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1. WELCOME

Welcome to the Department of Crop and Soil Science (CSS). Most of you are beginning your professional and scientific careers. Your graduate experience is a unique opportunity in your career to learn scientific principles, techniques, make a contribution to the scientific literature, and to develop professionally. It also will provide exposure to ethical dimensions and peer review activities. The more time and energy you invest, the greater the educational rewards and the preparation for a life-long science career.

This handbook is designed to answer some of the questions you will have and to help you proceed toward your degree. It supplements information found on the Graduate School website and policy statements of Oregon State University but does not include all details of the requirements of the University Graduate School. This handbook provides information on specific CSS graduate student policies and procedures.

There are two different degrees offered in CSS – Crop Science and Soil Science. Additionally, there are two options under the Crop Science degree – Plant Breeding and Genetics (PBG) and Entomology (ENT). Advanced degrees include the Masters of Science (MS), Masters of Agriculture (MAg) and Doctor of Philosophy (PhD). As many aspects of being a graduate student are similar in all these programs, much of this handbook is similar for all students. Where differences exist, these are highlighted.

**Crop Science Degree**
Areas of study leading to MS, MAg, and PhD in Crop Science include: crop breeding, genetics and cytogenetics (cereals, potatoes, grasses, oilseeds; specific PBG option is available); crop physiology and biochemistry; forage and pasture management; crop production; post-harvest seed technology; seed biology; seed crop physiology; seed production; weed biology; weed management; and entomology (specific ENT option is available). Original research is an essential part of MS and PhD thesis programs. Each program is individually designed by the student and his or her graduate committee. Graduate students are expected to participate in the on-going research program with which their thesis is associated regardless of their funding source. This research is considered an essential part of the training program and an excellent opportunity for the student to apply knowledge gained in the classroom to field or laboratory situations.

- PBG options – requires taking 12 PBG-related credits from a specific set of classes
- ENT option – requires taking 12 ENT-related credits from a specific set of classes

**Soil Science Degree**
Graduate programs in Soil Science lead to MS, MAg, and PhD degrees with specialization in various fields of soil science – environmental soil science; forest soils; nutrient cycling; soil geochemistry; soil conservation and land use; soil fertility and plant nutrition; soil genesis and classification; soil microbiology; soil physics; and water resources. Supporting course work is chosen for each student from the basic sciences and other related fields. Original research is an essential part of MS and PhD thesis programs. Each program is individually designed by the student and his or her graduate committee. Graduate students are expected to participate in the on-going research program with which their thesis is associated regardless of their funding source. This research is considered an essential part of the training program and an excellent opportunity for the student to apply knowledge gained in the classroom to field or laboratory situations.
2. IMPORTANT PEOPLE AND SOURCES OF INFORMATION

2.1 Your Major Advisor
The most important person in successfully navigating graduate school (besides yourself of course) is your Major Advisor. You will work with them to assemble a graduate committee, develop a program of study, outline and execute research project(s), and negotiate your duties as a graduate research assistant (GRA) or graduate teaching assistant (GTA). Therefore, it is important to carefully cultivate this relationship. Some guidelines for how to do this are provided in section VII.

2.2 Graduate Program Coordinator
Crop Science – Dr. Carol Mallory-Smith
Soil Science – Dr. Maria Dragila
Plant Breeding and Genetics – Dr. Pat Hayes
Entomology – Dr. Sujaya Rao

A faculty member in CSS is assigned to manage and coordinate the graduate programs. There are separate coordinators for the Crop Science, Plant Breeding and Genetics, Entomology, and Soil Science degrees/options. The faculty member assigned to these positions may shift over time, but this person is available to address your questions about grad school, policies in CSS or any other components of graduate study that cannot be addressed through interaction with your Major Advisor. This person is also available to receive comments or suggestions about ways that the Department can improve the graduate program. Also, feel free to talk with them about things you don’t feel comfortable talking about with your Major Advisor or simply if you just want to get a different perspective.

Keep in mind that the Graduate School (see below) is the main administrator of your official graduate enrollment and progress towards your degree. While your major professor and the Graduate Coordinator can certainly help you negotiate the Graduate School system, such as understanding the requirements for assembling a committee or a program of study, it is often best to obtain guidance directly from the Graduate School if there is any doubt about the answer to a question.

2.3 Graduate Program Assistant/Administrative Assistant
Barb Reed
(541) 737-5854
Barbara.J.Reed@oregonstate.edu

Barb is the person with whom you would have corresponded during your application process. She handles all paperwork associated with graduate research assistantships (GRAs), graduate teaching assistantships (GTAs), and fellowships. She can provide some guidance on health insurance issues. Barb can help you with day-to-day logistics such as getting your student ID set up, signing out meeting spaces, announcing your defense date, etc.

2.4 Office Specialists
Emmalie Goodwin
(541) 737-2821
Emmalie.Goodwin@oregonstate.edu

Emmalie can help you with office/room assignments, getting your keys in the Crops Building, AV equipment sign out, setting up purchasing and travel requests, and getting reimbursed for expenses.

Tracy Mitzel
(541) 737-5712
Tracy.Mitzel@oregonstate.edu

Tracy can help you with office/room assignments, getting your keys in the ALS Building and AV equipment sign out. She also works with those who are paid as hourly workers.

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2.5 IT and Computer Support Group
Roots IT Support Group:  http://support.roots.oregonstate.edu/
541-737-2470

As their name implies, the ROOTS IT staff can provide you with IT and computer support ranging from advice on a computer purchase to setting up a remote connection for your thesis defense. The IT group is located on the first floor of the Crops Building. Stop by there to request assistance or send an email to roots.support@oregonstate.edu

2.6 The Graduate School
Main website: http://oregonstate.edu/dept/grad_school/

The Graduate School officiates your program. It is the source and destination of all the documents and forms that you will need to file as you progress toward completion of your degree program. They also set the scheduled mileposts for your degree. You will become very familiar with the Graduate School and their website during your time here. The links above provide access to main portals of information.

2.7 The CSS Department Website
General website: http://cropandsoil.oregonstate.edu
Graduate student pages: http://cropandsoil.oregonstate.edu/content/graduate-students-0

If you haven’t already done so, you should look at our Departmental website, particularly the graduate student pages.

2.8 The CSS Graduate Faculty
http://cropandsoil.oregonstate.edu/content/graduate-faculty-crop-and-soil-science-department

Only faculty who are members of the CSS graduate faculty can serve as major or co-major professors for CSS degree. Only faculty who are members of the OSU graduate faculty can advise or serve on student committees. Joining the graduate faculty is a formal process. It is possible that some faculty members who are not currently part of the graduate faculty may be eligible to join and might have an interest in doing so if presented with an opportunity. If you think a faculty member would be a good person to serve on your committee but they are not listed as part of the graduate faculty, you should have a conversation with them directly. Faculty from other universities can petition to become members of the OSU Graduate Faculty and can thereby serve on your committee.

2.9 The International Programs Office
General website: http://oregonstate.edu/international/atous/students
Information for new students: http://oregonstate.edu/international/atous/students/new

The International Programs Office provides a wide variety of services and assistance for international students, including information about immigration regulations and support services. If you are an international student, this should be your first stop upon arriving on campus.

3. ORIENTATION EVENTS

3.1 General Orientation for all New Graduate Students
This orientation is sponsored by the Graduate School during the fall term. Check the Graduate School Website for scheduling and registration information.
3.2 Orientation and Training for New Graduate Teaching Assistants (GTAs)
This is sponsored by the Graduate School each fall term. If you will be a GTA during the coming academic year, or if you have an interest in teaching, you should attend this training. Check the [Graduate School Website](#) for scheduling and registration information.

3.3 CSS Orientation Session
CSS holds a new graduate student orientation session each fall the week prior to the beginning of classes. All students will be notified of the date. Continuing students are encouraged to attend to obtain a refresher on departmental resources and perhaps learn about new.

3.4 International Student Orientation and Document Check
[http://oregonstate.edu/international/atosu/students/new/orientation](http://oregonstate.edu/international/atosu/students/new/orientation)

International students are required to attend a mandatory orientation program (see link above for details). This program is designed to provide you with valuable information and facilitate your transition to OSU. By participating in the International Student Orientation, you will gain essential information about the following:

- immigration rules and regulations that affect your visa status
- student health services and health insurance requirements at OSU
- academic life at OSU and how to register for classes
- campus and community resources
- opportunities to meet other new international and domestic students at OSU

All newly-admitted international students are required to attend orientation and the immigration document check-in. If you do not attend both, International Student Advising and Services will place a hold on your registration. If you are unable to attend one or both of these sessions, contact International Student Advising and Services at 541-737-6310 or email [isas.advisor@oregonstate.edu](mailto:isas.advisor@oregonstate.edu). To cover the cost of orientation, all students will be charged an orientation fee of $35 – 50 (depends on term). This fee will be automatically charged to your OSU student account. If you are on a state-funded assistantship (teaching or research) that receives tuition remission (a position where you do not have to pay tuition), this fee will be paid for you.

3.5 University Day
[http://oregonstate.edu/events/universityday/](http://oregonstate.edu/events/universityday/)

This exciting event is a celebration of OSU and a kick off to the new school year. Visit the expo to learn more about other departments across campus and resources. There is also usually a free lunch!

4. THINGS TO DO WHEN YOU FIRST ARRIVE

4.1 Check your admission status and degree.
Graduate students may be admitted as regular, conditional, provisional, or special (non-degree). Refer to the [OSU Graduate Catalog](#) for definitions of student status. Be certain that you understand your admission status. A student admitted under the special category may be considered for admission as a regular graduate student. See the recent Graduate Catalog for regulations concerning this reclassification.

You may be admitted into either the Master of Science (MS), Master of Agriculture (MAg), or Doctor of Philosophy (PhD) programs. Confirm that your admission documents correspond with your desired degree.
4.2 Obtain your student identification (ID) card.
http://fa.oregonstate.edu/business-affairs/idcenter
To obtain a student ID card, you must show evidence of official admission to OSU at the Identification Center in the Kerr Administration Building, room B094.

4.3 Obtain your keys, a mailbox, and desk space.
See the Office Specialist (see section 2 above) for help in getting all of these things.

Keys
Check with your Major Advisor on what keys you will need, then obtain the appropriate key request cards from the ALS (Tracy Mitzel) or Crops Building (Emmalie Goodwin) office specialist. Requests for greenhouse keys are handled in the office of the Greenhouse Operations (East Greenhouse). Take the signed key request cards to the Key Shop (On the corner of SW Washington Way and SW 15th Street) to obtain the keys.

Mailboxes
All graduate students who are in residence are assigned a mailbox. The mailboxes are located in the Soils office (Room ALS 3017) or Crops Building office (Crops 107). United States and campus mail is delivered and picked up twice daily.

Office and desk space
As space permits, the department provides a desk for each graduate student in an office shared by other students.

4.4 Get a building use permit
If you expect to be in buildings after working hours or on weekends you should obtain an After-Hours Work Permit from the Administrative Assistant (Barb Reed). This provides authorization to study or work in the areas listed on the permit.

4.5 Get connected.
Computing and IT support in the department is coordinated through the Roots IT Support Group. Their website provides a wealth of information and the contact information for people who can provide assistance in a wide range of IT needs: http://support.roots.oregonstate.edu/

In addition, general IT support across campus is coordinated through OSU online services:
http://oregonstate.edu/main/online-services

When you first applied to graduate school at OSU you were given an ONID account. This is your portal to a wide range of online services, including registering for classes, viewing transcripts, and checking your employment status. You have an email address associated with this account. You can also get a CSS specific address that you can link with your ONID account. Check with Barb to get the Network application form. Tina, with the Roots group, will set this up and will advise you on how to get started.

As a CSS-based Roots user, you have access to the following network file shares.

- H Drive ➔ This is your home directory, i.e. personal space that only you can access. This share has a quota of 14 GB and is backed up nightly for a period of 60 days.
- O Drive ➔ This is the departmental share directory. It is used as a place for labs to share files between fellow lab users as well as housing a general share that’s used to share files between any user within the department.
4.6 Set up your payroll.
If you are appointed to a graduate assistantship, see the Department Administrative Assistant (Barb Reed) to fill out the appropriate forms. Do this as soon as possible to avoid a delay in receiving your first paycheck. Bring your Social Security card and photo ID with you when meeting with the Department Administrative Assistant.

Students who are on fellowships will have different paperwork and will often be paid in a different fashion than students on assistantships, but the Administrative Assistant handles these appointments as well.

You will be asked to fill out forms regarding withholding a portion of your salary for tax purposes. Seek advice on taxes from your fellow students, payroll personnel, and tax booklets available at the library and http://www.irs.gov/

4.7 Register for classes
Catalog and Schedule of Classes: http://catalog.oregonstate.edu/

Eventually you, your Major Advisor, and your graduate committee will develop a comprehensive program of study (see section IX), but until then, you have to enroll in classes your first term. You should talk with your Major Advisor to design an initial study plan. You should also consult the current Schedule of Classes for information and detailed instructions on registration. Asking a veteran graduate student for help with registration procedures can be very helpful.

Full time status for graduate students is 9 credits per term during regular school terms. Summer enrollment minimum is 3 credits. However, students on assistantships (0.20 to 0.49 FTE) must register for a minimum of 12 credits each regular term. These credits can be a combination of regular classes and thesis credits. One of your primary tasks in graduate school is to produce a thesis or dissertation. Consequently, there are specifically designated thesis credits that you can enroll in to give you course credit for the time that you are engaged in this core task. These credits are designated CROP/SOIL/PBG/ENT 503 for MS students and CROP/SOIL/PBG/ENT 603 for PhD students. You must enroll in the credits that are specifically assigned to your Major Advisor. If you have questions or don’t see you major advisor’s credits listed in the schedule, talk to them about having a designator created. After registering for regular classes in a term (at some points in your program of study you may take no regular classes), you can use thesis credits to bring the total number to the required credit load (12). Note that although you can enroll in an unlimited number of thesis credits, MS students can only include a maximum of 12 credits in their official program of study. Do not register for 501/601 - “Research” unless specifically instructed to do so by your Major Advisor. 501/601 is a graded course, but 503/603 is not (see section IX for a description of the use of research credits).

Do not register for Ecampus classes unless you have specific permission from your major professor. Ecampus tuition is not covered by standard tuition remission policies, so you or your major professor will need to cover the cost of any Ecampus classes that you take.

Be sure to register for the correct classes and to note the various registration deadlines listed on the OSU Academic Calendar since there are fees associated with various late registration changes.

5. GRADUATE ASSISTANTSHIPS

See also this description from the Graduate School: http://oregonstate.edu/dept/grad_school/current/assistantships.html

5.1 Graduate Research Assistantships (GRA)
GRAs are part-time [0.01 to 0.49 Full Time Equivalent (FTE)] appointments that typically assist faculty in conducting research projects. There are no automatically recurring GRA positions in the department. Research project leaders or the department may create GRA positions each year as funds permit and
program priorities dictate. Such appointments are for terms of one year or less and are subject to renewal each year contingent upon work performance, academic performance, and availability of funds. GRA renewals are considered each spring and are normally made effective October 1. Major Advisors evaluate students based on coursework, progress on thesis research, and other contributions to the major professor’s research program/project.

Whenever possible, assuming satisfactory performance and adequate budgetary support, the department will renew appointments of GRAs who have not completed their graduate study unless such appointments were for a fixed-term of one year or less. Advisors will provide termination notices at least one quarter in advance whenever possible. Prior to the beginning of the appointment, advisors will inform students about financial support for the coming fiscal year.

GRAs on 0.49 FTE appointments are expected to provide an average of 20 hours of service per week for the assistantship. This means that up to an average of 20 hours/week should be spent on non-thesis work. Since GRAs ordinarily are doing research under their appointment as part of their thesis, separating work for which they are paid and work for their thesis may not always be easy. Interpretation and implementation of this University policy varies with each Major Advisor. This is an important subject to discuss with your Major Advisor (see section VII). GRAs at other FTE levels are expected to provide proportional levels of service.

5.2 Graduate Teaching Assistantships (GTA)

GTAs are part-time [0.01 to 0.49 Full Time Equivalent (FTE)] appointments that typically assist faculty in designing and delivering undergraduate courses. Many of the GTA appointments in our department are associated with teaching SOIL 205 – an undergraduate class with ten labs each term. Other GTAs are associated with other lab classes and some Ecampus classes. As a GTA, you need to master the course content and gain the ability to communicate ideas clearly (a skill that is central to success in your graduate studies and professional life). For many students planning a career in academia, a GTA position is an excellent training ground for issues of pedagogy, lesson planning, and classroom culture. As with GRAs, there are no automatically recurring GTA positions in the department. Course instructors or the department may create GTA positions each year as funds permit and program priorities dictate. GTA appointments are typically for a term, although you may be offered multiple GTA appointments within a year or over your graduate tenure.

GTAs on 0.49 FTE appointments are expected to provide an average of 20 hours of service per week for the assistantship. GTAs at other FTE levels are expected to provide proportional levels of service.

5.3 Stipends and Remissions

Assistantships provide a monthly stipend. The amount of these stipends depends upon the fractional appointment, usually from 0.20 to 0.49 FTE. Stipends are tied to a base rate established by the University. However, the specific stipend amount is determined by the Major Advisor. The decision is based on the experience and qualifications of the student and available funds. At the start of each academic year, the Department Manager will present you with an offer letter that outlines your appointment terms including the stipend amount.

Assistantships at appointments of 0.20 FTE or greater receive a tuition remission during the academic year as well as a portion of student fees ($430 as of 2014). If this is your first term, OSU will also remit the matriculation fee ($300 as of 2014) and also the International Orientation Fee for international students. Summer term appointments are often handled differently, because there is no tuition remission for summer assistantships. Many students go on an hourly wage appointment if they will be working over the summer. Please discuss this with your major advisor. If you are defending and graduating in a summer term, the Graduate School requires that you register for 3 credits that term.

Ecampus tuition is not covered under remission policies. See section 4.7 for additional detail.
5.4 Health Insurance

http://studenthealth.oregonstate.edu/graduate-assistant

All students who have graduate assistantships of 0.20 FTE or above are required to enroll in a health insurance policy administered through the Student Health Service. For 2014-15, OSU will pay 85 percent of the premium cost for Employee-only coverage while you are employed. Dependents can be added for an additional cost. You must pay 50% of this cost. See the link above for current details. During a summer term when you will be returning in the fall as a student, you can enroll in continued health insurance coverage at the same rate with OSU paying 85% of the premium. You will need to fill out forms spring term to enroll in this coverage. During a summer term when you are on an hourly wage appointment and will not be returning as a student in the fall, you may enroll in COBRA extension policy of the OSU student health insurance.

5.5 Coalition of Graduate Employees

http://cge6069.org/

The Coalition of Graduate Employees (CGE) is the collective voice of the graduate student employees of Oregon State University. The CGE is a labor union with the exclusive right to negotiate with OSU on behalf of its Graduate Research and Teaching Assistants. The contracts CGE earns through collective bargaining determine the salary, working conditions, health coverage, and other rights and benefits of employment for the individuals they represent. Membership in CGE is voluntary, although depending on your status, you may be required to contribute what are called “fair-share” fees whether you are a member or not. The details are nuanced and continually a topic of negotiation between the CGE and the University. See the CGE link above for more information.

6. SUMMER ENROLLMENT AND EMPLOYMENT

Students do not typically enroll in credits during the summer. One reason is that there are simply few graduate summer classes, and research work loads are typically high. There are potential exceptions that you may be interested in, such as this intensive thesis writing course offered during the summer: http://catalog.oregonstate.edu/CourseDetail.aspx?subjectcode=WR&coursenumber=599

However, if you do enroll you will be responsible for tuition and fees yourself. There are no tuition or fee remissions available during the summer and there is typically no mechanism to pay your tuition or fees directly from grant or project funds held by your Major Advisor. Have a conversation with your Major Advisor or the graduate Program Coordinator before enrolling in any summer credits.

Similarly, there are typically no research or teaching assistantships offered in the summer. However, many students are employed during the summer to continuing assisting in the research projects they are involved in. This is a common source of summer employment for our students. In these cases students are employed on an hourly basis at rates comparable to their school year assistantship during the summer. Talk with your Major Advisor about opportunities for summer employment.

7. CULTIVATING THE RELATIONSHIP WITH YOUR MAJOR ADVISOR

Your interaction with your Major Advisor will significantly influence your graduate school experience. Ideally, it should be a mutually enriching relationship that not only results in you graduating, but also maximizes the rewards and benefits you get from your time here. Your Major Advisor can become one of the most significant people in your professional career. Likewise, the professionals they train are often the most significant legacy and impact a professor has during their professional career. Cultivating the relationship with your Major Advisor should therefore be one of your top priorities in graduate school.

That does not mean that you have to be friends or even like your major advisor (and vice versa). What it does
mean is that both of you need to develop open, honest, and frequent lines of communication. Below is a guide to topics that you should use to open a dialog with your Major Advisor. Based on past experience, these topics have become sources of conflict in some instances as they are assumed to be understood or mutual expectations and responsibilities are not made explicit.

The types and form of graduate-mentor relationships are as diverse and varied as the biological systems we study. Therefore, this guide does not offer many specific guidelines. The answers to these topics should be a discussion between you and your Major Advisor. Also, how this conversation takes place is also a negotiation. Many students and advisors find it valuable to write down specific expectations, responsibilities, and timelines. These documents can act as a sort of contract between you and your advisor, or serve as a reference document to guide your progress or to refer to in case questions arise. On the other hand, you and your advisor may prefer to cover this information verbally. If this is the case, it is still useful to write down questions or topics that you would like to cover during your next conversation with your advisor and also to take notes during your conversations.

In addition, there is a formal annual review of your progress that you and your advisor are required to complete (see section IX). This will be useful in helping formulate expectations and desired outcomes.

### 7.1 Research Expectations

One of the main things you, your Major Advisor, and your committee will interact on is your research. Much of this conversation will revolve around how to best approach the science, and this is one of the main ways that you learn how to do scientific research. However, there are some practicalities to think about as well. How much leeway do you have in designing your own research plan? How does the research you do for your thesis relate to the research you do as part of your research assistantship? Are you expected to contribute to research activities outside of your thesis or assistantship?

### 7.2 Authorship, Intellectual Property, and Data Management

Authorship is an important aspect of research expectations. Research is increasingly collaborative, even when done as part of a MS or PhD thesis. While there are broad guidelines for determining authorship (e.g. [http://hms.harvard.edu/content/authorship-guidelines](http://hms.harvard.edu/content/authorship-guidelines)), specifics vary from field to field and even within sub-disciplines of crop and soil science. You should have a conversation with your Major Advisor about how authorship will be assigned. Does your Major Advisor expect to be co-author on the papers related to your thesis or dissertation? Will you be a co-author on work you do as part of your assistantship?

The data you produce as part of your graduate work is valuable in its own right, even independent of its inclusion in a scientific article. What is your right to this data now and into the future, and how will these data be shared? Many funding agencies require that data produced under grants be made publically available. Indeed, there is a growing trend to make nearly all scientific data “open source.” For instance, see: [http://www.nceas.ucsb.edu/datapolicy](http://www.nceas.ucsb.edu/datapolicy). On the other hand, your work may be funded in part or wholly by private companies that can place restrictions on how and when you can communicate results. For instance a funding source may place an embargo on publishing work so that they have first access to the information. Also, your work may involve intellectual property that has commercialization potential. There are a number of complex legal and patent related issues that can complicate how and when you can communicate your results. These are all issues that you should have a conversation with your advisor about. See also *being part of a team* below.

Finally there is the slightly more mundane but no less important issue of how to store and backup data. Many granting agencies require that detailed data management plans be included as part of proposals. Data management plans include the physical aspects of storing data in ways that minimize the chance for disaster. **YOU DO NOT** want to lose data because of an accident or negligence. But data management plans should also help prevent the more subtle and pernicious ways of losing data such as forgetting what those cryptic column headings in an Excel spreadsheet mean, not including units, not providing good descriptions of what the data are or how they were collected, or even forgetting where you put the data. You can be surprised how inscrutable
and opaque data can look (or how hard it is to find) after only a few weeks or months of inattention. Creating detailed metadata that describe the what, where, how, and when of data is in many ways just as important as collecting the data in the first place. It is also critically important when you share data among colleagues or archive data in publicly accessible repositories. In fact, another role of the data management plan is to outline the specific manner in which data will be shared and archived. You should have a discussion with your advisor about what their general data management strategy is as well as any specific data management plans for your project and work.

7.3 Assistantship Expectations
For those with 0.49 FTE appointments, nearly half of your time will be devoted to your assistantship. What does this mean exactly? What does it mean if you assistantship has a lower FTE? What are your specific expectations and job description? Does your advisor expect you to keep regular hours in the lab? If so what are they? Are there periods of time (such as harvest season) when you may have to put in more hours? Also, see “Research Expectations” above.

7.4 Being Part of a Team
As a graduate student, you now represent the State of Oregon, OSU, CSS, your lab group, and your advisor. This requires you to be ethical and professional at all times, but you should also consider that your actions and activities now reflect on a larger group, not just yourself. Therefore, your Major Advisor may require review of any work (e.g. talks, publications) before it is shown to peers or the public. In addition, being part of a team involves obligations and responsibilities that are not specifically tied to your assistantship or research. For instance, it is a common expectation that all lab members take part in mentoring and training undergraduate and new graduate students in research techniques and protocols. It is good to discuss with your Major Advisor what these broader expectations are. Other examples include attending regular lab meetings, occasionally helping out on other students’ projects, contributing to keeping lab space clean and tidy.

7.5 A Schedule of Communication
Keep in mind that your Major Advisor is your direct and most frequent contact in graduate school. They are your supervisor and are meant to be there for you. You should never feel like you cannot or should not “waste” their time. However, determine limits of communication expectations early on in your degree program. Does your Major Advisor expect to hear weekly updates on your progress? Or do they only want to hear from you if you have a specific question or problem? What are your own expectations and desires for communication? Incompatible non-expressed expectations are a common source of tension between students and advisors. Avoid this by having a conversation with your Major Advisor about when and how you both would like to keep each other informed. You and your advisor may never be completely aligned, but talking about this issue will hopefully allow you to reach an accommodation that satisfies both of your needs and personalities.

7.6 Completing your Degree Program
Communication becomes particularly important when you are beginning to analyze your data and beginning to write your thesis or dissertation. This can be a fun, intense and stressful time, but good communication can go a long way toward alleviating much of that stress and fostering a period of productive collaboration between you and your advisor. One important item to explicitly develop is a realistic schedule for writing, revising and defending your thesis or dissertation. It is easy to underestimate how much time this will take. In addition to producing early drafts, you will need to leave time to get meaningful feedback from your Major Advisor and other committee members, and to edit and revise your initial drafts. You will also need to coordinate your writing schedule with the scheduling requirements for your defense set by the Graduate School. Your schedule may also be influenced by associated issues such as the availability of funding. Early and frequent communication with your Major Advisor and the rest of your committee about this schedule is essential. It is advised to develop a general timeline for your program at your first committee meeting and to periodically revise and enhance the schedule as you progress toward your degree.

The majority of your interactions with your Major Advisor over the duration of your degree program will involve discussions on how best to analyze your results and to communicate those results to your peers and the general
public through your thesis or dissertation and associated publications/products. You should talk with your Major Advisor about how each of you would like the mechanics of this critical interaction to work. Does your advisor expect you to consult with them about every single analysis or figure you produce? Would they rather see a more polished selection of analyses? Would they like to see a more fully formed product such as a results section before providing feedback? What are your expectations and desires? Whatever you settle on, remember to keep up a regular flow of information, feedback, and interaction. Having limited or no communication about data analysis, results or review prior to your thesis dissertation is unacceptable. Plopping your dissertation on your advisor’s desk for the first time just two weeks before you want to defend is an invitation to disaster.

8. RESPONSIBILITIES

In addition to negotiating the nuances of the relationship with your advisor described above, there are several broad expectations that govern students, advisors, and supporting administration of the CSS Graduate Programs.

8.1 Student Responsibilities

- Assume the major responsibility for your graduate program and initiate each step involved in obtaining the degree.
- Students are expected to demonstrate honesty in all aspects of their academic work.
- File a Graduate Program Checklist (see Appendices) with your Major Advisor and update this each term.
- Meet regularly with your Major Advisor to discuss progress or difficulties in research and course work.
- Contact the members of your Graduate Committee to schedule time and place of committee meetings.
- Submit appropriate Graduate School forms as required (see Graduate Program Checklist).
- If experiencing serious difficulties with your Major Advisor, discuss the matter with the Department Head or Graduate Program Coordinator.
- Willingly take part in your advisor’s research, teaching, and Extension programs.
- Maintain a GPA of at least 3.0 but strive for excellence in both course work and research.
- Be familiar and comply with requirements and regulations of the Graduate School and department.
- Attend and participate in department seminars.
- Write your thesis, preferably in journal article format. Submit manuscripts for publication before leaving OSU if at all possible.
- Return departmental keys upon completion of your degree program.
- Maintain a tidy/clean office/lab space, and ensure that all of your area is left clean and organized before leaving OSU.
- Ensure that your research data has been archived and backed up with your Major Advisor.

8.2 Major Advisor Responsibilities

- Responsibly to advise and guide students in their graduate program development, course work, and research.
- Instruct new students on departmental regulations and research facilities; introduce them to other graduate students, staff, and faculty members; and assist them in filling out the Graduate Program Checklist.
- Be particularly alert to guidance of beginning students and specifically encourage short-term research challenges to promote student interest, involvement, and development of research expertise and philosophy.
- Provide budgetary support for supplies, services, and equipment needed for thesis research.
- Help advisees develop course study programs that are consistent with their needs and career goals and requirements of the department and Graduate School.
- Keep informed of advisee’s progress and difficulties in research and course work.
- Attend and participate in department seminars and assist advisees in seminar preparation and practice.
- Assist in organizing and editing the thesis and see that it is in good form before it is given to other committee members.
- Encourage students to participate in CSS and other departmental seminars and in regional, national, and
international scientific meetings. Assist them in preparing their oral presentations and posters.

- Carefully edit manuscripts co-authored with students prior to submission for departmental review.
- See that advisees function as an integral part of your research, teaching, or Extension effort.
- Inform students if their performance is not satisfactory and terminate advising responsibilities if necessary.
- Conduct an annual review of all GRAs and GTAs; send a copy to the Department’s Administrative Assistant.

### 8.3 Department Responsibilities

- Provide office and thesis research space, facilities, and educational experiences to graduate students insofar as resources and opportunities permit.
- Encourage students to attend and present research at professional meetings by providing transportation and/or in deferring costs of such participation as resources and university policies permit.
- See that the graduate policy and departmental standards are maintained.
- Assist in the solution of any major problems that arise during the student's tenure at OSU.
- Seek graduate student and Major Advisor input on issues of concern.
- Administer annual review process for all graduate students.

### 9. MAJOR COMPONENTS OF YOUR ACADEMIC PROGRAM

#### 9.1 Preliminary Committee Meetings

During your first term you will likely have a number of informal meetings with your Major Advisor to start the process of developing your academic program and to identify potential members of your graduate committee. These early meetings do not need to include your official committee members, although it can often be beneficial to include at least some of your committee members in these meetings. Once your committee is constituted (see Graduate Committee below), you should schedule a formal preliminary committee meeting. Ideally, this should be done before the completion of your first term, but at least no later than the completion of 18 credits for MS and MAg students. PhD students should have their preliminary committee meeting before completing 2 terms (if you already have a master's degree) or 5 terms (if you do not). Note that Graduate School regulations do not require that MS students have a preliminary committee meeting before filing their program of study, but we strongly encourage all CSS graduate students to do so. However, MS students are not required to include the graduate representative as part of the preliminary committee meeting, and you may choose to wait to identify a graduate representative. **PhD students must have a formal preliminary committee meeting that includes the graduate representative** before submitting their programs of study.

The Preliminary Committee meeting provides the graduate committee members with an opportunity for early input into the student’s course work and research that can greatly enhance the student graduate experience and productivity, and preempt problems that may otherwise arise at a student’s defense. The meeting should point out course, research, and career options and assist you and your Major Advisor in developing a plan for your graduate career. The following is an outline for an effective committee meeting:

**Introduction:** The student should present a brief verbal autobiography, including general background and educational experience, and short- and long-range professional goals. A projected timetable of graduate study should be presented as well as a tentative list of courses to be taken in the proposed program. If a tentative thesis plan has been formulated, it should also be presented.

**Discussion of Program:** The faculty advisors and the student together plan a tentative course program that is consistent with the candidate's previous education, research area, goals, and interests. Suggestions may be made regarding course deficiencies and appropriateness of proposed courses. It is often helpful if the following written information is provided to members of the Graduate
Committee before the proposed meeting:

- Listing of prior courses taken (undergraduate and graduate) including course names, numbers, credits, grades, and institutions. Group courses logically into discipline and/or subject matter.
- A tentative list of courses to be taken in proposed program.
- A tentative timetable for the graduate study planned (use checklist).
- A brief statement of student's professional goals and objectives.

9.2 Thesis Research Outline

The central part of the MS and PhD degree is the active engagement in research study. You will devote a considerable amount of planning, effort, and time into implementing your research project and communicating the results in various forms. Therefore, you should work with your Major Advisor and committee to develop a written outline and plan for your proposed research. The exact form and extent of this plan can vary. For instance, your Major Advisor might require that you write your plan in the form of a detailed research proposal such as the type you would submit to a granting agency like the USDA, or they might simply request that you write a brief 3-4 page outline. In either case, the plan will help you and your Major Advisor think explicitly about how your research fits into the rest of your graduate program. For instance, maybe you shouldn't take statistics, biochemistry, and soil physics during the spring term when you will also be establishing your research plots. The plan is also a very good way to facilitate meaningful discussion and obtain feedback on your research from your Graduate Committee. As such, it is helpful to be as specific and detailed as possible in your plan. Remember, this is a plan. Things will likely change, first as a result from the feedback you get from your committee and other peers, and later as a result of the unforeseen circumstances that undoubtedly challenge any research project. Part of research involves active planning and reconfiguration as necessary.

9.3 Graduate Committee

The Graduate Committee is the formal body that directly guides, mentors, and evaluates your graduate school experience. You and your Major Advisor should put some careful thought into its composition. Your Graduate Committee should include members who can provide you experience and expertise in areas related to your research or other career goals such as teaching and Extension.

You are not required to declare a minor for the PhD or MS degree, and indeed the distinction between a “major” and “minor” can be difficult to distinguish in a varied and interdisciplinary field such as CSS. However, you may declare a minor if you desire. The Graduate Committee is there to help you determine what constitutes the program of study for a minor, and the minor need not be restricted to one department and it may represent an integration of supporting courses from two or more departments. However, you should note that some programs may have specific requirements for a minor. Even if you do not officially declare a minor field, it is often desirable to include the equivalent of a “minor field” faculty member from outside of the CSS Department on your Graduate Committee. Also, your program of study will likely include a significant number of classes outside of those offered in CSS. Note that for Graduate School purposes the Crop Science and Soil Science degrees are separate programs and a soil science faculty member on a crop science graduate committee, or vice versa, is considered to be a faculty from another degree program.

The Graduate School has a number of regulations on how Graduate Committees should be structured. Please read more online (http://oregonstate.edu/dept/grad_school/degreecommittee.php).
Table 1. Minimum composition of Graduate Committees

<table>
<thead>
<tr>
<th>Degree</th>
<th>Major</th>
<th>Minor</th>
<th>Graduate faculty at large</th>
<th>Graduate Council Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAg*</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>MS (thesis with minor)</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>MS (thesis without minor)</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PhD (with minor)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PhD (without minor)</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

*A minimum of three members of the Graduate Faculty, one from each of the three fields are required, and a Graduate Council Representative if a thesis is involved. The major professor is the member from the major department/program.

As noted above, you may find it useful to include the equivalent of a “minor field” faculty member on your committee even if you do not formally declare a minor. Also, additional faculty may be included on the Graduate Committee if desired.

For PhD students, the committee must be formed before the program of study is submitted (see below for more information on program of study). The Graduate School does not require MS students to select major and minor professors before submitting the program of study. However, CSS MS students are encouraged to form their graduate committee as soon as possible (ideally before completing two quarters) and schedule a preliminary meeting of their committee.

All thesis MS and PhD students are required to have a Graduate Council Representative on their Graduate Committee. This person represents the graduate school, and it is their job to monitor the oral and thesis defense to ensure that a thorough examination occurred and that the student was treated fairly during the examinations. To obtain a graduate representative you must ask the Graduate School for a list of potential graduate representatives. They generate a random list of professors from across the University who have agreed to serve in this capacity. You should consult with your Major Advisor before deciding which professor to ask. Individuals on the list are not obliged to be on your committee and may decline to participate due to other commitments. You also are not obligated to accept any graduate representative on the list and can apply to the Graduate School for another list. The graduate representative is not required to read your thesis or participate in questioning the candidate. However, many graduate representatives do read the thesis and ask questions during the defense examination.

9.4 Programs of Study

The program of study is the list of classes you have taken and plan to take to fulfill the requirements of your degree. You will invest some time in developing it in collaboration with your Major Advisor and Graduate Committee. Your fellow students are also a valuable source for advice about classes and the intricacies of the regulations governing the program of study. All MS and MAg students should complete and file their program of study before the completion of 18 hours, usually in the second term of residence. At the very latest, you need to submit an approved program of study at least 15 weeks before your Final Oral Examination. All PhD students should complete and file their program of study before completing two terms (if you already have a master's degree) or five terms (if you do not). At the very latest, you need to submit an approved program of study at least six weeks before your Preliminary Oral Exam.

The Graduate School will review your program to make sure it conforms to the general rules and regulations for your degree. You will have to file a revised program of study and obtain all the appropriate signatures each time your program changes. A common strategy for minimizing this inconvenience is to construct a program of study that meets the minimum requirements for graduation. You are not limited to your program of study and can take as much additional coursework (including thesis and blanket courses) as you and your Graduate
Committee see fit. You do not have to list these additional classes on your official program of study.

The program of study for PhD students must be approved by the full Graduate Committee at a formal meeting (see Preliminary Committee Meeting above). The program of study for MS students only requires approval by the Major Advisor. However, CSS MS students should include their full committees in the development of the program. All study programs must be approved and signed by the Department Head.

The composition of your program of study is governed by a number of rules and regulations. Program of study forms that include a summary of these rules are available from the graduate school: http://oregonstate.edu/dept/grad_school/forms.php#program

Your program of study must also include training on the responsible conduct of research (RCR). See below for information on how to meet this requirement.

9.5 Seminars

Graduate students and faculty in Crop and Soil Science are expected to attend the departmental seminar unless there is a course schedule conflict. Students are expected to contribute to discussions and to make presentations as determined by the Seminar Committee and in consultation with the major professor. Faculty and students will complete seminar evaluation forms for student presentations. The major professor will discuss strengths and weaknesses of each seminar presentation with the student.

Each MS and MAg student is required to present at least one seminar outside of their thesis defense seminar and must sign up to take CROP/SOIL/ENT 507 the term they present unless other arrangements are made. The student is expected to select a thesis topic during the first year of graduate school and present a “research plan” seminar that includes a comprehensive literature review and research plan in a spring seminar session or other session if spring is not workable. MAg students may speak about the research work or literature review that they are doing to meet MAg requirements. Alternately for both MS and MAg degrees, students may give an oral presentation on their research at a professional meeting if permission is granted beforehand by the major advisor. A poster presentation cannot meet this requirement. In addition, the student must give an advertised seminar in conjunction with their MS/MAg degree defense.

Each PhD student is to present at least two seminars during their study period and sign up for CROP/SOIL/ENT 607 when doing so. The student is expected to select a dissertation topic during the first year of graduate school, and present a “research plan” seminar in a spring seminar session or other session if spring is not workable. The second seminar requirement may be fulfilled either by a departmental seminar presentation not related to the dissertation topic, on some phase of thesis work, or by an oral presentation of their research at a professional meeting if permission is granted beforehand by the major advisor. For PhD students, the second seminar should be given at least six months before thesis defense. In addition, a PhD student will give an advertised seminar in conjunction with their dissertation defense.

In addition to the above, PBG option MS or PhD students must give an additional seminar under the PBG 507/607 class designation. These seminars will be organized by the cross-department PBG faculty.

Guidelines for Seminar Development and Presentation

- The student should begin development of the seminar many weeks in advance of the presentation. Speakers will be expected to prepare their presentation well, deliver it in a professional manner, and be knowledgeable about the subject. Considerable background study on the topic is required.
- The student should work closely with the major professor in developing the seminar. Several practice presentations to other students and the major professor prior to the seminar are recommended.
- Visual aids should be prepared well before the seminar presentation so that revisions can be made, readability of charts can be tested, etc. Costs involved in preparation of visual aids should be approved by the major professor.

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• A brief written biographical sketch should be provided by the student to the Seminar Committee chair on the Friday preceding the regularly scheduled Monday afternoon presentation.

• All non-thesis seminars should be approximately 20 minutes in length with 10 minutes allotted for questions. Thesis defense seminars should be about 40 minutes, with 10 minutes allotted for questions. The development of an awareness of timing is important and finishing on time is expected.

• The speaker should be prepared to respond to comments and questions raised during the discussion period but should feel free to involve members of the audience in the discussion during the seminar if this a desired presentation technique.

9.6 Required Courses

9.6.1 Crop Science Degree

In addition to the general requirements for programs of study established by the Graduate School, the Crop Science Graduate Program requires that you include the following courses as part of your plan of study:

1. CROP 507/607 Graduate Seminar (variable credits) - See section 9.5 for details
2. For MS thesis and PhD students, participate in a teaching activity for at least one term with simultaneous registration for CROP/PBG/ENT 509. Teaching activity is optional for non-thesis MS and MAg students.
3. All students who enter the program after January 1, 2014 must have responsible conduct of research training. This requirement can be met in one of two ways:
   a. Complete the OSU Research Office Collaborative Institutional Training Initiative (CITI) on-line physical science training module and obtain a certificate of completion – see https://www.citiprogram.org/
   b. OR take a formal class offered by the Graduate School on other campus unit that specifically addresses responsible conduct of research/research ethics

   It is expected that individual research projects and research groups will have internal discussions about this topic
4. All students who enter the program after January 1, 2015 must complete the following training modules and obtain completion certificates:
   a. AlcoholEdu – High-Risk Alcohol Prevention
   b. HAVEN – Sexual Violence Prevention
   c. See http://studenthealth.oregonstate.edu/welcome for details

9.6.2 Crop Science Degree with PBG Option

In addition to the general requirements for programs of study established by the Graduate School and above for the Crop Science Degree, the Crop Science Graduate Program with a PBG option requires that you include 12 credits from the following list in your program of study:

1. BOT/MCB 575. Comparative Genomics (4)
2. CROP 590. Experimental Design in Agriculture (4)
3. PBG 507. Seminar (1-2)
4. PBG 519. Current Topics in Plant Breeding and Genetics (2)
5. PBG/HORT/CSS 530. Plant Genetics (3)
6. PBG/HORT/MCB 541. Plant Tissue Culture (4)
7. PBG/HORT/CSS 550. Plant Breeding (4)
8. PBG/MCB/CSS 620. DNA Fingerprinting (1)
9. PBG/MCB/CSS 621. Genetic Mapping (1)
10. PBG/MCB/CSS 622. Mapping Quantitative Trait Loci (1)
11. PBG 650. Advanced Plant Breeding and Quantitative Genetics (3)
9.6.3 Crop Science Degree with ENT Option

In addition to the general requirements for programs of study established by the Graduate School and above for the crop science degree, the Crop Science Graduate Program with an ENT option requires that you include 12 credits from the following list in your program of study:

1. ENT 507. Seminar (1-2)
2. ENT/HORT 518. Current Topics in Entomology (2)
3. ENT 520. Insect Ecology (3)
5. ENT/Z 547X. Insect Systematics: Diversity and Evolution (5)
6. ENT 599. Special Topics: Explorations in OSU Entomology (2)
7. Z 540. Insect Physiology (3)

9.6.1 Soil Science Degree

In addition to the general requirements for programs of study established by the Graduate School, the Soil Science Graduate Program requires that you include the following courses as part of your plan of study:

1. SOIL 507/607 Graduate Seminar (variable credits) - See section 9.5 for details
2. For MS thesis and PhD students, participate in a teaching activity for at least one term with simultaneous registration for SOIL 509. Teaching activity is optional for non-thesis MS and MAg students.
3. All students who enter the program after January 1, 2014 must have responsible conduct of research training. This requirement can be met in one of two ways:
   a. Complete the OSU Research Office Collaborative Institutional Training Initiative (CITI) on-line physical science training module and obtain a certificate of completion – see https://www.citiprogram.org/
   b. OR take a formal class offered by the Graduate School on other campus unit that specifically addresses responsible conduct of research/research ethics

   It is expected that individual research projects and research groups will have internal discussions about this topic
4. All students who enter the program after January 1, 2015 must complete the following training modules and obtain completion certificates:
   a. AlchoholEdu – High-Risk Alcohol Prevention
   b. HAVEN – Sexual Violence Prevention
   c. See http://studenthealth.oregonstate.edu/welcome for details

9.7 Blanket Courses

Blanket-numbered courses have a zero middle digit, and serve the purpose of providing you course credit for the many activities that are part of your program but don’t fit neatly into a traditional course structure. You can repeat these courses up to the maximum totals described for each degree program of study. Blanket courses in CSS include the following:

- **Thesis** (CROP/PBG/ENT/SOIL 503 for MS students or CROP/PBG/ENT/SOIL 603 for PhD students). These credits are used to reflect your effort in conducting your thesis or dissertation research and writing. You will likely make liberal use of these credits since research and writing will take up a considerable amount of your effort. Note that there is a limit to the number of thesis credits that can appear on the official MS and MAg programs of study filed with the graduate school. However, you should feel free to use thesis credits to ensure that you are taking a full credit load. It is not uncommon for students to take as many as 16 credits of thesis during terms when they are writing their
thesis or during intensive periods of data collection. When enrolling in 503/603, you should enroll using the course registration number (CRN) specific to your Major Advisor. If you do not see this number when enrolling, ask them to obtain a CRN. 503/603 classes are pass/fail and do not affect your GPA.

- **Research** (CROP/PBG/ENT/SOIL 501/601). These credits are used for research projects that are not related to your thesis research. DO NOT CONFUSE THIS WITH THESIS CREDITS. It is unlikely that you will need to enroll in 501/601 as a thesis MS or PhD student, but an example might be doing a project in a lab in order to gain experience with a technique or an approach. 501/601 is commonly taken as part of a non-thesis MS or MAg degree. Note that in contrast to thesis credits, research credits are GRADED and will affect your GPA.

- **Reading and Conference** (CROP/PBG/ENT/SOIL 505). These credits are used for special coursework not given under a formal course number. A number of different types of courses can fall under this category. For one, it can be a way to teach a class to only a few students or for a faculty member to have you read the body of literature on a certain topic and to have a regular discussion about it. As such, sometimes these reading and conference courses are not widely advertised beyond a professor’s lab group. They often arise because students suggest a topic to their Major Advisor. Faculty will also use 505 credits to offer new or experimental courses on a trial basis before going through the formal course approval process. Since these courses are not regularly scheduled, they are often advertised on relatively short notice, sometimes just prior to the term in which they will be offered.

- **Seminar** (CROP/PBG/ENT/SOIL 507). See required courses above.

- **Teaching Practicum** (CROP/PBG/ENT/SOIL 509). This is used to reflect effort in activities related to teaching. See specific requirement under each degree/option.

### 9.8 Teaching Experience

For MS thesis and PhD students, participation in a teaching activity for at least one term with simultaneous registration for a 509 class is required. Teaching activity is optional for non-thesis MS and MAg students. Your Graduate Committee has wide discretion in designing the most appropriate form of teaching experience given your background and career goals. Potential teaching experiences include assisting in an undergraduate course or assisting in the presentation of an Extension program, field day, or other event. Ideally, the teaching experience should include some direct contact with students such as preparing and presenting one or more lectures or Extension programs or being available for questions during labs and recitations. Your committee, Major Advisor, or the supervisor of your teaching experience will determine an appropriate number of 509 credits that should be included on your official program of study. Typically, assisting in an assigned undergraduate course equates to 3-4 credits of 509. Given career plans, some students may take additional 509 classes. Given financial need, some students may seek paid GTAs. 509 credits cannot be taken in association with a paid GTA.

### 9.9 Responsible Conduct of Research

See OSU Research Office CITI requirement under programs of study in section 9.6

### 9.10 Thesis, dissertation, or project

The work that you do in graduate school will have the biggest impact and contribute a lasting legacy if it is peer-reviewed and made widely available for others to use, interpret, and evaluate. At its core, scientific research involves the application of the scientific method to generate information, the synthesis and analysis of that information, and the vetting of that synthesis and analysis by peers. The MS and PhD programs are designed to give you practical training and experience in each of these elements, culminating in the publication of the thesis or dissertation (see section XII). While your thesis or dissertation itself will have been peer reviewed by your committee and it will be accessible to anyone who chooses to look for it, the process of writing a thesis or dissertation does not fully reflect the same amount of rigor in review as journal articles.
Most scientific knowledge is discussed, disseminated, and archived in the form of peer reviewed research journal articles. Consequently, we encourage students to write MS and PhD theses in the form of one or more scientific journal articles that are otherwise ready to submit to a journal, following that journal’s form and style. The department recommends the scientific paper format because it provides a "real-life" writing experience, speeds publication of thesis results by eliminating re-writing of the traditional "long form" of a thesis, and because it encourages organized compartmentalization of thesis research planning into publishable segments. The department requires a review of the literature section in all theses. It also encourages the use of appendices, especially as a place to put results of preliminary experiments and data that do not seem appropriate to any of the journal articles and may not be published elsewhere. Another extremely valuable use of appendices is to make data available in more raw form (instead of synthesized in tables and figures) so that it can be more readily used by other researchers in meta-analyses or other studies.


While the Graduate School no longer requires you to submit a paper copy of your thesis/dissertation, the department would like two traditionally bound copies for departmental use. Please confer with office staff about where to have copies made. The department will pay for these two copies. You may also have two copies printed at no charge at the Student Multi-media Services, located on the 2nd floor of the Valley Library. Their binding process is not high quality.

No thesis is required for completion of the MAg degree. However, a MAg program should include some form of scholarly work. The nature, format, and scope of this project will depend on your career goals and interests as well as those of your Major Advisor.

10. DEGREE CREDIT REQUIREMENTS

Be sure to note the general degree and credit requirements for all graduate programs: http://catalog.oregonstate.edu/ChapterDetail.aspx?key=38

All graduate programs of study must consist of a minimum of 50% graduate stand-alone courses. The remaining credits may be the 500 component of 400/500 slash courses.

Also, all programs require training in the responsible conduct of research (see above).

10.1 Master of Science (MS)

See the graduate catalog for the formal list of requirements: http://catalog.oregonstate.edu/ChapterDetail.aspx?key=39

- A minimum of 45 graduate credits is required. If a minor field is identified, approximately two-thirds of work (30 credits) must be in the major and one-third (15 credits) in the minor field. A minor is not required. Major courses may be selected from those in CSS as well as from those offered by many other departments.
- At least one credit of seminar (CROP/SOIL/PBG/ENT 507), two if PBG
- 3-4 teaching practicum credits (CROP/SOIL/PBG/ENT 509)
- 6-12 thesis credits (CROP/SOIL/PBG/ENT 503)
- A maximum of 15 credits of graduate work completed at another accredited institution, or in the Division of Continuing Education of the Oregon University System, may be transferred, provided that: 1) the work fits into a logical program for the degree, 2) the transfer is approved by the student’s committee and by the Graduate School, and 3) grades of A or B have been earned. Credit granted for work completed at another institution is tentative until validated by work in residence. Credit for out-of-state Extension courses, correspondence courses, institute courses, certain distance education
courses, and such are not acceptable.

- No more than 9 credits of blanket-numbered courses, excluding thesis (CROP/SOIL/PBG/ENT 503), may be applied toward the minimum 45-credit MS degree.
- A program of study for the degree must be filed in the Graduate School before the completion of 18 hours of graduate course work, usually before the end of the second term. The appropriate form is available from the Graduate School website: http://oregonstate.edu/dept/grad_school/forms.php
- All work for a MS degree must be completed within seven years, including transferred credits, course work, thesis, and all examinations.

10.2 Master of Agriculture (MAg)

See the graduate catalog for the formal list of requirements: http://catalog.oregonstate.edu/ChapterDetail.aspx?key=39

The MAg degree requires a student to attain advanced knowledge and achievement in CSS and two other fields of study. At least one of the two other fields of study must be from the College of Agricultural Sciences or closely related areas. The third field of study can be from any approved graduate major or minor. With approval, each field of study may contain integrated components. The MAg is generally considered a non-thesis degree, although a 6-credit thesis is an option (see below)

- A minimum of 45 graduate credits with a minimum of 12 credits in CSS (the major field) exclusive of thesis or research credits (see following), and including 9 hours in each of the two minor fields.
- No thesis is required, but programs must include either a research paper or similar work (3-6 credits of CROP/SOIL/PBG/ENT 505 Reading and Conference) or thesis (6 credits of CROP/SOIL/PBG/ENT 503).
- At least one credit of seminar (CROP/SOIL/PBG/ENT 507), two for PBG
- A maximum of 15 credits of graduate work completed at another accredited institution, or in the Division of Continuing Education of the Oregon University System, may be transferred, provided: 1) the work fits into a logical program for the degree, 2) the transfer is approved by the student's committee and by the Graduate School, and 3) grades of A or B have been earned. Credit granted for work completed at another institution is tentative until validated by work in residence. Credit for out-of-state Extension courses, correspondence courses, institute courses, certain distance education courses, and such are not acceptable. See the Graduate Catalog for a complete description of rules and procedures regarding transfer credits.
- No more than 9 credits of blanket-numbered courses, excluding thesis (or research-in-lieu-of-thesis for no thesis programs), may be applied toward the minimum 45-credit master's degree.
- A program of study for the degree must be filed in the Graduate School before the completion of 18 hours of graduate course work, usually before the end of the second term. The appropriate form is available from the Graduate School website: http://oregonstate.edu/dept/grad_school/forms.php

10.3 Doctor of Philosophy (PhD)

See the graduate catalog for the formal list of requirements: http://catalog.oregonstate.edu/ChapterDetail.aspx?key=40

- There is no rigid credit requirement, but the equivalent of at least three years of full-time work beyond the baccalaureate is required. Three years of graduate work roughly translates into: 3 years x 3 terms per year x 12 credits per term = 108 hours.
- A minimum of 36 credits completed in residence at Oregon State University and at least three terms of full-time graduate academic work (at least 9 credits per term) completed on campus or at an off-campus site approved by the Graduate School. The latter requirement of three terms of full-time enrollment does not have to take place in consecutive terms.
- At least two credits of seminar (CROP/SOIL/PBG/ENT 607), three for PBG
- 3-4 teaching practicum credits (CROP/SOIL/PBG/ENT 609)
- At least 36 thesis credits (CROP/SOIL/PBG/ENT 603)
- No more than 15 blanket-numbered credits, excluding thesis, may be applied toward the minimum 108-credit doctoral program.
- If a minor is declared, it must consist of at least 18 credits (15 credits for an integrated minor).
- A program of study must be filed by the end of one calendar year of enrollment as a PhD student for those who hold an MS degree and by the end of the fifth quarter for those who do not hold an MS degree. The final plan of study must be submitted to the Graduate School six weeks before the student’s oral preliminary examination.
- Students who wish to include courses previously taken outside of OSU within their programs of study must submit a Transfer Credit Request form before the end of their first year of study. Graduate courses to be transferred to a doctoral degree program can be courses that were used to satisfy the graduate course requirements for a graduate certificate or a master's degree (or equivalent). Selected 700-level courses that have been deemed equivalent to graduate-level learning may be used on doctoral programs of study upon approval of the student's graduate committee. There is no limit on transfer credit toward the doctoral degree as long as the doctoral residence requirement is satisfied. See the Graduate Catalog for a complete description of rules and procedures regarding transfer credits.

11. EXAMINATION REQUIREMENTS

In addition to the elements and requirements of your program described above, your graduate program consists of formal examinations. The nature and timing of these examinations are largely prescribed by the Graduate School: [http://oregonstate.edu/dept/grad_school/finalexams.php](http://oregonstate.edu/dept/grad_school/finalexams.php) Students must follow Graduate School guidelines for scheduling exams.

11.1. Soil Science

1) Examinations for Soils Master Candidates
   a) Soil Science master candidates (MS or MAg) are not required to take a written exam; however, major professors may use a written examination to prepare students for their oral examination or as another means of student assessment if agreeable to the student's graduate advisory committee.
   b) Final Oral Examination for the MS and MAg Degree in Soils
      i) The thesis/research paper and course work examinations are combined into one examination for MS degree candidates. The candidate should expect to be examined on both parts.
      ii) The formal oral presentation by the candidate is open to all interested—the examination is restricted to the graduate faculty, usually just the candidates committee. The student and major professor should publicize the presentation.

2) Written Preliminary Examination for the PhD Degree in Soils
   a) The Soil Science graduate faculty requires that a student pass a written departmental examination before taking the oral preliminary examination for the PhD degree. The written examination tests the student’s ability to integrate knowledge from different subject areas, to reason, and to apply principles to solutions of problems relating to soil science. It is typically taken towards the end of the second year of studies.
   b) The student's major professor is responsible for arranging the written part of the preliminary examination. The examination will consist of two questions in each of the following areas:
      i) Soil Chemistry
      ii) Soil Genesis, Morphology and Classification
      iii) Soil Biology and Biochemistry
      iv) Soil Physics
      v) In addition, there can be two or more questions from the student's graduate committee members whose discipline is not soil science. When appropriate for the student, questions on larger scales (nutrient cycling at ecosystem level, watershed water dynamics, etc.) or practical applications (nutrient, water or tillage management, etc.) should be arranged.
   c) The authors of the questions must indicate which questions are open book or closed book and approximately how much time should be allotted to answer the questions (1-2 hours). Open-book
questions can be answered using text or library resources if the student so desires. The answers will be returned by the major professor to the authors of the questions, who will indicate to the major professor whether the student passes their question(s). All questions should be evaluated within two weeks of the test date. If a student does not pass one or more sections of the examination, they will have one opportunity to be re-examined and successfully pass those sections. Additional course work may be suggested by the graduate committee as a result of this examination, or the student may be encouraged to work towards an MS rather than PhD degree.

d) All written examination answers will be provided to the student’s graduate committee and will be considered in deciding whether the student passes the Preliminary Qualifying Examination.

3) Oral Preliminary Examination for PhD in Soils
   a) After passing the written examination, the PhD student will then take the oral preliminary examination within six months. In preparation for the oral exam, the student will prepare a research proposal that is not directly related to his/her thesis topic. The intent of this exercise is for the student to demonstrate the ability to identify a researchable question, formulate testable hypotheses, and design experiments to definitively evaluate the hypotheses. Practically, the document could and has served as the basis for postdoctoral fellowship proposal. Exceptions to this time line must be approved by the student’s graduate committee and the soils graduate faculty.
   b) The oral preliminary examination is intended to evaluate a PhD student’s ability to utilize scientific literature, to think critically, to write creatively, to articulate ideas, and to demonstrate understanding of general and specific fields of study. This examination will also test the student’s ability to develop, investigate, and defend an original research idea. The originality, scholarly quality, and the technical feasibility of the proposal will be evaluated. The preliminary examination will consist of two parts:

   i) Written Research Proposal:
      (1) Before the time of the oral preliminary exam, the PhD student must submit a one-page abstract/outline on a topic for a research proposal to his/her graduate program committee for approval.
         (a) The topic of the proposal must be different from the student’s thesis research project.
         (b) The topic of the proposal must be reviewed and accepted or rejected within one week of submission. The committee may accept a topic with one dissenting vote.
         (c) A research proposal on the approved topic is then written and must include the following sections: introduction, objectives, rationale and significance, research design and methods, timeline, literature cited, budget with justification, and personnel required to achieve the objectives.
         (d) The written research proposal should be 10-15 single-spaces pages (references, budget, and personnel information will not be included in the page count).
         (e) The written proposal and a written proposal checklist and approval form (see Checklists and Timetables section for the form) must be submitted to the PhD student’s committee at least six weeks prior to the anticipated date for the oral exam.
      (2) Within one week of submission, the committee must vote to approve the proposal as suitable for the exam.
      (3) In the event that the proposal is not approved by two or more members of the committee, the student will have two weeks to modify and re-submit the proposal to the committee for a second decision.
      (4) Within one week of re-submission, the committee must vote to approve the revised proposal
      (5) A PhD student will fail the oral examination if the revised proposal is not approved by two or more members of the committee.
   c) Soils Oral Examination Procedures
      i) The examination will start with a 20-minute presentation of the proposal (open to all interested) followed by an examination by graduate committee. This examination is comprehensive (not just on the proposal), and evaluates the student’s general knowledge and ability to convey and discuss scientific ideas, theories, and techniques. It is the responsibility of the student to
have the appropriate pre-examination Graduate School paperwork completed and to schedule the exam.
ii) A Written Proposal Checklist and Approval Form (see Checklists and Timetables section for the form) should be attached to the written proposal when submitted for review by the student’s committee. Upon review, the student’s committee members should return the written proposal, review comments, and a completed form to the student.

4) Final Oral Examination for the PhD Degree in Soils
   a) At least one complete academic term must elapse between the preliminary oral and the final examination.
   b) The formal oral presentation by the candidate is open to all interested persons. The student and major professor should publicize it.
   c) Examination of the candidate and final deliberation will be conducted by only the graduate committee.
   d) The examination normally concentrates on the thesis.
   e) It is the responsibility of the student to follow OSU Graduate School guidelines with regards to scheduling and pre-examination forms.

11.2 Crop Science

1) Master Candidate Exams in Crops Science (including PBG and ENT options)
   a) Crop Science master candidates (MS or MA) are not required to take a written exam; however, major professors may use a written examination to prepare students for their oral examination or as another means of student assessment if agreeable to the student's graduate advisory committee.
   b) Final Oral Examination for the MS and MA Degree in Crops
      i) The thesis/research paper and course work examinations are combined into one examination for MS degree candidates. The candidate should expect to be examined on both parts.
      ii) The formal oral presentation by the candidate is open to all interested—the examination is restricted to the graduate faculty, usually just the candidates committee. The student and major professor should publicize the presentation.

2) Written Examinations for PhD Candidates in Crop Science (including PBG and ENT options)
   a) A written comprehensive examination must be taken by all PhD candidates in accordance with OSU guidelines (the examination must be completed before the oral preliminary examination, which must be completed one term before the final oral, and copies of the written examination must be given to doctoral committee members at least one week before the oral prelim). The written examination may be taken using one of two formats. One format follows the conventional question and answer format. The other option is the written research proposal format.

   b) Conventional Written Exam/Oral Exam Format in Crop Science
      i) The conventional question and answer examination is developed by the student's major professor(s) with input from the student's doctoral advisory committee. The examination must:
         (1) address the breadth of knowledge expected of PhD candidates specializing in the candidate's specific area of study, hence examinations will be different for agronomists vs. geneticists vs. seed physiologists;
         (2) be structured to require four hours of work on each of two consecutive days. This will generally entail four questions or sets of questions each day;
         (3) be approved by a member of the CSS Graduate Faculty Committee. The committee member will not evaluate the examination for specific content but for evidence of questions requiring breadth, depth and synthesis of knowledge. He/she also will assess time requirement (not too long or too short);
(4) It is recommended but not required that major professors use the following procedure to develop the exam:
(a) ask each doctoral committee member to submit a question or questions which will require one hour’s time to answer. The graduate council representative may submit a question if he/she so desires;
(b) ask other faculty members to develop one-hour questions;
(c) the major professor has final authority in developing examination content;
(d) Each examination question will be graded by the individual submitting the question

ii) Preliminary Oral Examination in Traditional Format
(1) The preliminary oral examination is normally about two hours in length, and is intended to cover course work and related subject matter. This examination is comprehensive and evaluates the student’s general knowledge and ability to convey and discuss scientific ideas, theories, and techniques. The Major Professor will officiate the exam and ensure that all committee members have adequate time to ask questions. The Graduate Council Representative will also ensure that all committee members have adequate time for questioning and that the student is treated fairly in the exam process.
(2) It is the responsibility of the student to have the appropriate pre-examination Graduate School paperwork completed and to schedule the exam.

c) Guidelines for PhD Preliminary Examinations Following the Written Proposal Format in Crop Science

i) The written research proposal followed by an oral defense and examination is an alternative option to the standard written and oral preliminary examinations described above. This examination is intended to evaluate a PhD student’s ability to utilize scientific literature, to think critically, to write creatively, to articulate ideas, and to demonstrate understanding of general and specific fields of study. This examination will also test the student’s ability to develop, investigate, and defend an original research idea. The originality, scholarly quality, and the technical feasibility of the proposal will be evaluated. The preliminary examination will consist of two parts:

(1) Written Research Proposal:
(a) Before the end of his/her third year of study, a PhD student must submit a one-page abstract/outline on a topic for a research proposal to his/her graduate program committee for approval.
(b) The topic of the proposal must be different from the student’s thesis research project.
(c) The topic of the proposal must be reviewed and accepted or rejected within one week of submission. The committee may accept a topic with one dissenting vote.
(d) A research proposal on the approved topic is then written and must include the following sections: introduction, objectives, rationale and significance, research design and methods, timeline, literature cited, and personnel required to achieve the objectives.
(e) The written research proposal is limited to 10 single-spaced pages (references, timeline, and personnel information will not be included in the page count).
(f) The written proposal and a written proposal checklist and approval form (see Checklists and Timetables section for the form) must be submitted to the PhD student’s committee not more than four weeks after the committee has approved the topic.
(g) The committee must vote to pass the proposal within one week of submission.
(h) In the event of a no-pass decision by two or more members of the committee, the student will have two weeks to modify and re-submit the proposal to the committee for a second decision.
(i) The committee must vote to pass the revised proposal within one week of re-submission.
(j) A PhD student will fail the written examination if the revised proposal receives a no-pass decision by two or more members of the committee.
(k) The student must set a date for his/her oral examination within three weeks of the decision to pass the proposal.

(2) Preliminary Oral Defense and Examination in Crop Science Following the Written Proposal Format
(a) The oral examination will consist of two parts:
   (i) A one-hour defense of the proposal. The defense of the proposal will include an introduction of the proposal by the student followed by questions from the committee members.
   (ii) A one-hour general oral examination not necessarily related to the proposal. The open questions may include anything related to science or training of the student that the committee members deem relevant. The decision to pass is made according to the rules of the Graduate School, which gives the committee the options to pass, not to pass and to terminate the student's work, not to pass and allow a re-examination or to recess and re-convene within two weeks.

3) Final Oral Examination for the PhD Degree in Crop Science (including PBG and ENT options)
   a) At least one complete academic term must elapse between the preliminary oral and the final examination.
   b) The formal oral presentation by the candidate is open to all interested persons. The student and major professor should publicize it.
   c) Examination of the candidate and final deliberation will be conducted by only the graduate committee.
   d) The examination normally concentrates on the thesis.
   e) It is the responsibility of the student to follow OSU Graduate School guidelines with regards to scheduling and pre-examination forms.

11.3 Thesis Copies
The Graduate School no longer requires you to submit a paper copy of your thesis/dissertation but does have other filing requirements. See the Graduate School website for current requirements. Please note that if you miss deadlines, you may be required to register for minimal credits in the following term or may not obtain your degree in your desired timeframe.

You may have two personal or departmental thesis copies printed at no charge at the Student Multi-media Services, located on the 2nd floor of the Valley Library. These copies are not suitable for departmental library use. The department will pay to have two, high-quality, bound thesis copies made. Talk with the office staff about where to have this work done.

12. KEEPING ON TRACK

12.1 Evaluation of Progress
Once per year, you and your Major Advisor are required to evaluate your performance and progress towards your degree. This is a formal process that is in addition to the regular lines of communication that you should develop with your Major Advisor (see section 7). The evaluation process and record should point out strengths, successes, and areas of improvement. It offers a more formal method to receive feedback and constructive criticism and is not meant to illicit significant stress on behalf of the student, but rather offer suggestions for advancing you as a scientist and professional. This is also a great opportunity to have a comprehensive and reflective conversation with your Major Advisor about your program, and develop opportunities and activities to enhance your program for the coming year.
You and your Major Advisor can choose the best time to conduct the yearly evaluation, but it must be completed before the end of the fall term. The evaluation should include a face-to-face meeting and follow the guidelines described in the CSS Graduate Student Evaluation Form (see below). After the evaluation, your Major Advisor must complete the form and provide a copy to the Grad Program Assistant and the Department Head by the last day of the fall term each year. After it is reviewed the evaluation form will be deposited in your graduate file. It is the responsibility of your Major Advisor to make an appointment with you and to complete the evaluation by the deadline each year.

12.2 Graduate Program Checklist

Checklists can be a helpful tool as you and your Graduate Committee organize and monitor your progress. There are separate checklists for MS, MAg, and PhD students provided at the end of this handbook. The Graduate School also provides a guide to track deadlines and milestones in your graduate study: http://oregonstate.edu/dept/grad_school/deadlines.php

13. SCHOLARSHIPS AND AWARDS

13.1 Travel Awards

Attending and presenting at professional meetings are important aspects of academic life. The Department has several endowments that can provide funding for meeting and other travel. The typical award is $250 per meeting. Application deadlines are March 31, June 30, September 30, and December 31 for the following three-month period. See Barb Reed for application materials.

Any additional trip costs are either borne by you or by your major professor. You should follow Departmental travel procedures (see below). In your pre-approval request, indicate that you are also requesting a travel award and specify the type and purpose.

In addition, the Graduate School also offers competitive travel awards. Information on their program can be found here: http://oregonstate.edu/dept/grad_school/travel.php. We can only submit one nomination from the department per award period. So if you are interested in applying, please provide the Department Head with the requested information TWO WEEKS before the Graduate School deadlines for each term.

13.2 Department Administered Scholarships for Continuing Students

The Department of CSS administers several scholarships that are available for continuing graduate students in our program. Each scholarship was funded by a different donor and each has slightly different criteria. These scholarships and their specific requirements are listed below. The award amounts vary for each award based on the wishes of the donors and the balances in the endowments during any given year. Awards are given annually. Students interested in scholarship funding are to apply using the College of Agricultural Sciences (CAS) scholarship application process including meeting deadlines for the CAS application.

- **Larry Burrill Memorial Scholarship** - The Larry C. Burrill Memorial Scholarship was established in 2008 by donations from the family and friends of Larry C. Burrill, former faculty member of the Department of Crop and Soil Science. The scholarship is available to undergraduate or graduate students with an interest in weed science.

- **J. Ritchie Cowan Memorial Scholarship** - Ruth Cowan established the J. Ritchie Cowan Memorial Scholarship in memory of her late husband. He served as Head of the OSU Crop Science Department from 1959 to 1976. This scholarship is open to international graduate students with financial need whose interest is in Agronomy and who have a Crop or Soil Science major. Preference is given to students from Asia.

- **John and Jean Krautscheid Scholarship** - Both Mr. and Mrs. Krautscheid attended OSU when it was known as Oregon State College and John was a past president of the Crop Science Club. John was the first in his family of ten children to get a college degree. He appreciated the scholarships that
enabled him to graduate debt free. The Krautscheids established this scholarship to support undergraduate or graduate students in the field of Crop and Soil Science.

- **Sheldon Ladd Memorial Scholarship** – Sheldon Ladd was Department Head of Crop and Soil Science from 1985-2000. He died unexpectedly that year. In recognition of his many contributions to the Department of Crop and Soil Science and Oregon State University, a memorial fund in his name was established. It is for graduate or undergraduate majors in Crop and Soil Science. Well-rounded individuals involved in community and educational pursuits are preferred.

13.3 Awards Administered by the Graduate School

The graduate school administers several fellowships and scholarships that can be found here:

http://oregonstate.edu/dept/grad_school/fellowships.php

You cannot apply to these scholarships directly, but instead must be nominated by the Department for them. Awards have varied winter term submission deadlines. The Graduate Program Coordinator will call for nomination requests early during the winter term.

13.5 External Scholarships

There are a number of scholarships available from external sources. The Graduate School has compiled a list of some of these here:  http://oregonstate.edu/dept/grad_school/externalfellowships.php

14. POLICIES, PROCEDURES AND REGULATIONS

14.1 Use of State Vehicles

OSU maintains a fleet of state vehicles for use for official business. See http://motorpool.oregonstate.edu/ for information on reserving a vehicle, rates, and regulations.

Graduate students must request permission to drive a state vehicle. The request must be signed by the Department Manager or Department Head and submitted to Transportation Services at least three working days before the time of travel. Drivers must have a valid U.S. driver’s license. International driver’s licenses are not acceptable. Drivers are encouraged to enroll in the SAIF driver class. Drivers are responsible for following all university and state regulations pertaining to use and operation of state vehicles.

Under no conditions should state vehicles be used for personal purposes. In rare cases, a spouse may accompany a staff member in a state car, but only after receiving permission from the Department Head. Under no situation should children or pets be transported in a state vehicle.

OSU has a contract with Enterprise Rental. Contact Emmalie Goodwin for information about rental cars and making reservations.

14.2 Laboratory Policy

1. The department has an open lab and facilities policy. Authorized departmental personnel are provided with keys to appropriate areas. Key requests are authorized by the Major Advisor and approved by the Department Administrative Assistant or Department Head.
2. There is a designated faculty supervisor for all rooms, labs, greenhouse sections, and special facilities.
3. Supervisors are responsible for coordinating and supervising the use of facilities for which they have been assigned responsibility and for accommodating the needs of our total program and personnel insofar as possible. They are responsible for developing facilities and space use policies and for the basic maintenance of the facilities and equipment. They are not responsible for providing expendable
supplies and chemicals, for the costs of such supplies used by others, or for repair costs resulting from unauthorized or negligent use of equipment.

4. It is the responsibility of persons wishing to use facilities, space, or equipment to clear their requests with the appropriate supervisor and to respect and comply with the use policies. Specifically, they should provide their own expendable supplies or arrange with the supervisor to borrow and replace expendables or some other mutually agreeable trade-off. Graduate students and technicians should consult with their project leader or Major Advisor about cost commitments. They must comply with check-out list policies, clean-up and glassware washing policies, equipment operation training requirements, and with times assigned for use of facilities that require scheduling because of heavy use.

5. Except for equipment purchased on certain types of active federal grants, all departmental facilities and equipment are the property of the University and the Department—not of individual project leaders or supervisors. In scheduling use, however, the program of the responsible supervisor normally has priority over other departmental or cooperating department programs.

6. Individuals who do not respect or comply with established procedures and policies may be denied use of facilities. Use denial recommendations are made by facilities supervisors and subject to approval by the Department Head.

14.3 Safety
Potential dangers exist in most labs, university research farms, greenhouses and remote field sites. You should familiarize yourself with the safety procedures and regulations of each work environment. If you will be working at any University Research and Experiment Station properties, research farms, or greenhouses you are required to take initial safety training before beginning work as well as periodic refresher courses. Information on CSS safety policies and procedures and training modules can be found at http://cropandsoil.oregonstate.edu/content/crop-and-soil-science-safety-program

Additional training may be required for use of some equipment and facilities. Check with your supervisor on specific training needs.

Immediately alert your immediate supervisor, Major Advisor or the OSU office of Environmental Health and Safety if you have safety concerns: http://oregonstate.edu/ehs/

14.4 Telephone use
Phones are located in some graduate offices. Since there is only one phone in each graduate office, please be courteous and limit conversation time. Long distance calls should be made only with approval of a student's Major Advisor and charged, by using the appropriate code, to their account. Notices of phone calls to graduate students received in the main office are placed in the student’s mailbox.

14.5 Copy Machine Use
The Department has copy machines in each office that are available for faculty and students to use for copying related to teaching, research, and Extension projects. First priority use of the copy machine in the office is by office staff. Please act responsibly and with consideration for others in matters concerning the copy machines.

There are assigned access codes for the copy machine in the main office. See the Office Specialist if you do not have an access code. Personal copying is not allowed when using a faculty member access code. If you need help determining whether a copy job is personal or otherwise, check with the office staff.

The number of copies made on each code is recorded by the copier and reviewed monthly. The copy machine we have is designed to do low volume copying. Large copy jobs or multiple copies of documents (over 100 pages) should be sent to Printing Services (http://printmail.oregonstate.edu; you can request an estimate of the print job before sending them to Printing). We are billed for each individual copy on the department copier at a fixed rate. However, at Printing Services, the costs go down as the number of copies increases. Therefore, when preparing materials for meetings, programs, large classes, etc. please utilize Printing Services.
Since publicly-owned resources are for official use only, the following guidelines will apply to the use of the copy machines by graduate students:

- That portion of a graduate student's activities that contribute directly to the teaching, Extension, and research programs of the Department (or University) are of an official nature. This includes preparation of materials for class by a Teaching Assistant, reproducing abstracts for distribution to seminar participants, preparation of manuscripts for publication (even though they may be included as a part of a student's thesis), etc.
- Not included are duplicating materials as a part of a class assignment, copying thesis material not being submitted for publication in a journal (i.e. for distribution to committee members), copying journal articles, etc. for the student's files with little or no use to the university, etc.

### 14.6 Poster Printing Policy and Procedure

When preparing posters for academic presentations, be sure to follow the current policies. They are outlined in detail at the IT Website [http://support.roots.oregonstate.edu/content/printing-posters](http://support.roots.oregonstate.edu/content/printing-posters)

Please submit your poster well in advance of when you need it. The IT services will not guarantee a one-day turnaround. Extra time is necessary in case prints need to be altered. Please plan to submit a minimum of 3 days in advance of the day needed. At the very least, please send an email to Roots Support a week or more in advance to be sure someone will be available to plot your poster, and that the plotter is operational.

**Quick Tips for Posters**

The plotter paper is on a roll that is either 42 or 36 inches wide, so one dimension of your poster should be one of those two sizes.

The plotter will not print all of the way to the edge of the paper, so be sure to leave a margin between the edge of your paper and where you want the poster content to begin. A one inch margin is recommended.

Save your finished poster as a PDF document so that embed fonts and images aren't lost.

**Other Poster Printing Options**

If you do need to go elsewhere, OSU Printing and Mailing Services [http://printmail.oregonstate.edu/](http://printmail.oregonstate.edu/) can plot posters. Contact them for more information.

Students can plot a limited number of free posters at the Student Multimedia Presentation Center. Contact them for more information.

### 14.7 Travel Procedure

**All out-of-state travel must be pre-authorized as well as travel for which you will be requesting for a professional meeting travel award.**

The following order must be taken for travel:

1. Get pre-approval for travel from your Major Advisor or PI and the Department Head. The email template for this pre-approval is below. (If you are traveling to a foreign country on grant funds then OPPA must also approve the trip.)
2. Azumano or Teel's are the contract travel agencies. You are no longer required to get a quote from the contract agency before purchasing a ticket online. If you use one of the below contract agencies, once you decide on a ticket, have the travel agency send the itinerary to Emmalie for “authorization to purchase.” If you are driving instead of flying, then you MUST get a quote from one of the travel agencies to justify that driving is cheaper.
HUT Shuttle to PDX can be booked at the same time as your airline ticket through the travel agency.
Rental cars can be booked at the same time as your airline ticket for transportation to PDX or at your destination through the travel agency.

AZUMANO CORVALLIS  
(541) 757-9792  
(800) 334-2929  
Fax: (541) 758-1631  
azcorvallis@azumano.com

Teel's Travel Planners  
728 NW Kings Blvd  
Corvallis, OR 97330  
(541) 758-0808  
(800) 233-3225  
Fax: (541) 758-0814  
travel@travel-planners.com

3. Conference registrations and abstract submission fees can be put on the department credit card through the office specialist. You can send the information by email to one of the office specialists or they can come to your computer and enter the credit card number.

4. Hotels, taxis and shuttles at your destination need to be covered by you (put on your own credit card) until reimbursement. Make sure to keep all receipts for hotel, taxi, shuttle, etc. Hotel rates are covered up to current per diem rates in most cases. Contact Emmalie for current per diem rates in the cities you are travelling.

5. The Department approves reimbursement for per diem meals, so you do not need to keep all meal receipts. Note that depending on the source and amount of funding per diem for meals and incidentals may not be covered or they may be covered at a lower rate than the prescribed OSU maximums. Be sure to consult your major advisor or the entity providing travel funds before planning travel and submitting reimbursement requests.

6. If you will be gone 5 days or more, you are entitled to a travel advance. Go to this link for the form: https://oscar.oregonstate.edu/Resources/SubNav.aspx?NavPage=13&submenu=T13

Pre-approval travel email template:

Please submit your pre-approvals for travel via email to the PI of the grant, Major Advisor, then the Departmental Chair with a "cc" to the office specialist (Emmalie Goodwin, Emmalie.Goodwin@oregonstate.edu) providing the following information:

Subject line: pre-approval for travel
Traveler's name  
Destination  
Date of departure  
Date of return  
Index  
Activity code (if applicable)  
Reason for travel  
Estimated cost of trip, include:  
Transportation  
Registration fees  
Meals  
Lodging  
Other
The Department Head will then pre-approve your travel using the "reply all" feature (note: if you remembered to put Emmalie Goodwin in the "cc" then you won't have to forward the pre-approval to her).

If you have any questions, please ask Emmalie. (541)737-5093; emmalie.goodwin@oregonstate.edu

15. RESEARCH SUPPORT FACILITIES

15.1 On-campus
As a graduate student, you have direct access to a number of shared facilities (http://oregonstate.edu/research/shared/facilities.htm). Much of the equipment and some of the services offered by these facilities are available at no charge for graduate student use or for a small fee to cover expendable supplies. However, the majority of services are fee-based, albeit at a discounted rate to the OSU community. The campus facilities most commonly used by our students and program include:

Agricultural and Life Sciences Building (ALS), Crop Science (CS) and Cordley Hall
The department’s main office is located in 109 Crop Science. There is a satellite office for the soils unit in ALS 3017. Several of our entomology faculty have offices and labs in Cordley Hall. Offices, teaching and laboratory facilities are located in all three buildings.

Greenhouses http://agsci.oregonstate.edu/greenhouse/
There are two major greenhouse complexes on campus that are available for teaching and research. They are the College of Ag Science East (located immediately west of Cordley Hall) and West Greenhouses (about 1 block west of 30th Street between Orchard Avenue and Campus Way). The total combined growing space of these two units is approximately 100,000 sq. ft. of glass greenhouse.

All new users (graduate students, faculty, and staff) are required to complete an initial orientation and safety training before starting work in the greenhouse. Contact greenhouse staff to arrange this orientation and training.

Greenhouse space is allocated on a long-term basis to a primary user who is assigned space through their respective department. These project leaders/primary users can make short-term space assignments to so-called secondary users. Users are responsible to the Manager to coordinate the use and any modification of the facilities.

Research Farms
The department faculty primarily use three research farms – Hyslop Field Lab, Vegetable Farm and Lewis Brown Farm. See http://agsci.oregonstate.edu/farmunit/ for farm details. Plantings and field laboratories at these locations are used in field plot research work. Graduate students need to provide written requests to use these farms for research purposes, and the requests must be approved by the Major Advisor and College of Agricultural Sciences Farm Committee. These written requests must be made in advance and include materials, methods, and timing.

Center for Genome Research and Biocomputing (CGRB)
3021 Agriculture and Life Sciences Building http://www.cgrb.oregonstate.edu/
The CGRB provide services, technical expertise, collaborative functions and share-use equipment for molecular bioscience research at Oregon State University. The Core Labs are a fully staffed facility that serves as a focal point for acquisition and development of new instrumentation and technologies. A professional staff of six
provides service in four areas:

- **Genomics** – DNA sequencing, high throughput sequencing, genotyping and fragment analysis
- **Functional Genomics** – microarray services for analysis of global gene expression patterns in all types of organisms
- **Biocomputing and Bioinformatics** – advanced computational resources for data mining, data analysis and database development
- **Imaging and Image Analysis** – a confocal laser scanning microscope facility for high resolution analysis of wide variety of specimens

In addition, the CGRB provides shared instrumentation, including real-time PCR, scanners, robotics and computational facilities for use by walk-in users.

**Central Analytical Laboratory**
3079 Agriculture and Life Sciences Building
http://cropandsoil.oregonstate.edu/content/central-analytical-laboratory-cal
The Central Analytical Laboratory (CAL) in the Department of Crop and Soil Science provides fee-based analytical services to OSU scientists and cooperating investigators. The CAL also serves as an important resource for Oregon students and Extension clientele seeking information and advice about plant, soil, and water analysis.

**Stable Isotope Research Unit**
Agricultural and Life Sciences Building
http://cropandsoil.oregonstate.edu/content/stable-isotope-research-unit
The Stable Isotope Research Unit analyzes plant, soil, and other types of biological and environmental samples for 15N and 13C abundance by CF-IRMS and by GC-C-IRMS. Our systems include two PDZ-Europa 20/20 isotope ratio mass spectrometers interfaced with Sercon and Europa gas-solid-liquid prep modules and an Agilent Gas Chromatograph.

**The OSU Seed Certification Service**
031 Crop Science Building
http://seedcert.oregonstate.edu/
The OSU Seed Certification Service in the Department of Crop and Soil Science certifies seed acreage across the state. Seed Certification faculty have a wealth of information about seed certification policies and procedures on local, regional, national and international levels.

**The OSU Herbarium**
2082 Cordley Hall
http://oregonstate.edu/dept/botany/herbarium/
The herbarium is the world’s most comprehensive collection of Oregon plants and fungi, with over 400,000 preserved specimens. Some identification services are provided, and voucher specimens are accepted from OSU research projects.

**The OSU Seed Lab**
Seed Lab Building – Campus Way
http://seedlab.oregonstate.edu/
The OSU Seed Lab in the Department of Crop and Soil Science test seeds of hundreds of types. Seed Lab faculty and staff have a wealth of information about seed testing procedures from around the world. They have extensive seed testing facilities that can be used when doing cooperative research work.

**The Oregon State Arthropod Collection**
3029 Cordley Hall
http://osac.science.oregonstate.edu/home
This is a research collection of nearly 3 million preserved insect specimens. Begun in the 1870s as a reference
tool for early entomology classes at OSU, the collection is now amongst the largest of university-owned insect collections in the country and the largest insect collection in the Pacific Northwest.

Research Office
A312 Kerr Administration Building
http://oregonstate.edu/research/
Students and faculty can obtain information about grants, fellowships, etc., from the Research Office. The Research Office regularly notifies via e-mail and provides pertinent information to OSU research faculty about upcoming grant and fellowship opportunities.

Statistics Consulting Services
44 Kidder
http://www.stat.oregonstate.edu/consulting/scs
The Statistical Consulting Laboratory in the Department of Statistics offers consultation and advice to University researchers engaged in:
- The design of studies and experiments (including proposal preparation)
- The statistical and graphical analysis of data
- The appropriate choice, application and presentation of statistical methods
Researchers are encouraged to interact with a consultant as early as possible in a study, preferably at the planning stage.

For graduate students at OSU, the Statistics Student Consulting Service provides free statistical advice on University-related research projects. Faculty at OSU may also submit consulting requests to the Statistics Student Consulting Service, or they may directly contact the manager of the Statistical Consulting Lab, Cliff Pereira (541-737-1984).

Fee-based consulting can be arranged.

15.2 Off-Campus
A wealth of off campus facilities and resources are available to graduate students in the program. Some of the most valuable resources these facilities offer is the range of ecotypic variation they encompass. These resources include:

HJ Andrews Experimental Forest: The mission of the H.J. Andrews Experimental Forest is to support research on forests, streams, and watersheds, and to foster strong collaboration among ecosystem science, education, natural resource management, and the humanities. Located in the western Cascade mountains of Oregon, the Forest is administered cooperatively by the USDA Forest Service’s Pacific Northwest Research Station, Oregon State University, and the Willamette National Forest. Through the 1970s, the site was part of the International Biological Programme-Coniferous Forest Biome (IBP-CFB), and in 1976 it was designated a Biosphere Reserve as part of the United Nations’ Man and the Biosphere Program. In 1948, the site was established as an Experimental Forest by the US Forest Service and in 1980 the site became a charter member of the National Science Foundation's Long-Term Ecological Research (LTER) Program.

Branch Experiment Stations
Branch experiment stations in Oregon that work with CSS related activities include the following:

1. Central Oregon Agricultural Research Center: Located in central Oregon at the Madras site (850 NW Dogwood, Madras, OR 97741) and the Powell Butte site (8215 SW 126, Powell Butte, OR 97753). Research is conducted on potatoes, mint, and sugar beets.
2. Columbia Basin Agricultural Research Center: Include locations outside Pendleton and Moro (48037 Tubbs Ranch Road, P.O. Box 370 Pendleton, OR 97801; 66365 Lone Rock Road, Moro, OR 97039). Field research at both Pendleton and Moro emphasizes the production of wheat and rotational crops such as barley, legumes, and canola. Scientists at the Columbia Basin Center specialize in research and
extension work important to the production of field crops on 2 million acres in north-central and northeastern Oregon. Wheat and barley in this region generate more than $300 million annually.

3. **Hermiston Agricultural Research and Extension Center**: Located on Hinkle Road (P.O. Box 105, Hermiston). Research is conducted on fruits and vegetables.

4. **North Willamette Research and Extension Center**: Located near Interstate 5, south of Portland (15210 NE Miley Road, Aurora). Research is carried out on small fruits, vegetables, and ornamentals.

5. **Malheur Agricultural Experiment Station**: Located midway between Ontario, Vale, and Nyssa (595 Onion Avenue, Ontario). Research is conducted on row crops, small grains, and alfalfa.

6. **Klamath Agricultural Experiment Station**: Located on 86 acres of mineral soil 3 miles south of Klamath Falls and 20 miles north of the California border (6941 Washburn Way, Klamath Falls). Research concentrates on potatoes, cereals, forages, and sugar beets.

Graduate students are encouraged to visit these locations to view the research plots and learn about the applied research needs of the crop, soil and forestry industries in these areas.

**National Clonal Germplasm Repository, Corvallis**
This US Department of Agriculture, Agricultural Research Service facility, which is part of the National Plant Germplasm System, is located adjacent to the Lewis Brown research farm on Peoria Road, Corvallis, OR. This unit is concerned with the collection, maintenance, evaluation, and distribution of selected clonally propagated crops: pear, hazelnut (filbert), hardy kiwifruit, strawberry, blueberry, cranberry, raspberry, blackberry, gooseberry, currant, hop, mint, and other minor specialty crops. Plants are maintained in the field and/or in large insect-proof screen houses and in greenhouses. The facility houses four scientists. Kim Hummer is the Research Leader/Small Fruit Curator. Barbara Reed is the Plant Physiologist in charge of in vitro culture and cryopreservation. Joseph Postman is the Plant Pathologist/Pear Curator. Nahla Bassil is the Molecular Geneticist in charge of DNA marker technology.

**USDA- ARS-National Forage Seed Research Lab**
**Campus Way**
The mission of the Forage Seed and Cereal Research Unit is to improve the profitability of forage seed, cereal, hop and shellfish production systems in the Pacific Northwest in a manner that meets the environmental expectations of society. Forages Seed Lab scientist have many cooperative projects with CSS faculty. The lab has specialized facilities that can be used on cooperative projects.

**USDA- ARS-Plant Materials Center**
**Hyslop Field Station**
The Corvallis Plant Materials Center (ORPMC) provides plant solutions for northwestern California, western Oregon, and western Washington. The Center’s service area includes the northern Pacific Coast Range, Willamette Valley and Puget Sound, as well as Olympic, Cascade, and Siskiyou Mountains of western Washington and Oregon. Heavily forested coastal terraces, steep mountains, grass balds, foothills, valleys, flood plains, woodland prairies, and Savanna vegetation in the Willamette Valley and Puget lowlands typify the topography and natural vegetation.

**USEPA –Western Ecology Division (Corvallis Environmental Research Laboratory).**
[http://www.epa.gov/wed/](http://www.epa.gov/wed/)
This EPA research facility has three organizational sections, namely, (a) air pollution effects, (b) terrestrial/pesticides, and (c) hazardous waste/water. Research areas of special concern to plant scientists include air pollution effects on plants, uptake and effects of pesticides on plants, and acid rain effects on crop plants. This is a well-equipped facility. Of particular interest is a unique system to study the uptake and translocation of chemicals by whole plants. The plant’s aerial and root environments are continuously assessed and controlled, and transpiration and photosynthesis monitored.

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16. **LIFE BALANCE**

Your research can be so engaging and fulfilling that it is easy to devote nearly all of your time to it. However, you should make an effort to engage in some of the other activities and opportunities that Oregon and Oregon State University have to offer. Attend one of the free weekly lunchtime concerts in the MU or one of the numerous other events, lectures, exhibitions, that are continuously taking place on campus; work out at the Dixon Recreation Center; take up a hobby at the OSU Craft Center; join a sports club; see some of Oregon’s natural beauty; volunteer,...

The various demands of graduate school can also cause stress, anxiety, as well as more serious and debilitating mental illness. The University offers a number of resources to help. A good place to start is Counseling and Psychological Services (CAPS) [http://oregonstate.edu/counsel/](http://oregonstate.edu/counsel/)

One important service that CAPS offers is after-hours crisis counseling. **To access a counselor anytime call their main number:** 541-737-2131. CAPS is also home to the Mind Spa, a unique sanctuary where you can soothe your mind, body, and spirit. [http://oregonstate.edu/counsel/mind-spa](http://oregonstate.edu/counsel/mind-spa)
# TIMETABLE FOR MS THESIS STUDENTS

(See the Graduate School's *Graduate Student Guide to Success* for additional information)

<table>
<thead>
<tr>
<th>Year</th>
<th>Activities</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>___ Choose major professor(s)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ Choose committee members and declare minor (if desired)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ Send Program of Study Statement to Graduate Faculty for review by end of second term</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ Secure Graduate Council Representative for your graduate committee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ File official OSU Graduate Program of Study form with Graduate School before finishing 18 credits</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>___ Before scheduling thesis, file the “Approval to Proceed with Final Defense” Form with Graduate School, which includes thesis title approval</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ Schedule thesis defense and provide a copy of the thesis at least one week before the defense date</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ Give thesis seminar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>___ Submit final thesis materials, per Graduate School Guidelines, to Graduate School no later than six weeks after exam</td>
<td></td>
</tr>
</tbody>
</table>

Before graduating, be sure to fulfill

___ Program requirements
___ Teaching requirements
___ Seminar requirements
___ Ethics training/certificate

Schedule exit interview with department head

---

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TIMETABLE FOR PHD STUDENTS

(See the Graduate School's Graduate Student Guide to Success for additional information)

<table>
<thead>
<tr>
<th>Year</th>
<th>Activities</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Choose major professor(s)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Choose committee members including Graduate Council Representative and declare minor (if desired)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Send Program Statement to Graduate Faculty by end of first term</td>
<td></td>
</tr>
<tr>
<td></td>
<td>File official OSU Program of Study form with Graduate School by end of first year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give first of two seminars (departmental or professional)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Take departmental written preliminary exams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Take oral preliminary examination (schedule with Graduate School)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give second of two seminars (departmental or professional)</td>
<td></td>
</tr>
<tr>
<td>3-5</td>
<td>Before scheduling the thesis defense, file the “Approval to Proceed with Final Defense of Thesis” Form with Graduate School, which includes approval of thesis title</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two weeks prior to final exam, schedule examination with Graduate School and submit an examination copy of your thesis to Graduate School and your committee. You must provide your graduate committee a copy of your thesis at least two weeks before the thesis defense date</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give thesis seminar and take final oral exam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Submit final these materials to Graduate School no later than six weeks after exam</td>
<td></td>
</tr>
</tbody>
</table>

Before graduating, be sure to fulfill

|      | Program requirements |               |
|      | Teaching requirements |               |
|      | Seminar requirements |               |
|      | Ethics training/certificate |               |

Schedule exit interview with department head

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Crop and Soil Science
MS and MAg Graduate Student Annual Review Form

Name of Graduate Student
Degree Program
Program Start Date
Expected Completion Date

MILESTONE
Date

Course Work
Program Meeting
Official Program Approved and Filed
Teaching
Non-Thesis Topic Seminar
Ethics training
Oral Exam and Thesis Defense
Thesis Submitted to Grad Committee

Circle One
Completed/Scheduled/Anticipated

THESIS OR PROJECT
Progress made:

Goals for upcoming year:

Graduate Student’s Endorsement:
I have completed an annual review with my major professor and understand that I have the right to discuss this evaluation with the department head. Furthermore, I understand that I can attach any comments, explanations and rebuttals to this review.

Graduate Student Signature
Date

Major Professor’s Endorsement:
This certifies that I completed an annual review with this graduate student.

Major Professor Signature
Date
Crop and Soil Science
PhD Graduate Student Annual Review Form

<table>
<thead>
<tr>
<th>MILESTONE</th>
<th>Circle One</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course work</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Program Meeting</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Program filed with Graduate School</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Written Preliminary Exam</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Oral Preliminary Exam</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>First Seminar</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Second Seminar</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Ethics Training</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Thesis Defense Seminar</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td>Completed / Scheduled / Anticipated</td>
<td></td>
</tr>
</tbody>
</table>

THESIS OR PROJECT
Progress made:

Goals for upcoming year:

Graduate Student’s Endorsement:
I have completed an annual review with my major professor and understand that I have the right to discuss this evaluation with the department head. Furthermore, I understand that I can attach any comments, explanations and rebuttals to this review.

Graduate Student Signature ___________________________ Date __________

Major Professor’s Endorsement:
This certifies that I completed an annual review with this graduate student.

Major Professor Signature ___________________________ Date __________
CSS PhD Written Exam Research Format Proposal Checklist and Approval Form

Student: ____________________________________________
Major Professor: ________________________________
Committee Member: ______________________________

A written research proposal is part of the PhD preliminary examination in the Department of Crop and Soil Science. The proposal format should conform to the established guidelines.

The proposal has to be approved by the PhD student’s committee prior to the oral examination (one dissenting vote is allowed). In order to evaluate the written proposal in a timely manner and to allow time for the student to respond to comments, the following schedule should be followed:

a. Thesis topic approved by committee Date_______

b. Student submits proposal to his/her committee at least six weeks before the scheduled date of the exam. Date_______

c. Committee members vote to approve the proposal, with any suggested requirements or revisions of the proposal (seven days after submission of the proposal). If the proposal is not approved by two or more members of the committee, the student has two weeks to submit a revised proposal.

Vote for the original proposal:

_____ Pass  _____ No pass Date_______

Vote for the revised proposal:

_____ Pass  _____ No pass Date_______

---------------------------------------------------------------------

Committee Member’s Signature

The committee member should sign the Approval Form when giving a final approval of the proposal. The student should return this completed form to his/her Major Professor prior to scheduling the oral examination.

Comments (attached additional pages if necessary):

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Flow Chart for Master’s Degree Completion

**Admission**
- Discuss your goals and expectations with your department’s graduate student adviser.

**Registration**
- Take courses. Determine eligibility of transfer credits, if any. **Continuous enrollment required**
- Before completing 18 credits of coursework: Develop a Program of Study* with your program. *This is your plan for completing your degree. Your adviser, department chair or departmental graduate coordinator will help you.
- Take courses and work on research, thesis, project or portfolio.

**Academic Unit Graduate Degree Requirements**
- Review the graduate degree requirements of your academic unit (college, school, department or program) with your adviser, the program director/chair or the graduate program director.

**Before completing 18 credits of coursework:**
- Develop a Program of Study* with your program. *This is your plan for completing your degree. Your adviser, department chair or departmental graduate coordinator will help you.
- Take courses and work on research, thesis, project or portfolio.

**At least 15 weeks before your final oral examination:**
1. Submit your approved Program of Study to the Graduate School and
2. Select a Graduate Council Representative (if required) for the final exam.

**At least 2 weeks before your final oral examination:**
1. Use online form to schedule your final oral examination,
2. Distribute a defendable copy of your thesis to your committee,
3. Bring in or email pre-text pages of your thesis to the Graduate School, and
4. submit a diploma application (EXCEPT for SPRING Term completion, when you must submit by FIRST week of Spring Term).

**Final Examination**
- If your master’s degree requires a thesis, upload final thesis to ScholarsArchive and relevant paperwork to the Graduate School within 6 weeks of your defense date. You must be registered for 3 graduate credits when you submit your thesis to the Graduate School.

**Graduation**

---

**NOTE:** A dashed line connected to a university requirement indicates your department or program may have additional requirements. Check with your academic unit for its specific rules and requirements.

**NOTE:** Check the Graduate Catalog for full details on deadlines.
Flow Chart for Ph.D. Completion

**Admission**
Discuss your goals and expectations with your department’s graduate student adviser. Draft a schedule of coursework for your degree.

**Registration**
Continuous enrollment required unless leave of absence requested.

**Determine eligibility of transfer credits, if any.**
Take courses. Start research.

**Continuous enrollment required**

Before completing 2 terms (if you already have a master’s) or 5 terms (if you do not have a master’s):
(1) Select program committee members, which must include a Graduate Council Representative,
(2) Meet* with your program committee to create a Program of Study.
*Take to the meeting: your Doctoral Program Checklist, all transcripts, list of eligible transfer credits, your program curriculum and initial draft of Program of Study.

At least 6 weeks before your preliminary oral exam and most coursework has been completed, submit your signed Program of Study to the Graduate School. When it has been approved by the Graduate School, you may schedule your preliminary oral exam. **At least 2 weeks before the exam**, submit the online Exam Scheduling Form.

**Preliminary Oral Examination**

Pass Preliminary Oral Examination

At least 2 weeks before your final oral examination:
(1) Use online form to schedule your final oral examination,
(2) Distribute a defendable copy of your thesis to your committee,
(3) Bring in or email pre-text pages of your thesis to the Graduate School and
(4) submit a diploma application (EXCEPT for SPRING Term completion, when you must submit by FIRST week of Spring Term).

**Final Examination**

Pass Final Examination

NOTE: At least ONE term must elapse, but no more than 5 YEARS may elapse between Preliminary Oral Exam and Final Examination.

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**Graduation**
Upload final dissertation to ScholarsArchive and relevant paperwork to the Graduate School within 6 weeks of your defense date. You must be registered for 3 graduate credits when you submit your dissertation to the Graduate School.

**Academic Unit Graduate Degree Requirements**
Review the graduate degree requirements of your academic unit (college, school, department or program) with your adviser, the program director/chair or the graduate program director.

NOTE: A dashed line connected to a university requirement indicates your department or program may have additional requirements. Check with your academic unit for its specific rules and requirements.

NOTE: Check the Graduate Catalog for full details on deadlines.
Crop and Soil Science Seminar Evaluation Form

Speaker’s name:

Evaluator’s name (optional):

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Start time: __________________
End time: __________________