possibility with their advisor as early as possible.

SECTION 10: Grading & Evaluation

10.1: Grading Scale/System

A student's progress in the Ph.D. program is measured along multiple dimensions. One of these dimensions is a student's performance in courses, and our expectation is that Ph.D. students earn a B- or better. Grades of C+ or below do not count towards program requirements.

10.2: Independent Study/Directed Research

An Independent Study course is appropriate for a learning activity that is neither covered by existing courses nor is in independent research. At the Ph.D. level, students tend to focus on formal coursework and independent research, so the independent study course is rarely taken. Please reach out to your Academic Program Coordinator for a form if you feel this is appropriate.

10.3: Doctoral Student Review-(DSR) Semi-Annual /Satisfactory Academic Standing

Evaluation and feedback on a student's progress are important both to the student and to the faculty. Students need information on their overall progress to make long-range plans. The faculty need to make evaluations to advise students, to make support decisions, and to write recommendations to potential employers.

The faculty meet at the end of each semester to make a formal evaluation of each student in the Ph.D. program. This meeting is called the "Doctoral Student Review" meeting. The purpose of having all the faculty meet together to discuss all the students is to ensure uniformity and consistency in evaluation across all the different areas, by all the different advisors, throughout the years of the SC Ph.D. program as it inevitably changes.

The faculty measure each student's progress against the goal of completing the Ph.D. program in a reasonable period of time. The evaluation considers all components of the program using indicators and information sources described below. Requirements need not be fulfilled in any particular order, but each student must show reasonable progress each semester toward satisfying the full set of requirements. Because the critical path to completing the Ph.D. is research, making early and regular research progress is the most important consideration. Through a Doctoral Student Review letter, the faculty inform students of the results of this evaluation, which may include specific recommendations for future work or requirements that must be met for continued participation in the program.

Components and Indicators

In their evaluation, the faculty consider the following components, though naturally only some of these components will be applicable in any given semester; they are not equally important at every stage of a student's career, and each student will progress through the requirements as suits his or her individual needs:

Directed research: Evaluated by research supervisor and other collaborating faculty.

Courses taken: Evaluated by the course instructor—brief prose evaluation/summary grade.

Teaching: Evaluated by the current advisor

Skills: Writing, speaking, and computational by current advisor

Thesis: Status summarized by the thesis advisor and commented by members of the thesis committee.

Other: Lectures given, papers written, etc. evaluated by cognizant faculty.

The faculty's primary sources of information about the student are the student's advisor and the student's statement. The advisor is responsible for assembling the above information and presenting it at the faculty meeting. The student should make sure the advisor is informed about participation in activities and research progress made during the semester. Each student is asked to submit a summary of this information to the advisor at the end of each semester—the Student Statement for Doctoral Review at https://gsaudit.cs.cmu.edu.

This statement is used as student input to the evaluation process and as factual information on activities and becomes part of the internal student record. It is strongly recommended that the student and advisor meet prior to the faculty meeting to review the information provided in this statement.

Outcomes and Recommendations

Based on the above information, the faculty decide whether a student is making satisfactory progress in the Ph.D. program. If so, the faculty usually suggest goals for the student to achieve over the next semester. If not, the faculty make more rigid demands of the student; these may be long-term (e.g., finish your thesis within 1-1/2 years) or short-term (e.g., select, and complete one or more specific courses next semester; prepare a thesis proposal by next Doctoral Review meeting).

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

The faculty also decide whether financial support (including tuition and stipend) should be continued for each student. Termination of support does not always mean termination from the program.

If you wish to appeal any decisions please follow the Graduate Student Appeal and Grievance Procedures below:

Summary of Graduate Student Appeal and Grievance Procedures

10.4: Satisfactory Academic Standing

Students are evaluated at the end of every semester through the Doctoral Review Process described in Section 10.4: Doctoral Student Review-(DSR). If a student is not making satisfactory progress, the faculty may choose to dismiss the student from the program. Typically, when students are first informed that their progress is not satisfactory through a DSR evaluation, the faculty provides concrete requirements that must be met in the following semester to be considered satisfactory progress in the next evaluation.

See summary of Graduate Student Appeal and Grievance Procedures

SECTION 11: Funding & Financial Support

11.1: Health Insurance Requirement

Student (SHIP) Health Insurance Coverage

If you elect to enroll in Carnegie Mellon University's Student Health Insurance Plan (SHIP), the University will cover 100% of the premium cost for your individual coverage under SHIP. While you will have the opportunity to purchase partner, spouse or dependent coverage under the SHIP plan, the University's support will be 100% of the individual coverage amount. Please note that if you wish to elect the required health insurance coverage under an alternate plan, you will not be eligible for the University support referenced here.

https://www.cmu.edu/health-services/student-insurance/plans.html

https://www.cmu.edu/sfs/billing/payments/monthly-plan/index.html

The HUB's website (https://www.cmu.edu/hub/new-grad/enrollment-finances.html) also has information specific to health insurance coverage and waivers for doctoral students.

11.2: Additional Sources of Internal & External Financial Support

We encourage students to seek their own external funding since often the award is prestigious (e.g., NSF or Hertz) or the source provides an opportunity to make professional connections (e.g., an industrial fellowship).

If a student receives an external fellowship/scholarship, they must notify the SC Ph.D. Program Administrator. The department supplements the stipends of students with an outside fellowship to meet the stipends of students with internal funding, plus a bonus: in a year when a student brings in a fellowship worth $X, that student gets 1% of X added to their stipend each month, for a total of 12% of X if the student takes a stipend all 12 months.

The department also pays a dependency allowance that is 10% of the S3D monthly base stipend per eligible dependent provided that your spouse or qualifying domestic partner earns less than 15% of the stipend amount.

11.3: Department Policy on Outside Employment

International students must contact the Office of International Education regarding their ability to hold employment.
Working (i.e., doing anything for pay) either within or externally to the university, beyond your responsibilities as a teaching assistant or research assistant, is a privilege, not a right.
Work is permitted under exceptional circumstances, and with the written approval of the student's advisor (or with the written approval of all advisors, in case of multiple advisors) and of the Societal Computing program director, the following is permissible:

- Outside consulting will be limited in time, and should consist of no more than **8 (eight) hours of consulting per week, and must be done in Pittsburgh.**
- The purpose of the consulting must be closely related to the research area of the student and be clearly aligned with the student's thesis goals.
- The consulting project must be self-contained. In particular, it cannot use any Carnegie Mellon University intellectual property.
- Likewise, the project cannot make any use of university facilities (e.g., buildings), or equipment (e.g., laptops, or computing resources, including networking and email).
- Approval from the advisor(s) and the program director must be renewed every semester.

Students are responsible for understanding the tax implications and are encouraged to consult with a tax advisor if needed. International students should consult with OIE, as outside employment is usually forbidden.

Students who are not on a leave of absence must abide by all Carnegie Mellon rules and policies while performing these activities, including, but not limited to, rules governing potential conflicts of interest and ownership of intellectual property.

We require that students limit employment to follow university and government rules, but the more important principle is maintaining adequate focus and creative energy for the research that is at the core of the Ph.D. degree.

SECTION 12: Graduate Student Handbook

Graduate Student Handbook Suite.
https://www.cmu.edu/graduate/resources/index.html
