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Robotics Graduate Handbook 2021-2022

This document is intended for Robotics graduate students (MS and PhD) and faculty.

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Table of Contents

Communication

The majority of communication is provided through the OSU Robotics mailing list. All graduate students should join the mailing list here: https://it.engineering.oregonstate.edu/mailman/listinfo/robotics

Seminar announcements are provided through the Robotics Seminar list. Graduate students should also join this list: https://lists.oregonstate.edu/mailman/listinfo/robotics-seminar

1. Academic Requirements

This chapter outlines all the academic requirements for graduate students in the Robotics program. **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.**

Robotics program requirements: https://catalog.oregonstate.edu/college-departments/engineering/school-mechanical-industrial-manufacturing-engineering/robotics-meng-ms-phd/#requirementstext

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

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

Additional helpful information is available in the School of MIME handbook and the School of EECS handbook:

MIME: https://mime.oregonstate.edu/students/current/grad

EECS: https://eecs.oregonstate.edu/current-students

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 Robotics faculty bi-annually at the end of Spring and Fall terms. In addition, unsatisfactory academic progress may result in non-renewal of assistantships.

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 in this document with further details are given in brackets.

Quarter	**M.S.**
1-3	Identify major advisor (1.6) Submit program of study (1.3)
Throughout	Maintain 3.0 GPA (1.5) Fall/Spring Student Progress review (1.4) Complete 2 courses per quarter until coursework complete (1.3)
Last	Final oral exam (1.3)

Quarter	**Ph.D.**
1-3	Identify major advisor (1.6)
5	Qualifier exam (1.3) Program of study meeting (1.3)
4-6 terms before final oral exam	Preliminary exam (1.3)
Throughout	Maintain 3.0 GPA (1.5)

	Fall/Spring Student Progress review (1.4) Complete 2 courses per quarter until coursework complete (1.3)
Last	Final oral exam (1.3)

1.3 Robotics Program and Course Requirements

1.3.1 Robotics Core Courses (MS and PhD)

The intent of the Robotics core is to ensure each program of study both specializes in robotics, and contains sufficient breadth. To that end, the four-course core comprises one introductory course, one hands-on robotics course, one autonomy course, and one fundamental dynamics/controls course:

1. **ROB 514**: Introduction to Robotics
2. **ROB 521**: Research Robotics
3. **ROB 537**: Learning-Based Control -OR- **ROB 534**: Sequential Decision Making in Robotics
4. **ME 531**: Linear Multivariate Control Systems I -OR- **ROB 545:** Kinematics, Dynamics, and Control

1.3.2 Robotics MS Program

A Robotics MS program of study comprises a minimum of 45 credits, with the following options:

- **MS thesis option:** 12 credits of Thesis (ROB 503) and at least 30 credits of coursework. The balance may constitute credits from the following sources: research (ROB 501), reading and conference (ROB 505), seminar (ROB 507), or additional coursework. Of the coursework credits, 16 must come from approved core courses (see above). Students are required to submit a formal Program of Study (POS) form prior to completing 18 credits of coursework.

  After completing all required coursework and thesis credits, and submitting the pretext pages of their thesis to the Graduate School, students must schedule their final oral examination through the Graduate School using their Exam Scheduling Form. The thesis must be distributed to all committee members (including the Graduate Council Representative) at least two weeks prior to the examination. The student's defense presentation for the MS should be approximately 45 minutes, followed by open questions (approximately 15

minutes), and then a closed session with the faculty (examination should be scheduled for a total of 2 hours).

- **MS project option:** 6 credits of Projects (ROB 506) and 36 credits of coursework. The balance may constitute credits from the following sources: research (ROB 501), reading and conference (ROB 505), seminar (ROB 507), or additional coursework. Of the coursework credits, 16 must come from approved core courses (see above). Students are required to submit a formal Program of Study (POS) form prior to completing 18 credits of coursework.

  After completing all required coursework and project credits, and submitting their project report to their committee, students must schedule their final oral examination with their graduate committee. The final presentation for the MS project option should be approximately 30 minutes, followed by open questions (approximately 15 minutes), and then a closed session with the faculty (examination should be scheduled for a total of 1.5 hours). Copies of the project report must be distributed to all committee members at least one week prior to the examination.

At least 50 percent of the credits on a student's POS must represent stand-alone graduate courses (500 level or above). The remaining credits may include the 5XX component of 400/500-level courses.

1.3.3 Robotics PhD Program

The Robotics Ph.D. program of study comprise a minimum of 108 credits, including at least 48 credits of coursework and 36 credits of Thesis (ROB 603). The balance may either constitute additional coursework and/or thesis credits or come from other sources such as research, reading and conference, etc. At least 50 percent of the course credits should represent stand-alone graduate courses (500 level or above). The remaining credits may include the 500 component of 400/500-level courses. Of the coursework credits, 16 must come from approved “core” courses.

Timeline of a Ph.D. in Robotics:
The major milestones in completing a Ph.D. in robotics at Oregon State are listed below.

Selecting a major professor: Your major professor will serve as your primary advisor throughout your graduate program. It is your responsibility to select your major professor in your first year and assemble your committee prior to the end of

your fifth term. Your Ph.D. program of study, which must be filed with the Graduate School prior to the sixth term of enrollment, requires your committee's approval.

Qualifying examination: The purpose of the Ph.D. qualifying exam is to assess students' research skills (their ability to analyze, interpret, and communicate fundamental scientific, mathematical, and engineering concepts) for the purpose of determining their aptitude for the Ph.D. program. The examination also includes a diagnostic function to highlight potential weaknesses in the students' background that can be addressed through additional coursework or independent study.

Qualifying exam format: The qualifying exam consists of:

- A written research paper on a topic selected by the committee. This will generally consist of literature review with a discussion highlighting the interesting research directions in that topic. The committee will specify the format and length of the paper, which will be due one week prior to the scheduled oral examination.
- A 20 minute oral presentation on the topic of the research paper.
- A 20 minute examination session on:
    - topics presented in the research paper
    - topics identified by the committee as a result of evaluating the research paper
    - material from two graduate courses (selected by the student and meeting the following requirements: (1) 'Intro to Robotics' and 'Research Robotics' cannot be selected as courses to be evaluated, and (2) the student should select two graduate-level ROB courses (one of these may alternatively be from the core robotics courses with ME designators: ME 531 or ME 533), unless the student has a dual major or a minor, in which case one course can be any course from that other program.

Qualifying exam timeline: The qualifying exam is conducted every Winter term during dead week (the week prior to exams). Students must take the qualifying exam by the end of their second year in graduate school. Students entering with an MS degree have the option of taking it in their first year of graduate school.

Program of Study meeting: After passing the qualifying examination and establishing a Ph.D. committee, students must convene a program meeting at which all committee members (including the Graduate Council Representative) are

present. The purpose of this meeting is for you to present your program of study. At this meeting you will also present an approximate timeline for Ph.D. requirement completion (coursework completion, preliminary exam, and final oral exam).

Preliminary exam: The preliminary examination evaluates a Ph.D. candidate's research methodology, experimental plan, and interpretation of preliminary results (if appropriate). The purpose of the exam is to allow the committee to aid the candidate in planning and implementing the highest quality thesis.

Preliminary exam format: The preliminary exam consists of:

- A research proposal document describing the motivation, prior work, work to date, and proposed work for the dissertation
- A presentation of the proposal to the committee and open to the public
- An closed oral examination on the proposal's content
- The student's presentation for the preliminary exam should be approximately 45 minutes, followed by open questions (approximately 15 minutes), and then a closed oral examination session with the faculty (examination should be scheduled for a total of 2 hours)

Preliminary exam timeline: The preliminary exam must be scheduled through the Graduate School using their Exam Scheduling Form, and exam takers must be formally enrolled (for a minimum of 3 credits) during the term in which the exam takes place.

Final Oral Examination: After completing all required coursework and thesis credits and submitting the pretext pages of your thesis to the Graduate School, you must schedule your final oral examination through the Graduate School using their Exam Scheduling Form. Also, you must be formally enrolled (for a minimum of 3 credits) during the term in which the exam takes place. The student's defense presentation for the PhD should be approximately 45 minutes, followed by open questions (approximately 15 minutes), and then a closed session with the faculty (examination should be scheduled for a total of 2 hours).

1.4 Fall/Spring Student Progress review

At the end of Fall and Spring terms, all M.S. and Ph.D. students will submit a summary of their academic progress and goals as instructed by the Robotics Program Director. The Robotics Faculty will meet to discuss the progress of all students. Students will be issued a (S) Satisfactory Progress, (IN) Improvement

Needed, or (U) Unsatisfactory rating in each category of research, coursework, and service. Service includes ways of contributing to the program in a non-academic or research role (e.g., running tours Graf Hall, maintaining shared equipment, helping with seminar setup). It is recommended that students meet with their advisors to discuss their academic progress in person at this time. Students who have received a (U) rating towards one or more components of their progress (or do not have an advisor at the time of review) 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.

1.5 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.).

Given this strict requirement, the Robotics Program requires that students maintain a GPA of 3.00 throughout their degree. If a student's graduate GPA falls below 3.00, the Robotics Program will issue a warning during the Fall/Spring review, and a study plan will be developed to raise the GPA above 3.00 in a timely manner. 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.

1.6 Selecting and Switching Major Advisors

1.6.1 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 thesis or project credits to get started in research. Students should begin research even prior to identifying an advisor. 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 Robotics Program Director (contact info on title page of this document) with the new advisor cc'd to notify the program 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 third quarter 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 Robotics Program Director.

1.6.2 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 Robotics Program Director and the Robotics faculty will work to facilitate this process. A student or major advisor should notify the Robotics Program Director (contact info on title page of this document) of the intent to change the advising relationship.

1. If the student has identified a new major advisor, then the student will email the Robotics Program Director who will update the program records.
2. If a new major advisor has not been identified, then either the student or the previous advisor will email the Robotics Program Director. The Robotics Program Director 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.

3. 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.

1.7 Robotics Graduate Student Association (RGSA)

RGSA is a student-run association connecting current, former, and affiliated graduate students of the Robotics program at Oregon State University and other programs within the CoRIS institute. The focus of the group is the overall well-being of its members, which it strives to achieve through two primary avenues. First, RGSA officers act as a bridge between students and faculty/administration to voice their concerns and act as advocates on behalf of robotics students. Second, RGSA hosts academic and social events such as professional development workshops, reading groups, game nights, retreats, etc. to promote socialization and cross-collaboration amongst the students.

For incoming students, joining RGSA is a great way to connect with people in the program and help make the transition to OSU smoother. To sign up and stay informed on upcoming events, join RGSA's mailing list using your @oregonstate.edu account: https://groups.google.com/g/robotics-graduate-student-association/

2. Graduate Teaching Assistant Guide

Graduate Teaching Assistants (GTAs) are covered by the CGE-OSU contract (see references section of this document). This document serves to provide Robotics-specific guidance to Robotics 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. Coalition of Graduate Employees (CGE), the union representing GTAs, also provides resources to help navigate employment at OSU.

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 College of Engineering 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 College is that as long as a student has a 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.

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 GTAs to assign to each course. CGE provides a template for tracking hours.

GTAs observe the holidays recognized by the university and are entitled to 15 days of leave time without loss of pay during the academic year (Article 10, Section 7). 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).

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.

2.2 Course and GTA Organization

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 per-assignment basis when grading. Automating repetitive, quantitative portions will allow GTAs to focus their time on providing more valuable, qualitative feedback.

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).

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).

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
- 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
- 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.;
- 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 Robotics, 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. 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 College of Engineering 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 Robotics Program Director. The Director 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.
- Providing meaningful feedback to students.
- Entering grades into online systems.
- 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.

GTAs for E-campus 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

1. CGE-OSU contract: https://hr.oregonstate.edu/employees/administrators-supervisors/graduate-employee-cge-contract-resources
2. GTA training available at OSU: https://docs.google.com/document/d/11qD0eNCtOr7cSKk8ABVd9f3ZoSJ4jmMW6eVMzcqaFmk
3. CGE resources: https://www.cge6069.org/
4. International Affairs, Oregon State University: https://international.oregonstate.edu/ois/employment
5. University holidays: https://hr.oregonstate.edu/benefits/current-employees/time-holidays-protected-leaves/holiday-schedule
6. OSU's HR resources for Graduate Employees: https://hr.oregonstate.edu/benefits/student-employee/graduate-assistants
7. 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
8. Student Conduct & Community Standards: Academic Misconduct -- Faculty https://studentlife.oregonstate.edu/studentconduct/academicmisconduct-faculty

3. Graduate Research Assistant Guide

3.1 General Expectations

Graduate research assistants are expected to remain in good standing with the graduate school and the student's home department, including maintaining at least a 3.0 GPA. Graduate research assistant duties may include research paper development, literature reviews, testing and evaluation of techniques, research presentation, reports to funding agencies, etc. The expected duration of the Ph.D. is 5 years and the expected duration of the M.S. is 2 years. Students on GRA may take up to 3 weeks of vacation (15 weekdays), including Winter and Spring Breaks; they must notify their advisors when they plan to take vacation. Vacation policies may vary based on faculty advisor. Students are expected to conduct high quality research, including the development of algorithms, theory, software, and/or hardware.

3.2 Service to the Robotics Program

Graduate students on assistantship are required to participate in service activities that contribute to the Robotics program (approximately 10% of their time). Service examples include: giving tours of Graf Hall, contributing to outreach activities, mentoring undergraduates and/or junior graduate students, helping with seminar setup/teardown, and maintaining shared equipment. Students should discuss appropriate service activities with their advisor and/or the Robotics Program Director.

3.3 Safety

Graduate research assistants are expected to follow all laboratory and field safety precautions even if the result is a delay in research productivity. This includes, but is not limited to, being knowledgeable in the health hazards associated with hardware and/or chemicals being used, using all appropriate Personal Protective Equipment for the hardware and/or chemicals being used (appropriate gloves, safety glasses, closed toe footwear, etc.). Students are expected to maintain a clean workspace wherever they work in the labs and participate in occasional clean-up days. Students are expected to be supportive and helpful to others working in the laboratory and share in laboratory housekeeping chores, such as disposal of waste, hardware maintenance, and ordering of supplies.

3.4 Publications and Communication

Graduate research assistants are expected to be effective communicators. This will be accomplished through formal and informal oral presentations and by writing manuscripts involving their research. First authorship will only be given if the student has written the majority of the manuscript. Your advisor will expect to be included on manuscripts that are prepared by you while you are enrolled under his/her supervision at OSU. Students will share their research findings with their advisor and the rest of the research group on a regular basis, including group meetings. Effective communication also means seeking help when one encounters difficulties. Running into snags is a normal, functional part of doing research. However, if after a reasonable effort you cannot find a solution to a problem that you face, please do not continue in isolation hoping that you can work the problem through. Advisors and other students are a tremendous resource, and you are expected to seek them out if you need help.

Students are expected to meet with their advisors on a regular basis and to attend all research group meetings. It is the student's responsibility to meet with their advisor one-on-one, approximately every, or every other, week, to discuss research progress, course work, and graduate student life in general. At these meetings, you are expected to be organized and take good notes. . In addition, students should seek to collaborate with OSU colleagues and others as appropriate.

Graduate research assistants are expected to be informed members of the scientific community. This includes successfully completing course work, attending OSU seminars and external scientific meetings (with advisor's approval) relevant to your research topic and degree field, and staying current in publications relevant to your research topic. Some journals of interest to our research groups include: *Journal of Field Robotics*, *International Journal of Robotics Research*, *Autonomous Robots*, *IEEE Transactions on Robotics*, and *Robotica*.

Students are expected to be proactive members of the scientific community. This includes proactively seeking additional or new directions for their research that enhances the quality and/or significance of the overall program and proactively seeking supplemental fellowships (such as NSF Graduate Fellowships, Hertz, and DOE Fellowships, etc.) as well as other award opportunities – in particular for travel.

3.5 Degree Completion

Students are expected to obtain their degrees within reasonable time periods and with good productivity. This includes obtaining a Ph.D. within 5 years and obtaining a M.S. within 2 years of starting the degree program. Funding cannot be expected to be provided beyond these time periods except with extenuating circumstances. Ph.D. students are expected to publish at least three high quality, peer-reviewed journal papers, while M.S. students are expected to publish at least one high quality, peer reviewed journal paper. The published manuscripts will be used as the basis of the student's thesis.