EECS Graduate Handbook 2019-2020

This document is intended for ECE and CS graduate students and faculty.

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1 Academic Requirements

This chapter outlines all the academic requirements for graduate students in the ECE and CS programs. Official program requirements are available in the catalog. If there is a conflict between what is stated here and what is presented in the catalog, the catalog requirements take precedent.

Computer Science program requirements: <u>https://catalog.oregonstate.edu/college-</u> <u>departments/engineering/school-electrical-engineering-computer-science/computer-science-ma-meng-</u> <u>ms-phd/</u>

Electrical and Computer Engineering program requirements: <u>https://catalog.oregonstate.edu/college-departments/engineering/school-electrical-engineering-computer-science/electrical-computer-engineering-meng-ms-phd/</u>

Academic Regulations: https://catalog.oregonstate.edu/regulations/

The Graduate School at Oregon State University has a number of policies that effect all graduate students as well as a number of resources for graduate students, as described here: https://gradschool.oregonstate.edu/current

1.1 Academic Progress

A student's academic progress is measured through coursework, oral examinations (M.S. and Ph.D.), and meeting research project deadlines with their major advisor (M.S. and Ph.D.).

Students will be warned if their academic progress is not meeting the requirements below, and an academic plan will be developed to get the student back on track in a reasonable time. Barring exceptional circumstances, not meeting our academic progress guidelines in a subsequent quarter will result in dismissal from the student's graduate program, with possible allowance to change degree programs (from Ph.D. to M.S. or M.Eng., or from M.S. to M.Eng.). Major professors will provide feedback and consult on warnings and dismissals that are reviewed by the Graduate Student Progress Committee. In addition, unsatisfactory academic progress may result in non-renewal of assistantships in the School of EECS.

Reminders for deadlines (e.g. program of study, qualifier, spring academic review) will be sent to students and (when applicable) their advisor.

1.2 Degree timelines

Details of degree requirements are given in the rest of this guide but these are the major milestones. The quarter numbers do not count summer quarters: e.g., for a fall start, the 4th quarter is fall of the second year. Relevant section numbers with further details are given in brackets.

Quarter	M.Eng.	M.S.
1	Portfolio preparation course (2.3 & 2.4)	Submit a goal sheet (2.5)
	Submit program of study (2.10)	
2		Identify major advisor (2.8)
		Submit program of study (2.10)
Throughout	Maintain a 3.0 GPA (2.6)	Maintain a 3.0 GPA (2.6)
	Complete ≥ 2 courses per quarter (2.7)	Spring Academic Review (2.5)
Last	Portfolio completion course (2.3 & 2.4)	Final oral exam (2.11)
Quarter	Ph.D. (with prior M.S.)	Ph.D. (no prior M.S.)
1	Submit a goal sheet (2.5)	Submit a goal sheet (2.5)
3	Identify major advisor (2.8)	Identify major advisor (2.8)
	Program of study meeting (2.10)	
Throughout	Maintain a 3.0 GPA (2.6)	Maintain a 3.0 GPA (2.6)
	Spring Academic Review (2.5)	Spring Academic Review (2.5)
4	Qualifier exam (2.12.1)	
5		Program of study meeting (2.10)
7		Qualifier exam (2.12.1)

Preliminary exam (2.12.2)

Final oral exam (2.12.3)

Preliminary exam (2.12.2)

Final oral exam (2.12.3)

Last

1.3 ECE Program and Course Requirements

	M.Eng.	M.S.	Ph.D.
Required Core	3 of the following: ECE 614, 520, 530, 550, 560, 570, 580, 590		
	An average GPA of at least 3.0 must be achieved over these 3		
		courses.	
Electives	20 graduate	15 graduate	36 graduate credits
ECE credits, or other as	standalone credits	standalone credits	
approved by the committee,			
excluding blanket and thesis			
credits			
Blanket Credits	0-6	0-6	0 - 15
ECE 501, 505, or 506			
ECE 601 (Ph.D. only)			
Thesis or Project	Portfolio Preparation	9 – 12 credits ECE	36 – 60 credits (ECE
	and Completion	503	603)
	Courses (ENGR 599)	or	
	2 credits total ¹	6 credits ECE 506	
Responsible Conduct of	Complete the online training		
Research Training	http://research.oregonstate.edu/ori/responsible-conduct-research		
	and submit completion certificate to eecs.gradinfo@eecs.orst.edu		
EECS Colloquium	1 term in the first	3 terms in the f	irst year of study
ECE 507 (cannot be used toward	year of study		
the program of study)			
Total Graduate Credits	45	45	108

All programs of study submitted to the Graduate School must consist of at least 50% graduate standalone courses (numbered 500 and above). The remaining credits may be the 500 component of 400/500 "slash" courses.

M.Eng. or M.S. students without undergraduate degrees in Electrical Engineering or Electrical and Computer Engineering must complete one course from at least four of the following topic areas:

- A. ECE 390 or ECE 590
- B. ECE 322 or ECE 422 or ECE 520
- C. ECE 323 or ECE 423 or ECE 428 or ECE 528
- D. ECE 351 or ECE 451 or ECE 461 or ECE 550
- E. ECE 352 or ECE 462 or ECE 464 or ECE 560
- F. ECE 375 or ECE 471 or ECE 472 or ECE 473 or ECE 570

¹ Students who switch from the M.S. or Ph.D. program into the M.Eng. program in their last quarter of study may request a short oral exam representing their work during their studies with the committee they formed for their M.S. or Ph.D. program. Students who switch from the M.S. or Ph.D. program into the M.Eng. program in their second-to-last quarter of study may request to waive the Portfolio Preparation requirement. These requests should be made at the time of submitting the new M.Eng. program of study.

1.4 CS Program and Course Requirements

	M.Eng.	M.S.	Ph.D.
Breadth Requirement	At least two courses each out of three areas, not double counted:		
	Theoretical Comp. Set	cience: CS 515-517 (M.Eng.	& M.S. only), CS 52X
	 Artificial Intelligence 	: CS 53X	
	Computer Systems:	CS 57X, CS 54X, ECE 57X	
	 Programming Langua 	ages: CS 58X	
	 Software Engineering: CS 560 – 564, CS 567, CS 569 		
	Human Computer In	teraction: CS 564 - 568, RO	B 567
	Computer Vision and	d Graphics: CS 55X	
	An area approved by	/ the committee	
	At least a 3.0 GPA must be a	achieved over these six c	courses.
Depth Requirement	N/A	3 graduate courses	4 graduate courses
		A coherent set of cou	rses giving preparation
		and support for the stu	ident's thesis or project,
		selected in consultatio	n with and approved by
		the student's major p	professor. Two breadth
		courses may also be	used as depth courses.
Theoretical Computer Science			CS 515 and CS 517
Blanket Credits	0 – 6	0-6	0 – 15
CS 501, 505, or 506			
CS 601 (Ph.D. only)			
Thesis or Project	Portfolio Preparation and	9 credits CS 503	36 credits (CS 603)
	Completion Courses	or	
	(ENGR 599)	6 credits CS 506	
	2 credits total ²		
Responsible Conduct of	Con	nplete the online training	5
Research Training	http://research.oregonst	ate.edu/ori/responsible-	<u>conduct-research</u> and
	submit completion c	ertificate to <u>eecs.gradin</u>	fo@eecs.orst.edu
EECS Colloquium	1 term in the first year of	3 terms in the f	irst year of study
CS 507 (cannot be used toward	study		
the program of study)			
Total Graduate Credits	45	45	108

All programs of study submitted to the Graduate School must consist of at least 50% graduate stand-alone courses (numbered 500 and above). The remaining credits may be the 500 component of 400/500 "slash" courses. All graduate students in Computer Science must achieve a B grade (or equivalent) in the following courses, or courses deemed equivalent to these courses by the program director, and must be taken either prior to or during your graduate studies. Exceptional students may meet these requirements by taking equivalent grad-level classes.

- A. Theory of Computation (equivalent of CS 321)
- B. Analysis of Algorithms (equivalent of CS 325)
- C. Operating Systems (equivalent of CS 444) or Computer Architecture (equivalent of CS 472)
- D. Translators (equivalent of CS 480) or Programming Languages (equivalent of CS 381)

² Students who switch from the M.S. or Ph.D. program into the M.Eng. program in their last quarter of study may request a short oral exam representing their work during their studies with the committee they formed for their M.S. or Ph.D. program. Students who switch from the M.S. or Ph.D. program into the M.Eng. program in their second-to-last quarter of study may request to waive the Portfolio Preparation requirement. These requests should be made at the time of submitting the new M.Eng. program of study.

1.5 Spring Academic Review (M.S. and Ph.D. only)

In Spring quarter, all M.S. and Ph.D. students will submit a summary of their academic progress and goals. The student's advisor will review this and comment on the student's progress. It is recommended that students meet with their advisors to discuss their academic progress in person at this time. Students who are not making reasonable progress toward the degree (or do not have an advisor at the time of review) are identified and reviewed by the Graduate Student Progress Committee, and a minimum progress requirement is established for each of them. Students will receive a letter listing a set of actions that must be completed. Barring exceptional circumstances, a student who fails to complete the required actions will be dismissed from the graduate program.

Students in their first quarter will fill out a goal sheet to initiate the academic review process. Failure to participate in the Spring Academic Review or submit a first-term goal sheet will result in a hold on registering for courses until the review is completed.

1.6 GPA Requirements

The Graduate School requires a minimum grade point average (GPA) of 3.00 for:

- (a) all graduate courses taken at OSU as a graduate student, and
- (b) for courses included in the graduate program of study.

The courses on a student's program of study are those that are taken in order to satisfy your program requirements. However, all graduate courses a student takes while at OSU include any courses you take for personal interest and repeats of courses: at OSU, if a student repeats a course, only the grade in the second attempt contributes to their overall GPA. Grades on transfer courses will be included in the calculation of the program-of-study GPA, but will not affect the GPA of courses taken at OSU. Both the overall GPA and program-of-study GPA must be above 3.0 before scheduling final oral or written exams (M.S. and Ph.D.) or beginning the portfolio completion class (M.Eng.).

Given this strict requirement, the School of EECS requires that students maintain a GPA of 3.00 throughout their degree. If a student's graduate GPA falls below 3.00, the School of EECS will issue a warning, and a study plan will be developed to raise the GPA above 3.00 in a timely manner. For M.Eng. students, the Graduate Coordinator or Associate School Head for Graduate Programs will meet with the student to develop this study plan. For M.S. and Ph.D. students, the major advisor will be consulted in the development of the study plan.

If a student's graduate GPA in a single quarter is below 3.00 but the overall GPA is above 3.00, the student (and their major advisor, if one is on record) will be informed, but no warning will be issued.

1.7 Progression in Coursework (M.Eng. only)

We expect our coursework-based master's students make steady progress in completing their coursework. The School of EECS requires that:

- 1. Students may withdraw late from courses or switch to S/U (satisfactory/unsatisfactory) grading at most twice in any three consecutive academic-year quarters.
- Students complete at least two letter-graded or pass-fail didactic courses (non-blanket courses) every quarter until the coursework on their program of study is complete. Grades of S/U (satisfactory/unsatisfactory) in graduate or required prerequisites are not considered progress as they cannot count toward a degree.

If students do not meet this expectation, the School of EECS will issue a warning. Exceptions based on availability of courses or part-time studies should be sought a priori from the Associate School Head for Graduate Programs.

1.8 Selecting and Switching Major Advisors (M.S. and Ph.D. only)

1.8.1 Advisor selection

Depending on how a student is admitted to our M.S. or Ph.D. program, they may have an advisor of record from the start. If not, the student should identify an advisor as early in the first year as possible, so that the student can start taking research and project (blanket) credits to get started in research. To identify an advisor, we recommend:

- The student takes classes in their area of interest, as the faculty teaching this class will be a good point of contact for identifying an advisor;
- The student attends reading groups or seminars in their area of interest, which will help them get to know the faculty and graduate students in their area of interest; and,
- The student talks to a prospective advisor about how to find out about the research area and whether it is a good fit with the student's interests.

Once an advisor has been identified, the student simply emails the Graduate Coordinator <<u>eecs.gradinfo@oregonstate.edu</u>> with the new advisor cc'd to notify the School of EECS of the new advisory relationship. Having an advisor is an important signal of academic progress. Not having a major advisor by the end of your second quarter (for M.S.) or third quarter (for Ph.D.) will result in discontinued enrollment in the M.S. or Ph.D. program. In exceptional circumstances, this deadline may be extended, but needs prior approval from the Associate School Head of Graduate Programs.

You will be able to enroll in research and project credits with your advisor by simply emailing this intent to <<u>eecs.gradinfo@oregonstate.edu</u>>.

1.8.2 Switching Advisors

Changing advisors is fairly common. Ideally, this comes from conversation between the student and their current advisor with the current advisor supporting the effort to identify a new advisor. However, situations are not always ideal, in which case the Graduate Coordinator, Associate School Head for

Graduate Programs, or the Graduate Student Progress Committee will work to facilitate this process. A student or major advisor should notify the Associate School Head for Graduate Programs of the intent to change the advising relationship.

- If the student has identified a new major advisor, then the student will email the Graduate Coordinator <<u>eecs.gradinfo@oregonstate.edu</u>>. The School of EECS will notify the previous and new advisors confirming the change in responsibilities.
- 2. If a new major advisor has not been identified, then either the student or the previous advisor will email the Graduate Coordinator <<u>eecs.gradinfo@oregonstate.edu</u>>. The School of EECS will notify the previous advisor confirming the change in responsibilities and the student regarding the process and timeline for identifying a new advisor. The Graduate Coordinator, Associate School Head for Graduate Programs, and/or the Graduate Student Progress Committee will work with the student to facilitate a transition to a new advisor; the earlier this facilitation can happen, the better. This may include mediating conversations with the previous advisor to understand reasons for the switch and to ensure that the student will have every chance to be successful with a new advisor. However, the student is ultimately responsible for identifying a new advisor (see "Procedure for Selecting an Advisor") by the end of the following academic term. In the absence of exceptional circumstances, not doing so may result in discontinued enrollment in the M.S. or Ph.D. program.

Results of formal exams and meetings (qualifiers, oral exams, program meetings) are respected through advisor changes: for example, if you pass your qualifier but later switch advisors, you do not need to retake the qualifier exam. A student's committee may also be helpful during a transition to a new advisor.

1.9 Program Committee

A students' committee, in consultation with the student, is responsible for preparing the student's program, administering the required examinations, and reporting the student's progress to the School. This committee has considerable freedom in defining the student's program, being subject only to the rules of the Graduate School and the degree requirements listed in this guide. The student's committee includes their major advisor, and should be viewed as a group of faculty who will give you broader guidance on your research.

M.Eng.	Three graduate faculty members in EECS. For students completing their M.Eng.	
	degree with a portfolio, the committee is assigned by the School of EECS.	
M.S. (project)	Three graduate faculty members: at least two in the major field and one may be	
	from the graduate faculty at large.	
M.S. (thesis)	Four graduate faculty members: at least two in the major field, one in the minor field	
	if a minor is included, and a Graduate Council Representative (GCR). When a minor is	
	not included, the fourth member may be from the graduate faculty at large.	
Ph.D.	At least five faculty members: the major professor, at least two other members of	
	the School of EECS who represent the student's areas of study, a faculty member	
	from the student's minor department and/or other related departments, and a	

The composition of a student's program committee depends on the degree as follows:

Graduate Council Representative (GCR).

A GCR will be chosen by the student from a list supplied by the Graduate School via this website: https://gradschool.oregonstate.edu/gcr-generate

1.10 Program of Study

The program of study is a document that defines your specific degree requirements and coursework and the members of your graduate committee. Programs of study are tentative and can be updated or changed. A hold will be placed on a student's account if they do not submit their program of study on time. The program of study must include the discipline-specific requirements given in the above tables. The program of study forms are available from the Graduate School's website (https://gradschool.oregonstate.edu/progress/program-study). The method of designing and submitting a program of study depends on your degree, as follows.

Master of Engineering: The student submits their program of study to either the EECS Graduate Program Coordinator or in the Portfolio Preparation course (usually in their first quarter) and before the completion of 18 graduate credits. If a student changes degrees to a Master of Engineering, then the program of study is due by the end of the term in which the degree change is completed.

Master of Science: The student submits their program of study before the completion of 18 graduate credits (usually in the second quarter of study). If a student changes degrees to a Master of Science, then the program of study is due by the end of the term in which the degree change is completed. The student fills out the Program of Study form and has it approved by their professor and all committee members (including a GCR for the thesis option), and turns in the form to the EECS Graduate Program Coordinator for the Associate School Head's approval.

Doctoral students: Students submit their program of study before the end of their fifth quarter as a Ph.D. student (or the end of one calendar year if the student already has an M.S.) and at least six weeks before the student's preliminary exam. If a student changes degrees to a Ph.D. degree, that term marks the first quarter in the five-quarter deadline. In order to submit a program of study, Ph.D. students must hold a Program Committee Meeting to approve the selections on the program of study form. Schedule your Program Committee Meeting with the Graduate Program Coordinator at least two weeks before your event using this form: http://register.eecs.oregonstate.edu/scheduler/views/

1.11 M.S. Final Exam

The M.S. thesis option requires a written paper that represents a modest research contribution whereas the M.S. project option requires the student demonstrate good domain knowledge (ECE or CS) and a written paper that describes the project. Students enrolled in the CS Software Innovation Track complete a project that applies computer science to create a novel software system.

Both options require a final oral exam. This may be scheduled only after all other requirements are satisfied, or in the quarter in which the remaining coursework will be completed (subject to the GPA requirements described earlier). All members of the student's committee must approve the scheduling of the final oral exam. Notice of oral exams should be posted and distributed to all faculty and graduate students at least one week prior to the exam. Except in unusual circumstances, these exams will be held

during the normal academic year (fall, winter, or spring quarters). For scheduling, use the Event Schedule Form: <u>http://register.eecs.oregonstate.edu/scheduler/views/</u>

1.12 Ph.D. Exams

There are three major oral exams for the Ph.D.: the qualifier (which has a fixed deadline), the preliminary exam (which usually happens in the students second-to-last year), and the final oral exam or defense.

1.12.1 Qualifying Exam

The due date for a student's qualifying exam depends on their start date and whether they already have an M.S.:

Starting quarter	Qualifying exam deadline (no prior M.S.)	Qualifying exam deadline (prior M.S.)
Fall	November 15 of 3 rd year of study	November 15 of 2 nd year of study
Winter	February 15 of 3 rd year of study	February 15 of 2 nd year of study
Spring	May 15 of 3 rd year of study	May 15 of 2 nd year of study

The qualifying exam committee has the same composition as the program committee, but does not require a Graduate Council Representative.

The student's advisor with the consultation of the committee assigns a research topic to the student one month in advance of the exam. The student submits a paper on the topic one week prior to the exam. The paper may be based on:

- comprehensive review of existing literature in an area
- the student's current or prior original research
- or some combination as stipulated by the committee

The committee has the discretion to allow previously completed research papers, including jointly authored papers, if the student's contribution to the paper warrants such recognition. The intent of the paper requirement is to evaluate the student's skills to do Ph.D. level research, including the ability to perform a literature review, understand and synthesize research topics, conduct independent and collaborative research to the standards of the chosen discipline, and communicate the findings in a scholarly fashion. The student must present the paper to the committee and answer the committee's questions during the qualifying exam.

Subject questions (CS only): In addition to the above, CS students are asked to demonstrate mastery of subject matter. At least two weeks prior to the qualifying exam, the student's advisor assembles a set of topics or questions from the student's Ph.D. committee. The topics and the questions may be selected by the committee based on the student's course work and/or research area. Some of the questions may require written responses, in which case they should be completed within a week after the questions are given. Optionally, the committee might provide feedback on the student's written responses. The questions during the qualifying exam will be based on the topics and written questions given in advance.

Students who are doing double degrees (M.S. and Ph.D.) can combine their Ph.D. qualifying exam with their M.S. oral defense with approval by their program committee(s).

After the exam the committee will have a confidential discussion on the performance of the student and make one of the following recommendations:

Computer Science	Electrical and Computer Engineering
 Pass Fail research paper. If first attempt, allow retake of this part within 6 months. Fail subject questions. If first attempt, allow retake of this part within 6 months. Fail both parts. If first attempt, allow retake within 6 months. Fail. Student will be dismissed from the Ph.D. program. 	 Pass Fail. If first attempt, allow retake within 6 months. Fail. Student will be dismissed from the Ph.D. program.

A student schedules their Ph.D. qualifying exam with the School of EECS (not with the Graduate School) using this form: <u>http://register.eecs.oregonstate.edu/scheduler/views/</u>

The top half of the Ph.D. Qualifying Exam Evaluation Form should be completed by the student prior to the qualifying exam. The completed, signed form should be returned to the EECS Grad Coordinator by the major advisor after the exam. The forms are available here: <u>http://eecs.oregonstate.edu/current-students/graduate/forms</u>

If a student does not attempt their qualifier by their due date, the attempt (whether a first or second attempt) will be considered a failed attempt. Requests for a change in due date as a result of exceptional circumstances should be made in advance to the Associate Head for Graduate Programs and will be considered by the Graduate Student Progress Committee.

1.12.2 Preliminary Exam

This exam is generally taken around the beginning of the third year with timing to allow the committee to have input on the proposed research. The purpose of the preliminary exam is to guarantee that the student has obtained sufficient breadth and depth of knowledge to carry out the proposed research. This includes a thorough understanding of course work from the core areas on the student's program and of important articles in the thesis area.

The preliminary exam consists of:

• A thesis proposal document (optional for ECE) which should succinctly describe (a) the topic to be investigated, (b) the significance and relevance of this topic, (c) the approach and methods to be used in the investigation, (d) a discussion of the feasibility of the proposed research, (e) an annotated bibliography listing all relevant publications that have been or will be read by the student, and (f) a timetable for carrying out the research and completing the degree. The student should realize that this proposal is a plan. It is often the case that the actual completed research is substantially different from the proposed research. This document should be

submitted to the committee at least three weeks prior to the oral examination and have already been approved by the student's major professor.

- **A 30-minute oral presentation** by the student on the day of the exam, presenting the proposed research.
- A 90-minute oral examination of the student by the committee.
- In CS, an optional written exam. Two weeks prior to the oral exam, the committee and the major professor may prepare a written exam for the student. This exam is normally open-book, and the student is given a week to complete it. The questions involve reading and analyzing an article, comparing a number of approaches, or other activities deemed appropriate by the committee. The student submits their completed written exam one week prior to the oral exam.

The student must schedule their preliminary exam at least two weeks in advance via: http://register.eecs.oregonstate.edu/scheduler/views/

1.12.3 Final Exam

The student distributes a defendable copy of their thesis to their committee at least two weeks in advance. See https://gradschool.oregonstate.edu/progress/thesis-guide for more information. The student presents their research in an open presentation and then defends their research by answering questions from the committee that focus on the presentation and thesis research in a closed session. The student must schedule their final exam at least two weeks in advance via: http://register.eecs.oregonstate.edu/scheduler/views/

2 Graduate Teaching Assistant Guide

Graduate Teaching Assistants (GTAs) are covered by the CGE-OSU contract.ⁱ This document serves to provide EECS-specific guidance to EECS GTAs and Faculty on:

GTAs receive training from OSU, the Graduate School, COE and e-campus. Additional training may also occur, and is considered part of a GTA's employment.^{II} Coalition of Graduate Employees (CGE), the union representing GTAs, also provides resources to help navigate employment at OSU.^{III}

The supervisor for GTAs in the School of EECS is the Associate Head for Graduate Programs. However, each GTA works most closely with the faculty to whose class they are assigned, and the assigned faculty assumes responsibility for delegation of tasks and evaluation of work. Student are hired as GTAs if they are in good academic standing and based on instructional need. Students who are on internship are generally not hired as GTAs.

2.1 Time Management

While students are usually appointed as a Graduate Assistant for 9 months from September 15 to June 15, their work assignments may change from quarter to quarter. GTA work assignments for Fall, Winter, Spring, and Summer quarters begin on September 16, December 16, March 16, and June 16, respectively, and each assignment is 13 weeks long. The School of EECS recognizes that an assignment for Winter quarter may extend past March 16 (i.e., the start of Spring quarter assignment). However, the expectation of the School is that as long as a student has Graduate Assistant appointment for Spring quarter, they will not be asked to start work for their Spring quarter assignment until tasks relating to their Winter assignment are complete, generally through the end of final exam week of Winter quarter. A student without a spring graduate assistantship should inform the faculty they are assigned to, as they may only work until March 15.

Some courses require substantial time during critical grading periods; however, the number of hours a student may work per week is regulated by their appointment fraction, the CGE-OSU contract, and Federal regulations (particularly for International students):

- A 0.25 FTE appointment corresponds to an average of 10 hours per week; a 0.3 FTE appointment corresponds to on average of 12 hours per week; and, 0.49 FTE appointment corresponds to an average of 19.6 hours per week.
- "[H]ours shall not fluctuate more than 50% above the weekly average in any one work week throughout the course of the employment period, unless by mutual agreement between the supervisor and the employee." (Article 11, Section 3ⁱ)
- The time before and after the academic quarter starts and finishes cannot be redistributed over the weeks of academic quarter. (Article 11, Section 3ⁱ)
- International students on F1 or J1 visas may not work more than 20 hours in any week during term.^{iv}

2.1.1.1 Hour Tracking

It is important to keep track of hours worked because it can be useful in resolving disputes related to time management, and it can help the School determine the appropriate number of GTSs to assign to each course. CGE provides a template for tracking hours.^v

2.1.1.2 Leave Time

GTAs observe the holidays recognized by the university^{vi} and are entitled to 15 days of leave time without loss of pay during the academic year (Article 10, Section 7ⁱ). A GTA must request this leave time in writing from the Associate Head for Graduate Programs "sufficiently in advance [to] allow for planning for the absence," with a recommendation of two weeks lead time for leave between quarters and two months lead time for leave during quarter. Except in exceptional circumstances, leave is unlikely to be approved for an absence in week 1, exam week or for more than a few days during the academic quarter. Any additional schedule adjustments should be arranged between the GTA and the faculty to whose class they are assigned.

GTAs also have sick leave benefits (Article 30^{i,vii}).

2.1.1.3 Frontloading Work

Preparation activities to be an effective GTA should be started as soon as possible once the appointment begins. This involves reviewing the lecture material, preparing and testing labs and assignments, and other activities requested by the course faculty. Providing startup tasks to GTAs can allow GTAs to front-load work before they start their own courses.^{viii}

2.2 Course and GTA Organization

2.2.1.1.1 Courses should be designed with assessment in mind

The amount of feedback a GTA can give is proportional to the amount of time they're given on a perassignment basis when grading. Automating repetitive, quantitative portions will allow GTAs to focus their time on providing more valuable, qualitative feedback.

2.2.1.1.2 Define tasks/schedule at beginning of term

Well-defined work schedules aid GTAs in balancing their time, relative to scholarly activities. GTAs should be given an idea of their work assignments throughout the term up front to assist with planning. To this end, a document clarifying faculty expectations for GTAs, and their responsibilities (e.g., grading, material-related, and otherwise) should be provided at the start of their assignment (the 16th of the month before the start of a quarter).^{viii}

2.2.1.1.3 Effective distribution of tasks among TAs

From a resource-expenditure point of view, GTAs should be assigned where they are most valuable.

- More experienced GTAs will require less time grading, and will be more valuable to students for office hours. They may also be interested in developing tools to streamline their tasks or have suggestions for new subject explorations for the students.
- Less experienced GTAs may have difficulty with office hours until they fully understand the material but they may be helpful in helping designing learning activities (since they themselves are still learning the materials).

2.2.1.1.4 GTA Communication Planning

 Mechanisms for communication between GTAs and students should be established in the course syllabus. Ideally, GTA preferences can be taken into account. For example, Canvas Inbox may be used if GTAs do not want their email addresses published. Slack may also be used if that is set up for the course.

- For Faculty/GTA communication, the following is recommended:
 - an email at the beginning of the quarter detailing duties/timelines (see "Define tasks/schedule..." above);
 - a meeting before or at the start of quarter to have everyone get to know each other, to establish a working relationship and learn about capabilities/preferences, and establish office hours (See "Effective distribution..." above);
 - establishing an open communication among the instruction team will help solve issues before they become problems;
 - regular (weekly or bi-weekly) check-in meetings for conversations about grading issues, student conceptual gaps, GTA conceptual gaps, suggestions for supplemental explorations, status on development of explorations, etc.;
 - o an end-of-term meeting where the term's work is discussed prior to final grade-posting.

2.3 Feedback to GTAs

Feedback is important, especially at the beginning of a job. Early and frequent feedback (highlighting both the things that are going well and the things that need improvement) will help to improve our classes and help clarify expectations. Therefore, faculty are encouraged to meet with the GTAs assigned to their classes early and regularly to set clear expectations and let them know if they are straying. It is great to meet in person, but we recommend following up with email to help overcome any communication barriers and remove any uncertainty that may arise from a face-to-face meeting.

Formal evaluations of GTAs are required by the CGE-OSU contract (Article 15)ⁱ. In EECS, faculty are asked to evaluate all GTAs assigned to their courses at the end of every quarter on whether they meet the following criteria:

- possessed, demonstrated or showed the ability to learn the technical and academic content necessary to answer student questions, competently grade, and perform other duties for this particularly class; and
- performed tasks on time, responded quickly and professionally to emails and other communications, showed up to meetings and office hours on time, and acted ethically, fairly and consistently.

At the end of the academic year, this feedback will be summarized in an evaluation letter and made available to the GTA. GTAs who do not meet expectations in one or both aspects will be informed in writing with constructive criticism and a plan for improving performance as soon as possible, ideally before the start of a new academic quarter. If a GTA continues to underperform, despite notice and progressive and commensurate intervention, the GTA's contract may be suspended or the student may become ineligible for a GTA position in the future. Students may refute any charges and may seek the support of Union representatives. Refer to Article 17 of the CGE-OSU contract for details.ⁱ Above all else, the aim is to improve the performance of our GTAs so that our classes run smoothly and the educational experience for both undergraduate and graduate students is a positive one.

The School of EECS will also recognize our most outstanding GTAs with awards at the end of the academic year.

2.4 Feedback to Faculty: From Improvements to Grievances

GTAs play an important role in courses, as they interact with students and evaluate them. Furthermore, GTAs execute the tasks assigned by the faculty they are assigned to. Therefore, it is important that GTAs provide feedback to faculty, if they feel the need to. It is also important that faculty ask for feedback about the course from the GTAs. Feedback may include (but is not limited to):

- the amount of time that assigned tasks take to be completed,
- suggestions on how to improve the quality and structure of the course, and
- suggestions on how to improve the course evaluations.

Faculty and GTAs should agree on the best mechanism for GTAs to share their feedback (e.g., via email or in-person meetings).

GTAs should inform their assigned faculty if they are unable to perform their assigned tasks, for example, if:

- the amount of work assigned requires more than their contractual obligation; or,
- the GTA does not have the knowledge to complete the assigned tasks.

It is recommended that the GTA talk directly with their assigned faculty about such issues. If this does not resolve the issue or the GTA does not feel comfortable broaching the issue with their assigned faculty, the GTA should contact the Associate Head for Graduate Programs. The Associate Head for Graduate Programs will mediate communication between GTAs and faculty to determine necessary actions to help resolve the issue.

2.5 Types of GTA Duties

The most critical duty of a GTA is to know the material for the class they are assigned. GTAs will start their assignment one to four weeks before the beginning of the term so it is imperative that the GTA has access to the syllabus so they can determine any deficiencies and learn the material.

Duties of a GTA may include:

- Holding office hours either on campus (face-to-face) or online via web conferencing.
- Testing and grading both written and programming assignments. (GTAs will need to learn any software used to grade programming assignments.)
- Preparing solutions to homework assignments.
- Grading quizzes and exams either on paper or online using Canvas speedgrader.
- Providing meaningful feedback to students.
- Entering grades into Canvas gradebook.
- Promptly answering students' questions on grading via email or other communication platforms.

- Testing and proctoring midterms and final exams.
- Holding help and review sessions.
- Assisting with in-class activities.

For some courses, GTAs will be responsible for labs and/or recitations sections of the course. GTAs may need to create lab materials to present weekly to a small section of students.

A more experienced GTA may be given more advanced duties for the course, such as:

- Designing new quizzes and homework assignments.
- Generating grading rubrics.
- Giving a guest lecture or creating a PowerPoint presentation.
- Updating the course website.
- Meeting with small groups of students to review projects.
- Creating active learning modules.

For large classes with many GTAs, a lead GTA may be identified who will primarily manage the other TAs for a course and may have duties such as:

- Manage GTAs.
 - Ensure grading is done on time and correctly.
 - Organize office hours/meetings.
 - Handle grading rubric standardization (for consistency).
- Filter/Handle extension requests before they get to the faculty.
- Filter/Handle grading disputes before they get to the faculty.
- Assist faculty with collecting evidence for academic misconduct cases.^{ix}

GTAs for Ecampus courses may have some different responsibilities such as:

- Checking discussion boards.
- Creating videos.
- Holding a Q&A via Slack or other communication platform.

The duties of a GTA for any given course should be given in written form before the first day of class along with the due dates for grading and exams, with the understanding that adjustments may need to occur as the course progresses.

2.6 GTA Resources

- ⁱ CGE-OSU contract: <u>https://hr.oregonstate.edu/employees/administrators-</u> <u>supervisors/graduate-employee-cge-contract-resources</u>
- " GTA training available at OSU:

https://docs.google.com/document/d/11qD0eNCtOr7cSKk8ABVd9f3ZoSJ4jmMW6eVMzcqaFmk

iii CGE resources: <u>https://www.cge6069.org/</u>

^{iv} International Affairs, Oregon State University https://international.oregonstate.edu/ois/employment

- v CGE hour tracker <u>https://www.cge6069.org/resources/workload-hour-tracker/</u>
- vi University holidays <u>https://hr.oregonstate.edu/benefits/current-employees/time-holidays-protected-leaves/holiday-schedule</u>
- vii OSU's HR resources for Graduate Employees

https://hr.oregonstate.edu/benefits/student-employee/graduate-assistants

viii See these examples of GTA duties for a specific classes, including pre-term activities: https://docs.google.com/document/d/1CUo4o3xYc-Q8ZK-

PP55qOAVb2yiBKpubOvLV5r1nurk/edit

http://people.oregonstate.edu/~vanlondp/cs101/teaching-assistants.php http://people.oregonstate.edu/~vanlondp/cs391-new/teaching-assistants.php

^{ix} Student Conduct & Community Standards: Academic Misconduct -- Faculty <u>https://studentlife.oregonstate.edu/studentconduct/academicmisconduct-faculty</u>