

# **Crop and Soil Sciences Graduate Student Handbook**

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**September, 2010**

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## TABLE OF CONTENTS

WELCOME.....	4
INTRODUCTION.....	5
STATEMENT OF ETHICS .....	5
GRADUATE PROGRAM ADMINISTRATION .....	5
Graduate Program Bylaws.....	5
Department Chair.....	6
Graduate Coordinators .....	6
Academic Coordinator .....	6
CSS Statewide Resources.....	7
GENERAL ACADEMIC REQUIREMENTS, POLICIES AND PROCEDURES.....	7
Degree Options .....	7
Masters of Science (M.S) Thesis Option .....	7
Master of Science (M.S. ) Non-Thesis Option .....	7
Doctor of Philosophy (Ph.D.) .....	7
Advisor .....	7
Committee .....	8
Graduate Student Representatives.....	9
Courses at the University of Idaho.....	9
Grievances .....	9
Evaluations.....	9
Continuous Enrollment Policy .....	9
Graduation .....	10
Checklist for Graduation .....	10
Thesis/Dissertation Binding .....	11
Exit .....	11
Continuation for Another Degree .....	11
Milestones to Meet for Successful Completion of the Graduate Degree.....	12
GRADUATE COURSEWORK .....	13
Program of Study .....	13
Graduate School Coursework Requirements .....	13
Thesis Master’s Degree .....	13
Non-Thesis Master’s Degree .....	13
Doctoral Degree .....	13
Department Requirements.....	14
Seminar .....	14
Special Topics, Washington State Tour.....	14
Teaching Experience (Crop Science-PhD).....	14
Crop Science Graduate Coursework Requirements .....	15
Recommended Areas of Competency.....	15
Master’s Degree.....	15
Doctor of Philosophy Degree .....	15
Suggested Course Options.....	16
Soil Science Graduate Coursework Requirements .....	17
Recommended Areas of Competency.....	17
Special Soils Course Descriptions.....	17
Master’s Degree.....	17
Non-Thesis Master’s Degree .....	18
Doctoral Degree .....	18

Suggested Course Options.....	19
Reviews.....	21
<b>THESIS/DISSERTATION GUIDELINES.....</b>	<b>21</b>
Proposal .....	21
General Format .....	21
Publishing.....	21
How to Proceed.....	21
Standards of Conduct .....	23
<b>MAJOR EXAMINATIONS .....</b>	<b>23</b>
Crop Science Preliminary Doctoral Examination .....	23
Soil Science Preliminary Doctoral Examination.....	24
Crop Science and Soil Science Final Oral Exam.....	25
<b>GRADUATE ASSISTANTSHIPS .....</b>	<b>26</b>
Upon Arrival .....	26
Payroll .....	27
Residency Requirement and Tuition Waiver .....	27
No Tuition Allowed .....	27
Residual and Mandatory Fees .....	27
Responsible Conduct of Research Training .....	27
Health Insurance .....	27
Reappointments .....	28
English Proficiency Exam .....	28
International Students and Scholars.....	28
Terms and Expectations .....	28
Hourly Appointments (Timeslip).....	29
<b>BUSINESS POLICIES .....</b>	<b>29</b>
Keys and Card Access.....	29
Offices and Desks.....	29
Telephone .....	29
Email and List Serves .....	29
Mail.....	30
Photocopying .....	30
Purchasing .....	30
Greenhouses and Growth Chambers .....	30
Safety .....	30
Staff Assistance .....	31
Travel .....	31
Checkout/Exit.....	32
<b>CENTRAL STUDENT SERVICES AND FACILITIES .....</b>	<b>32</b>
<b>APPENDIX .....</b>	<b>35</b>
Graduate Student Annual Review Form	
TA Evaluation Forms	
CSS Authorship Guidelines	

## WELCOME

Welcome to the Department of Crop and Soil Sciences (CSS) at Washington State University! We are proud to offer world-class M.S. and Ph.D. degrees in both Crop Science and Soil Science, with the ability to conduct graduate research in a variety of specialized areas within each discipline.

The Department of Crop and Soil Sciences offers programs in the broad area of crop science, including plant breeding and genetics, crop and seed production, turf management, weed science, plant physiology, cereal chemistry, and plant biotechnology; and soil science, including soil fertility and plant nutrition, soil physics, soil chemistry, soil microbiology, soil genesis morphology and classification, organic and sustainable agriculture, and remote sensing technology including GIS, GPS, and soil mapping. Programs are designed to discover and develop principles of crop and soil sciences and to apply these principles to the development of new crop varieties and new crop, soil and water management practices in agricultural, urban, and natural environments.

Our goal is to train tomorrow's leaders, scientists and educators to make valuable and lasting contributions in their chosen field or endeavor. To achieve this goal, CSS provides students the opportunity to develop in-depth knowledge in their field, to develop critical thinking skills and to conduct original, creative, cutting-edge research. CSS students have opportunities to teach in the classroom and in outreach programs. Students also have the opportunity to develop a breadth of knowledge across the varied CSS disciplines and beyond by interacting with colleagues and faculty working in research areas outside of their own.

We have a long-standing commitment to financially supporting our CSS graduate students with a combination of funds from Washington State and from various private and governmental external grants. Since the availability of these funds fluctuates from year to year, we cannot guarantee support for all students throughout their entire programs. Nevertheless, we have an outstanding and consistent track-record of fully supporting our productive and progressive students from the day they start to the day they complete their degree. Graduate students on formal appointment and receiving a stipend are considered full-time graduate assistants in the department. These appointments represent an agreement between the student and the department with each party having defined responsibilities. Academic responsibilities are defined in this handbook. Your advisor and committee define your research responsibilities. Being a graduate student is more than a full time endeavor and requires your full attention and effort to succeed. Employment in addition to an assistantship is not permitted. Students generally devote half of their time to class studies and half to their research under the guidance of a major professor. Students are expected to complete their research project and thesis prior to graduation. Publication of the research is an expected outcome of graduate research.

Most agree that the time they spent in graduate school was some of the most challenging and rewarding in their life. Immerse yourself in the experience and take full advantage of the many social and professional opportunities coming your way. You will make many new and lasting friends from around the U.S. and world. Your time here will be filled with personal and professional growth, change, and accomplishment. At times you may want to give up. Don't. The CSS faculty and staff are dedicated to enriching your graduate experience and ensuring that it is World Class. We wish you every success in your program and your subsequent endeavors in crop and soil science-related professions.

Richard T. Koenig  
Chair, Department of Crop and Soil Sciences  
September 2010

## INTRODUCTION

Policies and procedures regarding graduate education are set at three levels--- the university, college, and department. The WSU [Graduate Catalog](#) and the [Graduate School's Policies and Procedures](#) contain most of the general policies on admissions and programs. Please refer to their websites for current information. This handbook addresses departmental policies and procedures in addition to the aforementioned. Failure to follow these policies and observe the degree requirements inevitably results in complications and could delay or jeopardize completion of your degree. Please read this handbook carefully and keep refer it throughout your program of study here.

## STATEMENT OF ETHICS

The CSS faculty and staff are committed to the basic values of:

*Accountability*  
*Integrity*  
*Positive Attitude*  
*Respect*  
*Honesty*  
*Passion*  
*Quality*  
*Work Ethic*

By upholding these values we strive for our students to develop scientific and professional values of their own. We highly encourage our students to reflect on and consider the following guiding principles:

1. Uphold the highest standards of scientific investigation and professional comportment, and an uncompromising commitment to the advancement of knowledge.
2. Honor the rights and accomplishments of others and properly credit the work and ideas of others.
3. Strive to avoid conflicts of interest.
4. Demonstrate social responsibility in scientific and professional practice, by considering whom their scientific and professional activities benefit, and whom they neglect.
5. Provide honest and impartial advice on subjects about which they are informed and qualified.
6. As mentors of the next generation of scientific and professional leaders, strive to instill these ethical standards in students at all educational levels.

Adopted by ASA, CSSA, and SSSA

## GRADUATE PROGRAM ADMINISTRATION

### Graduate Program Bylaws

The Department of Crop and Soil Sciences Graduate Program is governed by official bylaws, approved by the Graduate Faculty in Crop and Soil Sciences, The Graduate School, and the WSU Faculty Senate. The [Department of Crop and Soil Sciences Graduate Program Bylaws](#) define the qualifications for membership for the Crop and Soil Sciences Graduate Faculty, administration of the Crop and Soil Sciences Graduate Program, composition of graduate student committees, and participation of Crop and Soil Science graduate students in the administration of the Crop and Soil Sciences Graduate Program.

The Crop and Soil Sciences Graduate Program is administered by the Graduate Program Director who is also the Department Chair. The Graduate Committee coordinates and advises the Department Chair on the

Crop and Soil Sciences Graduate Program. Currently the committee is composed of the Crop Science and Soil Science Graduate Coordinators.

At the discretion of the Department Chair, student representation may be added or deleted from any committee, but graduate students may not serve on the committees of other graduate students.

Duties of the Department Chair related to the Graduate Program in CSS are to provide overall leadership, development and implement policies, represent the interests of the Graduate Program to the campus and University administrators, be responsible for coordinator all Graduate Program administrative matters within the Graduate School, manage the departmental resources for graduate student support in CSS, coordinate CSS graduate course teaching assignments, and to appoint a CSS Graduate Committee and a Chair of that committee.

Areas in which the Graduate Committee assists and advises the Chair include:

- Review, develop and update long-range goals for the CSS graduate program and plans for their attainment. These ideas shall be presented at least once annually to a meeting of all faculty.
- Serve as a sounding board for new ideas, changes, etc., in academic or administrative issues.
- Provide guidance on administration of the CSS Graduate Program.
- Lead the CSS graduate program assessment process.
- Coordinate all activities related to recruitment of CSS graduate students.
- Develop and maintain recruiting materials, including web materials, as required.
- Review all student applications and, in conjunction with the Department Chair after consultation with appropriate CSS Graduate Faculty, determine the appropriate disposition of applications (acceptance or rejection) in a timely manner.
- Make recommendations regarding the use of departmental resources for providing financial support to graduate students, including assistantships, scholarships and awards.
- Regularly (at least annual) review the CSS graduate curriculum.
- Make recommendations to CSS Graduate Faculty regarding curricular revision. Such recommendations are forwarded to the Department Chair to be presented to the Graduate Faculty for approval by majority vote.
- Prepare drafts of course or curricular change forms for revision and submission by the CSS Department Chair.
- With approval by the CSS Department Chair, other ad hoc committees may be appointed as needed. Changes to the existing Graduate Committee responsibilities must be approved by amendment of bylaws.

### **Department Chair**

Dr. Richard Koenig, 201 Johnson Hall, 335-3471, [richk@wsu.edu](mailto:richk@wsu.edu)

### **Graduate Coordinators**

#### ***Crop Science***

Dr. Kim Campbell, 379 Johnson Hall, 335-0582, [kgcamp@wsu.edu](mailto:kgcamp@wsu.edu)

Dr. Ian Burke, 171 Johnson Hall, 3352858, [icburke@wsu.edu](mailto:icburke@wsu.edu)

#### ***Soil Science***

Dr. Jim Harsh, 249 Johnson Hall, 335-3650, [harsh@wsu.edu](mailto:harsh@wsu.edu)

### **Academic Coordinator**

Deb Marsh, 205 Johnson Hall, 335-2615, [marshdj@wsu.edu](mailto:marshdj@wsu.edu)

The academic coordinator is responsible for coordinating graduate admissions, student appointments, initial student orientation, graduate student records, forms processing, office assignments, preliminary and final exam scheduling, as well as curriculum issues such as the catalog and time schedule. She is

your first point of contact upon arrival, and should be your first point of contact thereafter regarding academic policies and procedures.

### **CSS Statewide Resources**

Department of Crop and Soil Sciences, WSU-Pullman <http://css.wsu.edu>  
WSU Puyallup Research and Extension Center <http://www.puyallup.wsu.edu/>  
WSU Prosser Research and Extension Center <http://www.prosser.wsu.edu>  
WSU Mt. Vernon Research and Extension Center <http://mtvernon.wsu.edu/>  
WSU Wenatchee Tree Fruit Research and Extension Center <http://www.tfrec.wsu.edu/>

## **GENERAL ACADEMIC REQUIREMENTS, POLICIES AND PROCEDURES**

### **Degree Options**

#### ***Master of Science (M.S.). Thesis Option***

Because research is an integral part of science, most students complete the thesis degree program. The thesis describes a research project conducted by the student. The thesis typically has three sections: a background or literature review that sets the stage for the research; a section with one or more chapters describing the actual research and containing data and analysis; and a general conclusion. The thesis should be formatted in a style that is consistent throughout. The final exam is in two parts. The first is a seminar presenting the results of research project. This is a public presentation. The second part is an oral exam that focuses on defense of the research project.

#### ***Master of Science (M.S.) Non-Thesis Option***

In a few instances, students may wish to obtain advanced knowledge but do not want to write a traditional research thesis. Such students may elect the non-thesis option. This option must be chosen within the first semester following enrollment. Students in this option are required to take considerably more coursework than is required of students in the thesis option. Students in the non-thesis option must complete a paper or project in lieu of the thesis. The final oral exam will focus more on broad knowledge and less on project defense than would an exam for the thesis option. More details are provided in the 'Final Exam' section of this handbook.

#### ***Doctor of Philosophy (Ph.D)***

The PhD degree is awarded in recognition of excellence in scholarship and for an original contribution to the advancement of science. The degree is awarded for originality and creative scholarship rather than for an accumulation of academic credits.

The Ph.D. program is separated into the "initial" period preceding the preliminary examination and the "candidate" period following the preliminary examination. During the initial period, the student acquires knowledge and skills needed for his/her research program and most of the academic program is completed. The preliminary exam should be completed no later than the fourth semester into the Ph.D. degree program. After passing the preliminary examination the candidate concentrates on research and preparation of the dissertation. During the latter period the candidate demonstrates his/her ability to do original research. The final oral examination should reflect that students have developed into mature scientists, which includes the ability to conceive research projects, to critically evaluate the literature, to gain knowledge of acceptable scientific behavior, and to think and discern outside the area of the dissertation. More details are provided in the 'Major Examination' section of this handbook.

## **Advisor**

The *major advisor* is the thesis or dissertation advisor and is the graduate student's primary contact for all matters related to the program of study and thesis research. The major advisor assists in selection of the thesis committee and development of a program of study and thesis or dissertation research proposal. The major advisor monitors the student's academic and professional growth, reviews program changes, and arranges for graduate student support. The major advisor is generally the committee chair.

If the major advisor is located at a Research Station, a *campus advisor* must be identified who will support the academic development of the student while that student is on campus. If the student is conducting their project at least partly on campus, then in an ideal situation the campus advisor will be a co-investigator on the student's research with the major advisor. Although the major advisor is responsible for advising the student on experimental design and manipulation and interpretation of data, and for reviewing initial drafts of theses/dissertations and papers, the student will be integrated into the campus advisor's research program. The campus advisor will also provide *monetary* support for these research activities. For those students whose research program focus is off-campus, the campus advisor will serve on the student's committee, answer day-to-day questions while the student is in Pullman and will invite the student to research group meetings, journal clubs, and similar activities.

## **Committee**

All students have a thesis or dissertation advisory committee. The students must meet with their committee at least twice per academic year.

The initial selection, or subsequent changes of a graduate student's committee shall be determined jointly by the student and the student's major advisor and approved by the Department Chair.

The graduate committee of each student shall have a minimum of three members for both the M.S. and Ph.D. At least half of the committee members shall be active CSS Graduate Faculty members.

Crop and Soil Sciences allows non-tenure track professionals internal to WSU (i.e. research, clinical, adjunct, or affiliate such as USDA –ARS researchers) and appointed as adjunct faculty to serve on, co-chair, or chair a committee. In these cases, at least one other member of a master's committee must be a permanent, WSU tenure-track faculty member and a member of the graduate faculty of the student's program. The third member must be a graduate faculty of the student's program but is not required to be a permanent WSU tenure-track faculty. Similarly, at least two other members of a doctoral committee must be permanent, WSU tenure-track faculty and a member of the graduate faculty of the student's program.

Non-tenure track professionals external to WSU may be granted Graduate Faculty participation if they are first officially approved as adjunct faculty, but cannot serve as chair or co-chair of a graduate student committee.

Individuals not officially participating as Graduate Faculty within any graduate program at WSU (i.e. a faculty member from another university or entity) may be approved to serve as a committee member for an individual student on a case-by-case basis. The committee chair for that student should forward the name and curriculum vitae of the desired committee member along with the program of study for approval by the Chair, and final approval by the Dean of the Graduate School.

If a minor is declared, one member of the committee must be from the Graduate Faculty of the minor program. This person may fill the requirement of one of the WSU permanent tenure-track faculty members on the committee.

The committee chair ensures that the student is making satisfactory progress towards a degree.

The committee aids in developing the course program and provides guidance and expertise for the student's research. To ensure guidance in all aspects of their research, many students, especially Ph.D. students, elect to have four or five faculty on their committee. In addition to advising the student, each committee member must read the thesis or dissertation, attend, and vote at the preliminary and final exam. Committee members often participate in the annual student evaluation. The respective Graduate Coordinator must approve each committee.

[Graduate School](#) policies and procedures, deadlines, guidelines, as well as committee membership and program of study forms are found on their website.

### **Graduate Student Representatives**

In addition to the major advisor and the Graduate Coordinator, CSS students are represented by at least one, but no more than two, graduate students. The graduate student representative acts as a liaison with the faculty and attends all faculty meetings except those involving personal matters. He/she will communicate student's suggestions to the faculty and will serve as their advocate. Departmental committees with graduate student positions include the Computer, Graduate Studies, Safety and Space Committees, and Search committees. These representatives are elected by the graduate students and are the representatives for one academic year.

All graduate students in the university who are currently enrolled in 10 or more hours are members of the [Graduate and Professional Student Association](#) (GPSA). GPSA represents the concerns of graduate students within the university and nationally. The CSS program has at least one representative to the GPSA Senate (the governing body for GPSA) who is elected each fall. Many of the important advisory committees within the university itself have voting positions for graduate students.

### **Courses at the University of Idaho**

Register for cooperative WSU course(s) taught at UI via [myWSU](#) along with your other courses. The end of the semesters at UI and WSU do not coincide. Therefore after the WSU grade submission deadline, students may not receive a grade for the UI course(s) on their initial grade report. The Academic Coordinator will work with the UI departments to get the final grades and they will be added to the student's record as soon as it is received and processed from UI.

Many UI courses are not cross-listed in the WSU course catalog; the University of Idaho [catalog](#) should be consulted and course schedules must be verified with the instructor.

### **Grievances**

If grievances arise, the student should discuss the problem with their thesis advisor and the Graduate Coordinator(s). If additional consultation is needed, please consult the Department Chair, or as a final resort, the WSU Ombudsman. The [WSU Ombudsman Office](#) is in Wilson Hall, Room 2, phone (509) 335-1195.

### **Evaluations**

The Graduate School requires an [annual review](#) of each graduate student. In CSS, this review includes academic performance, research accomplishments and presentations, and, when applicable, performance as a TA. These reviews are completed by the thesis or dissertation advisor and discussed with the student and their thesis or dissertation committee. Teaching Assistants are also [evaluated](#) at the end of the semester by their students. If the student's progress is unsatisfactory, the thesis or dissertation committee will be consulted to determine if graduate student status should be continued. The Department Chair will notify the student in writing of the committee's recommendation and forward a copy of the report to the Graduate School.

### **Continuous Enrollment Policy**

All full-time graduate students must register for a minimum of 10 credit hours each Fall and Spring semester, with at least one (1) of those credits being CROPS or SOILS 700, 702, or 800 to track the contributions of your Major Advisor. Part-time graduate students must register for a minimum of 2 credit hours and a maximum of 9 credit hours each Fall and Spring semesters. International graduate students with F-1 or J-1 visa status should consult with the [Office of International Students and Scholars](#) for

enrollment requirements, which in general requires the same enrollment level as full-time graduate students.

Apart from exceptions for graduate leave for personal reasons or internship leave, all M.S and Ph.D. students (prior to preliminary examination) are required by the Graduate School to be continuously enrolled in a minimum of 2 graduate credits each semester, excluding summer, until they have completed all of the degree requirements on their Program of Study. Doctoral Students who have taken their preliminary exams, have met all of their program requirements except completion of their dissertation, and do not have the funding to register for graduate credits may be placed into Continuous Doctoral Status for a limited number of semesters. Doctoral students in Continuous Doctoral Status will be charged a small administrative fee and will have limited access to University resources. Graduate students who are not enrolled for a semester (except doctoral candidates in Continuous Doctoral Status) and have not received approval from the Graduate School for graduate leave or internship leave will have to reenroll and pay an additional fee.

See Chapter 5 of the [Graduate School Policies and Procedures Manual](#) for details on these policies.

## Graduation

Students should consult the Graduate School's website early in the semester they expect to graduate to obtain information regarding policies and procedures, and deadlines for thesis defense and graduation. Failure to meet the deadlines could require enrollment for an additional semester.

Additionally, CSS requires students to prepare an 'Intent to Graduate' notice. **The notice is due the first week of the semester in which the student plans to graduate.** The student and professor should be prepared to present, in writing, an official timeline of how the process leading up to the thesis defense will be carried out in a timely and fair manner. The timeline should include committee meetings, draft editing schedules, official graduate school deadlines and other pertinent dates and procedures.

The **Intent to Graduate Notice** should include the following:

- Student's Name:
- Major Advisor (Major Advisor signature must be included):
- Committee Members (Committee member signatures must be included):
- Dissertation Title:
- Date of Prelim Examination:
- Status of Thesis/Dissertation:
- Expected Date for delivery of Thesis/Dissertation Final Draft to Committee:
- Expected Date for Thesis/Dissertation Seminar:
- Expected Date for Thesis/Dissertation Defense:

In addition, **prior** to the formal scheduling of the defense a draft thesis with front page signed by the faculty advisor must be presented with the final exam scheduling form to the department chair for approval to move forward with the scheduling process. **The department chair will not sign the scheduling form without this thesis copy.** The decision on whether to approve will happen within two working days. This process does not override in any way the responsibility of the thesis committee. Rather, it is meant to offer one more step of preparation by and for the student. Any thesis committee member may deem that the thesis is not ready to be defended at any of the normal steps in the process.

**Students who do not complete the steps listed above will not be allowed to conduct their defense until the following semester, NO EXCEPTIONS.**

### **Check List for Graduation**

- 1<sup>st</sup> week of semester intending to graduate- submit written intent to graduate and timeline to Academic Coordinator
- Ensure all deadlines on timeline are met throughout final semester, students intending to graduate who determine that graduation during that semester is not possible, should immediately contact the Academic Coordinator with an updated intent to graduate and revised timeline.
- Submit Application for Degree to the graduate school (see Graduate School Website for specific deadlines)
- After final committee approval of thesis draft, approve defense date and time and obtain committee signatures on final exam scheduling form, contact Academic Coordinator to schedule a room for defense
- Submit final exam scheduling form with all committee signatures to Department Chair **along with a draft of thesis/dissertation containing your major advisor's signature** on the cover page, once signed submit original form to the Graduate School Programs office (see Graduate School website for specific deadlines and procedures) and submit a copy of the signed scheduling form to the Academic Coordinator
- Conduct final exam, and turn in final copy of thesis/dissertation to Graduate School within 5 working days of defense, and also two hard copies to the CSS Academic Coordinator

**Note: It is the sole responsibility of the student to ensure that all deadlines set forth by the Graduate School are met. Dates and deadlines can be found for each semester on the Graduate School website at <http://gradsch.wsu.edu> Failure to follow the CSS Policies and Procedures or to meet the deadlines set forth by the Graduate School will result of delay in graduation date.**

### **Thesis/Dissertation Binding**

The student is also responsible for providing two copies of the thesis/dissertation to the Academic Coordinator simultaneous with turning it into the Graduate School. The Department will pay to hard-bind these two copies. One is for the Department's thesis and dissertation library, the other is for Committee Chair. Additional bound copies can be arranged for \$20/ea, either at the expense of the student, or funding provided by the major professor. Personal checks should be made payable to J&S Bindery.

### **Exit**

Before departure from CSS, students must leave a forwarding address with the Academic Programs Coordinator, schedule an exit interview with the Department Chair, return all keys to the main office, and consult with the advisor about cleaning up samples, chemicals, etc., from the student's research and office space.

### **Continuation for Another Degree**

To continue for another degree you should contact the Academic Coordinator. The following forms/cards may be picked up from the Graduate School:

- Completed MS and continuing for a PhD in the same department.
- Not completing a PhD and continuing for a MS in the same department.
- Not completing a graduate degree and continuing as an undergraduate.
- New Application: Continuing a graduate degree program in a different department.

## Milestones to Meet for Successful Completion of the Graduate Degree

Milestone	M.S. Degree	Ph.D. Degree
Committee identified and agrees to serve	End of first semester	End of first semester
Research Topic identified	End of first semester	End of first semester
Initial Committee Meeting, Program of Study approved by committee and submitted to Academic coordinator	Early in second semester (thesis) End of first semester (non-thesis)	Early in second semester
Thesis/Dissertation proposal defended to committee (in the Crops degree this is part of the preliminary examination for Ph.D. students, see below)	End of second semester	End of second semester. Crops Students enroll in Crops511
Course-work completed	End of 4 <sup>th</sup> Semester	End of 4 <sup>th</sup> Semester
Oral Preliminary Exam scheduled (Ph.D. students). Scheduling form submitted to Academic Coordinator.	N/A	End of 4 <sup>th</sup> or early 5 <sup>th</sup> Semester. Scheduling Form must be submitted 12 work-days prior to exam. See Graduate School deadlines for length of time necessary between completion of preliminary examination and final examination.
Oral Preliminary Exam completed (Ph.D. students)	N/A	End of 4 <sup>th</sup> or early 5 <sup>th</sup> Semester,
Crops 510/Soils 501 seminars completed (see below)	Once,	Twice, first one during first year. Second can be final dissertation seminar.
Statewide tour Special Topics completed	During first year	During first or second year
Thesis/Dissertation Research completed	One semester prior to expected graduation	One semester prior to expected graduation
First draft of Thesis/Dissertation submitted to advisor	At end of semester prior to expected graduation.	At end of semester prior to expected graduation.
Schedule for graduation form approved by committee.	During first month of semester in which student expects to graduate.	During first month of semester in which student expects to graduate.
Intent to graduate form submitted to graduate school	During first month of semester in which student expects to graduate.	During first month of semester in which student expects to graduate.
Alert CSS academic coordinator and Crops or Soils graduate coordinator of intent to graduate.	During first month of semester in which student expects to graduate.	During first month of semester in which student expects to graduate.
First draft of Thesis/Dissertation submitted to committee	During second month of last semester.	During second month of last semester.
Committee and Advisor revisions incorporated into Thesis/Dissertation	During third month of last semester.	During third month of last semester.
Final Examination request form submitted to Academic Coordinator and Department Chair for approval.	Scheduling Form must be submitted 12 work-days prior to exam.	Scheduling Form must be submitted 12 work-days prior to exam.
Final draft of Thesis/Dissertation submitted to Committee	Minimum 10 work-days prior to exam.	Minimum 10 work-days prior to exam.
Final Examination	See Graduate School Deadlines	See Graduate School Deadlines
Revisions to Thesis/Dissertation completed and submitted to graduate School	Five working days after examination.	Five working days after examination.
Graduation.	If on RA/TA, eight to nine semesters after beginning study.	If on RA/TA, 8 -16 semesters after beginning study (depending on whether student begins with BS or MS).

## GRADUATE COURSEWORK

### Program of Study

Your committee chair and other members should aid you in developing your proposed Program of Study (POS). This is an official list of classes you have taken and/or will take, and research you have conducted or will conduct. All students should become familiar with the Graduate School program of study requirements as outlined on the Graduate School website at <http://www.gradsch.wsu.edu/>. The electronic form is available there too.

Your committee chair and other members should aid you in developing your proposed POS. The POS should be submitted early in your second semester.. It is your responsibility to have appropriate forms typed, proofread, and presented to your committee.

After the POS is developed and each member has signed, submit the POS to the CSS Academic Coordinator for full faculty review. The general Crop or Science faculty, respectively, must approve your program and may require additional coursework. Once approved, the Academic Coordinator will forward the POS to the Graduate School. The Graduate School then reviews the POS and contacts the student and Academic Coordinator both regarding any problems. Once the problems are resolved, the Dean of the Graduate school will approve the POS and send electronic notification to both the student and Academic Coordinator.

Revisions to the POS are possible should the need arise. These changes are made on a 'Change of Program' form available on the Graduate School website. Do not refile a new POS. Your committee, the respective Graduate Coordinator, and the Department Chair must approve all revisions for presentation to the Graduate School for final approval. Major revisions require a respective all-faculty review as well.

### Graduate School Coursework Requirements

#### ***Thesis Master's Degree***

- 30 hours minimum total credit
- 21 hours minimum of graded course work, which consists of:
  - 15 hours minimum of graded course work at the 500-level
  - 4 hours minimum of 700-level credit in major
  - 6 hours maximum of non-graduate graded course work (300-400 level only)

#### ***Non-Thesis Master's Degree***

- 30 hours minimum total credit
- 26 hours minimum of graded course work, which consists of:
  - 17 hours minimum of graded course work at the 500-level
  - 4 hours minimum of 702 credit in major
  - 9 hours maximum of non-graduate graded course work credit (300-400 level only)

#### ***Doctoral Degree***

- 72 hours minimum total credits
- 15 hours minimum of graded graduate-level (500-level) coursework beyond the bachelors degree, *excluding the following departmental requirements:*
  - *Seminar: Crops 510 or Soils 501*
  - *Special Topics--Statewide Tour: Crops 512 or Soils 502*
- 20 hours minimum 800-level research credits
- 9 hours maximum of non-graduate courses
- Courses graded S/F may not be used in the core program (*i.e. Crops/Soils 511 Research Proposal and Soils 505 Teaching Practicum*)
- Courses graded P/F or courses taken as audit may not be included on the program of study

A flexible number of credits are allowed for research and thesis (700 or 800 level) each semester. Students are required to register for Crops or Soils 700, 702 (Research Projects for Non-Thesis Majors) or 800 to bring their credit load up to the maximum allowed, 18 credits each semester. Courses taught at University of Idaho that are not listed in the WSU course catalog can be added to the program of study using the independent study, special topics option, with committee approval.

Once the program has been approved by the Graduate School, the program becomes official and students are required to take all courses listed on the POS. **Any course included in the advanced degree program in which a grade of 'C-' or below has been earned must be repeated for credit.** Students may choose to take courses not on the POS as well.

## Department Requirements

### *Seminar*

**All graduate students and faculty are expected to attend and participate in the departmental seminars** regardless of enrollment, including those scheduled outside of the regular seminar series, whenever they have no class conflicts. Seminars are routinely made available via videoconferencing to the Research and Extension Centers at Puyallup, Prosser, and Mt Vernon. Students residing at off-campus locations are expected to participate via videoconferencing whenever possible. Arrangements for other locations can also be made.

M.S. students are required to take one credit of Crops 510 or Soils 501, respectively. They will also be required to give an exit seminar as part of their final defense of their thesis. Soils M.S. students should take Soils 501 and present this exit seminar as part of the course. Crops M.S. students may do the same or they may take Crops 510 earlier and present their exit seminar as a special seminar.

PhD students are required to take two credits of Crops 510 or Soils 501, respectively, of which one credit must be taken during their first year of study at WSU. The subject of this seminar is their research proposal. For Soils PhD students, the second credit of seminar will be for the dissertation seminar presented in the final semester during regularly the scheduled seminar series. For Crops PhD students, the second credit of seminar **may** be for the dissertation seminar presented in the final semester during regularly the scheduled seminar series. Alternatively, Crops PhD students may choose to deliver their dissertation seminar in addition to the second credit of Crops 510.

It is highly recommended that students in other degree programs (such as Molecular Plant Sciences), who are advised by CSS faculty and are housed in the CSS department, take one credit of Crops 510 or Soils 501.

### ***Special Topics, Washington State Tour***

To provide graduate students with an overview of the breadth of our departmental resources and the diverse agricultural industries in the state and to acquaint students with our statewide WSU faculty, staff, and graduate students, all incoming graduate students are required to attend the Statewide Tour at their earliest opportunity. The tour occurs sometime during the summer break, usually shortly after finals. Crop Science students should enroll for one credit of Crops 512, Soil Science students should enroll for one credit of Soils 502 in the Fall semester following the summer in which they participate in the tour. Students who complete a master's degree in our department and enroll in our doctoral program, will be invited but are not required to attend the tour again. The instructor of the course rotates between Crops and Soils faculty. After the tour students must submit a group paper of their impression of Washington's agriculture, industry, and environment, followed by a group presentation during the Fall semester seminar series in which they give an overview of the trip.

## Teaching Experience (Crop Science-PhD)

Educational delivery experience equal or equivalent to a semester Teaching assistantship is required of Ph.d. students, regardless of funding. Equivalent experience can include lecturing in a course multiple times, extension program delivery, and assistance with education courses.

## Crop Science Graduate Coursework Requirements

### Recommended Areas of Competency

The advisor, thesis committee, and Graduate Coordinator will discuss course expectations of incoming students on an individual basis. Entering students should have a solid B.S. level background in mathematics, chemistry, and the biological sciences. If it is determined that an incoming student is deficient, they may be asked to make up those deficiencies by taking or auditing courses or by doing extra reading.

<i>Recommended Areas of Competence (or equivalencies)</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
SOILS 201	Soil Science: A Living System	3	F	every year
CROPS 202	Crop Growth and Development	4	S	every year
STAT 212	Introductory Statistics	4	F, S	every year
CHEM 102	Chemistry Related to Life Sciences	4		
BIOL 320	Introductory Plant Physiology	3	F	every year
CROPS 411	Crop Environmental Interactions	3	S	every year
PI P 429	General Plant Pathology	3	F	every year
SOILS 441	Soil Fertility	3	S	every year
CROPS 444/445 or M BIOS 301	Plant Breeding I & II  General Genetics	2/2	S	every year

### Master Degree Requirements

<i>M.S. Core Course Requirements</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
CROPS 510	Seminar	1	F, S	every year
CROPS 512	Special Topics, State Tour	1	F, S	every year
CROPS 700	Master's Research (Thesis)	4	F, S	every year
CROPS 702	Master's Special Problems (Non-Thesis)	4	F, S	every year

<i>M.S. Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
M BIOS 303	Introductory Biochemistry	4	F, S	every year
STAT 412	Biometry	3	F, S	every year
CROPS 444/445	Plant Breeding I & II	2/2	S	every year

CROPS 503	Advanced Cropping Systems	3	F	every year
STAT 512	Analysis of Variance of Designed Exp.	3	F, S	every year
STAT 519	Applied Multivariate Analysis	3	S	every year

### **Doctoral Degree Requirements**

<i>PhD Core Course Requirements</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
CROPS 510	Seminar	2	F, S	every year
CROPS 511	Research Proposal Development	2	F, S	every year
CROPS 512	Special Topics	1	F, S	every year
CROPS 512	Special Topics, State Tour	1	F, S	every year
CROPS 800	Doctoral Research	20	F, S	every year

### **Suggested Course Options**

<i>Breeding/Genetics Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BIOL 519	Introduction to Population Genetics	3	F	even years
BIOL 520	Conservation Genetics	2		
BIOL 521	Quantitative Genetics	2	S	even years
CROPS 504	Plant Transmission Genetics (UI PISc 507)	3	S	odd years
CROPS 505	Adv. Classical and Mol. Breeding	3	F	odd years
CROPS 512	Special Topics, History of Genetics	1-2	S	odd years
CROPS 520	Plant Cytogenetic Tech. (UI PISc 520)	3	S	odd years
MATH 563/BIOL 566	Mathematical Genetics (UI)	2	S	even years
MBIOS 513	General Biochemistry	3	F	every year
MBIOS 525	Plant Molecular Genetics	3	F	every year
or 514	General Biochemistry	3	S	every year
PL P 525	Field Plant Pathology and Mycology	1	S	odd-alt yrs, summer
PL P 535	Mol. Genetics of Plant & Pathogen Inter.	2	S	even years

<i>Physiology Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BIOL 513	Plant Metabolism	3		
BIOL 517	Stress Physiology of Plants	3		
MBIOS 513	General Biochemistry	3	F	every year
MBIOS 514	General Biochemistry	3	S	every year

<i>Production/Management Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
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CROPS 503	Advanced Cropping Systems	3	F	every year
CROPS 512 special topic	Herb. Fate Mode of Action	2		
CROPS 512 special topic	Herbicides, Tox. and Mode of Action	1		
CROPS 513	Biology of Weeds	3	F	even years
F S 583	Cereal Science and Technology	2	F	odd years
SOILS 413	Introduction to Soil Physics	3	F	every year

<i>Turf Management Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BIOL 462	Community Ecology	3		
BIOL 517	Stress Physiology of Plants	3	S	even years
BIOL 548	Evolutionary Ecology of Populations	3		
CROPS 512 special topic	Herb. Fate Mode of Action	2		
CROPS 512 special topic	Herbicides, Tox. and Mode of Action	1		
ENT 558	Pesticide Topics	1		
IPM 452	Pesticides and the Environment	2		
PL P 521	General Mycology	4	F	every year
SOILS 547	Advance Soil Fertility Management	3	F	even years
STAT 412	Biometry	3	F, S	every year
STAT 512	Analysis of Var. of Designed Exp.	3	F, S	every year
STAT 519	Applied Multivariate Analysis	3		
STAT 530	Advanced Linear Models	3	S	
STAT 547	Multivariate			

## **Soil Science Graduate Coursework Requirements**

### ***Recommended Areas of Competency***

To the extent possible, Soils graduate students should be knowledgeable in all five sub-disciplinary areas of Soils (chemistry, fertility, morphology, biology, and physics). However, because many students entering graduate school have received their B.S. degrees from an area outside of Soils, it is sometimes impractical and often very time consuming to take a graded course in each of these areas for the M.S. degree. For this reason, the Soils Faculty require that a graded Soils course be taken in a minimum of three of the five sub-disciplinary areas in Soils. Additional Soils and other courses to make up deficiencies can be taken as P/F as determined by the M.S. thesis committee and Soil Faculty. (It is generally expected that all deficiencies will be taken for a letter grade, but recognize that in special cases, it may make sense to take one as P/F, if agreed to by the thesis committee and Soils Faculty.)

It is recommended that students enter the program with established competence in soil science and supporting subjects. Minimum degree of competence include introductory soil science (Soils 201), organic chemistry (Chem 345), statistics (Stat 412), soil analysis (Soils 442 or 503) and at least two courses in upper level soil science (Soils 415, 421, 411, 431, 441, 451). Deficiencies should be made up in the first one or two semesters following admission and should be done at the student's expense.

### **Special Soils Course Descriptions.**

#### Soils 502 – Advanced Topics

All graduate students in Soils are encouraged to enroll and to participate in this course. Sections of this course are designed to acquaint you with the literature in Soils. The course is organized on an informal basis by subject matter areas, with each area being the responsibility of a faculty member who specializes in that area. You may register and repeat this course for up to six credit hours, but not more than three credits per semester. One Soils 502 course is required of all soils graduates—the State Tour course.

#### Soils 503 – Advanced Soil Analysis

Courses ranging from one to three credits are offered on specialized topics relating to instrumentation and to soil analysis. Topics include site selection and characterization, flame emission and absorption, organic matter analysis, electronics, fluorescent antibody techniques, elemental analysis, microcomputer software, tracer techniques, N-15 mass spectrometry, and others. Students may develop an independent study course in consultation with their advisors and the graduate coordinator. The course should involve mastering the use of instruments or techniques or developing new methodologies applied to research in soil science.

#### Soils 505 – Teaching Practicum

All Ph.D. degree candidates are required by department policy to enroll in Teaching Practicum (Soils 505) prior to graduating. This course offers credit for experience in Teaching Assistant (TA) duties obtained in a soils course. Foreign TAs must pass an English Proficiency Exam, which tests communication skills in English prior to engaging in Practicum. The type of experience obtained depends upon several factors, including the nature of the course, the capabilities of the student, and the needs of the instructor. Experience could include lecturing in a discussion or laboratory section, preparing and grading exams or homework, or helping set-up laboratory or discussion sessions.

### **Master's Degree**

The M.S. in Soils is awarded to graduate students for substantial scholarly achievement beyond the baccalaureate. To earn this degree a student is expected to demonstrate in-depth knowledge of a basic subject matter area in Soil Science and research competence in the form of a thesis or competence in the application of soil science in the form of a special project. The M.S. degree in Soils at WSU includes both the thesis and non-thesis options. The students' advisory committee will develop an appropriate program of study that must be approved by the Soils Faculty. In addition to competence in selected areas of soil science, students may be required to obtain competencies in core technical areas including, but not limited to, mathematics, statistics, natural sciences, and computer sciences.

#### *Non-thesis Masters Degree*

Within the Graduate School's minimum requirements, the non-thesis student's graded course work will include 6 credits in plant and soil biology (agronomy, horticulture, forestry, crop protection, plant ecology, biology, microbiology, plant physiology), 15 credits in soil science (soil chemistry, soil physics, soil biology, soil fertility, pedology, environmental biophysics), and 5 credits in other professional core courses (e.g., statistics, sustainable agriculture, colloid science, hydrology). The student must demonstrate skill in critical thinking, scholarship, and written and oral communication through course work, the seminar course, and the final report and examination. The non-thesis option requires the student to form a committee and develop the program of study during the first semester of enrollment. Students in this option will have lowest priority for state-funded assistantships and will generally be expected to be self-funding.

<i>MS Core Course Requirements</i>	<i>Credits</i>	<i>Sem</i>	<i>Offered</i>	
SOILS 501	Seminar	1	F, S	every year
SOILS 502	Special Topics, State Tour	1	F, S	every

				year
SOILS 700	Master's Research (thesis)	4	F, S	every year
SOILS 702	Master's Research (non-thesis)	4	F, S	every year

<i>MS Suggested Course Options</i>	<i>Credits</i>	<i>Sem</i>	<i>Offered</i>	
CROPS 503	Advanced Cropping Systems	1	F	every year
STAT 512	Analysis of Variance of Designed Exp.	3	F, S	every year
SOILS 368	Intro to GIS	3	F	every year
SOILS 502	Advanced Topics in Soils	1-3	F, S	every year
SOILS 503	Advanced Soil Analysis	1-3	S	every year
SOILS 504	Research Presentation Techniques	1		
SOILS 505	Teaching Practicum	1	F, S	every year
SOILS 514	Environmental Biophysics	2	S	every year
SOILS 515	Environmental Biophysics Laboratory	1	S	every year
SOILS 526	Soil Mineralogy (UI SOILS 526)	2	S	every year
SOILS 531	Advanced Soil Bioch. and Microb.	2	S	every year
<del>SOILS 537</del>	<del>Soil Biochemistry (UI SOILS 537)</del>	<del>3</del>	<del>F</del>	<del>every year</del>
SOILS 541	Soil-Plant-Microbial Interactions	3	F	odd years
SOILS 547	Soil Fertility Management	3	F	even years
SOILS 557	Advanced Soil Genesis and Classification	3		
SOILS 568	ArcGIS and Spatial Analysis	4	S	every year

### **Doctoral Degree**

All students pursuing a Ph.D. are required to have taken an undergraduate course (400 level) in each of the major areas: soil chemistry, soil physics, soil fertility-management, soil genesis, morphology-classification, and soil microbiology-biochemistry. In addition, a graduate (500 level) course must be taken in two of the five Soils areas.

An Interdisciplinary Soils Ph.D. is defined as: expertise in Soils enhanced by another academic discipline (for example, plant physiology, agricultural economics, civil engineering or colloid chemistry). A representative from outside the discipline must serve on the Doctoral Committee. In the program of study the student may substitute one 400/500 level course in another academic discipline for a required 400/500 level course in Soils. The interdisciplinary program must be approved at the same time the program of study is approved. Also refer to Preliminary Doctoral Examination for guidelines specific to the Interdisciplinary Soils Ph.D.

In addition to the Graduate School requirements shown below, Soil Science Ph.D. candidates must take the following courses:

<i>PhD Core Course Requirement</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
SOILS 501	Seminar	1	F, S	every year
SOILS 502	Special Topics, State Tour	1	F, S	every year
SOILS 505	Teaching Practicum	1	F, S	every year

SOILS 800	Doctoral Research	20	F, S	every year
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**Suggested Course Options**

<i>Soil Classification &amp; Genesis Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
SOILS 368	Intro to GIS	3	F	every year
SOILS 514	Environmental Biophysics	2	S	every year
SOILS 515	Environmental Biophysics Laboratory	1	S	every year
SOILS 526	Soil Mineralogy (UI SOILS 526)	2		
SOILS 531	Advanced Soil Bioch. and Microb.	2		
or				
SOILS 541	Soil-Plant-Microbial Interactions	3	F	odd years
<del>SOILS 551</del>	<del>Advanced Pedology</del>	<del>3</del>		
or				
SOILS 557	Advanced Soil Genesis & Classif. (UI SOILS 557)	3		
SOILS 568	ArcGIS and Spatial Analysis	4	S	every year

<i>Soil Chemistry Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BSYSE 558	Groundwater Flow and Contaminant Transport	4		
CH E 585	Interfacial Phenomena	3	S	odd years
CHEM 501	Advanced Inorganic Chemistry	3	F	even years
E MIC 586	Special Projects in Electron Microscopy	3	F, S	every year
GEOL 579	Groundwater Geochemistry	3	S	odd years
SOILS 502	Advanced Topics	V	F, S	every year
SOILS 503	Advanced Soil Analysis	V	F, S	every year
SOILS 526	Soil Mineralogy (UI Soils 526)	2		
SOILS 531	Advanced Soil Bioc. and Microb.	2	S	every year
SOILS 541	Soil-Plant-Microbial Interactions	3	F	odd years

<i>Soil Fertility Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BIOL 513	Plant Metabolism	3		
BIOL 517	Stress Physiology of Plants	3	S	even years
BSYSE 558	Groundwater Flow and Contaminant Transport	4		
CROPS 503	Advanced Cropping Systems	3	F	every year
SOILS 468	ArcGIS and Geospatial Analysis	4	F	every year
SOILS 514	Environmental Biophysics	2	S	every year
SOILS 515	Environmental Biophysics Laboratory	1	S	every year

SOILS 531	Advanced Soil Bioch. and Microb.	2	S	every year
SOILS 541	Soil-Plant-Microbial Interactions	3	F	odd years
SOILS 547	Advance Soil Fertility Management	3	F	even years
STAT 512	Analysis of Variance of Designed Exp.	3	F, S	every year

<i>Soil Physics Suggested Course Options</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BSYSE 558	Groundwater Flow and Contaminant Transport	4		
C E 550	Advanced Hydrology	3		
CE 315	Fluid Mechanics	3	F, S	every year
CH E 585	Interfacial Phenomena	3	S	odd years
E MIC 586	Special Projects in Electron Microscopy	3	F, S	every year
MATH 548	Numerical Analysis	3	F, S	every year
SOILS 442	Soil Analysis	3	F	every year
<del>SOILS 513</del>	<del>Models for Vadose Zone Transport</del>	<del>2</del>		
SOILS 513:	Advanced Soil Physics	3	Fall	even years
SOILS 514	Environmental Biophysics	2	S	every year
SOILS 515	Environmental Biophysics Laboratory	1	S	every year
SOILS 531	Advanced Soil Bioch. and Microb.	2	S	every year
SOILS 533:	Vadose Zone Processes	3	Fall	odd years

<i>Soil Microbiology &amp; Biochemistry Suggested Courses</i>	<i>Title</i>	<i>Cr</i>	<i>Sem</i>	<i>Offered</i>
BIOL (Bot) 563	Field Ecology	2	S	every year
BIOL 548	Evolutionary Ecology of Populations	3	S	every year
BIOL 564	Molecular Ecology and Phylogeography	3		
CHEM 332	Physical Chemistry	3	S	every year
CHEM 340	Organic Chemistry I	3	S	every year
E MIC 587	Special Problems Electronic Microscopy	1	S	every year
MBIOS 301	General Genetics	4	S	every year
MBIOS 303	Introductory Biochemistry	4	S	every year
MBIOS 426	Microbial Genetics	3	F	every year
MBIOS 442	General Virology	3	S	every year
MBIOS 506	Molecular Techniques in Microbiology	3	S	every year
MBIOS 513	General Biochemistry	3	F	every year
MBIOS 514	General Biochemistry	3	S	every year
MBIOS 550	Basic & Applied Microbial Physiology	3	S	every year
MBIOS 578	Molecular Biology Computer Techniques	1-4		
SOILS 514	Environmental Biophysics	2	S	every year
SOILS 515	Environmental Biophysics Laboratory	1	S	every year
<del>SOILS 521</del>	<del>Environmental Soil Chemistry</del>	<del>3</del>	<del>S</del>	<del>every year</del>
SOILS 531	Advanced Soil Bioch. and Microb.	2	S	every year
SOILS 541	Soil-Plant-Microbial Interactions	3	F	odd years

STAT 512	Analysis of Variance of Designed Exp.	3	F, S	every year
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### **Reviews**

Members of the Faculty in Soils have adopted a firm policy calling for a formal advisory-review of students' programs on a regular basis. As soon as the graduate student committee has been established the members are expected to meet at least twice a year to assist in program and research planning, to carefully review the student's progress and to give advice as needed.

## **THESIS/DISSERTATION GUIDELINES**

### **Proposal**

All students should develop a thesis or dissertation proposal after consultation with their advisor and committee. This proposal forms the basis for the thesis/dissertation research. All students are expected to develop and carry out original, creative research projects. While the advisor and committee members serve as mentors, the student is expected to develop and demonstrate the ability to work independently; to design, conduct, and analyze experiments; and to prepare the work for publication in scientific journals.

Thesis or dissertation preparation involves synthesizing concepts by interpreting experimental and analytical data that are gathered for that purpose. It constitutes a major part of the creative scholarship in a master's or doctoral program. Experience in preparing and writing a research publication, as well as the peer-review process, are important goals of graduate programs.

### **General Format**

The general thesis or dissertation format required by the department is one with three sections: a literature review, several chapters describing methodology, research results, and a chapter with the overall conclusion. The chapters describing research results should be written as papers for publication. For the thesis or dissertation, the papers should be modified to clearly reflect the work of the student. This is especially necessary when Thesis/Dissertation chapters will be submitted for publication with multiple authors. If student is not first author, the paper cannot be used or must be revised. They must also be paginated and formatted to give uniformity to the thesis or dissertation. Thesis or dissertation formatting requirements are posted on the [Graduate School's](#) website.

### **Publishing**

Students are expected to publish thesis or dissertation research in an appropriate scientific journal. If the student has not submitted thesis or dissertation results for publication within a reasonable amount of time after passing the final exam, the thesis/dissertation advisor will have the option of publishing the student's thesis or dissertation results.

### **How to Proceed**

Formal guidelines for preparation of the thesis or dissertation are available from the Graduate School. However, the following steps and schedule are recommended:

1. Select a problem and review background literature – prepare and defend research proposal, preferably by the end of the second semester after beginning work for a graduate degree.

2. Complete and summarize literature review in written form and develop theories, conduct experimental work, and collect data -- begin this phase as quickly as practical, and complete at least one semester ahead of the completion date for the degree.
3. Summarize and tabulate data, analyze data, apply theories, and develop a written presentation - begin as early as possible on a tentative basis and follow up by preparing a complete, typed draft for submission to the thesis/dissertation advisor at end of semester prior to graduation. Select a style from a scientific journal you wish to follow. Research papers prepared by professionals may be rewritten as many as a dozen times before submission to a journal for editorial review. Graduate students should plan to rewrite several drafts before the manuscript is given to the thesis/dissertation advisor.
4. Comments from the thesis/dissertation advisor should be carefully considered and addressed while preparing the revised draft that is submitted to the graduate committee. This step in preparation of a thesis corresponds to the process involved in preparing a paper for a journal. The graduate committee should be allowed at several weeks for the review process. See above for a suggested timeline. If problems surface involving interpretation of or meaning of data, the committee may have to meet to resolve issues. Therefore it is important to allow enough time for a thoughtful and thorough study of dissertation material. The revised draft of this document becomes the "final draft" as outlined in the following section on activity and comments.

Students on research appointments may continue to collect and analyze data, write, etc., during the final semester or summer session. Research results generated after submission of the thesis or dissertation to the committee will not automatically be accepted as essential material. If the advisor(s) consider it appropriate, the data collected during the final semester or summer session may be used in the final draft.

The Faculty recommends that the student be in residence (i.e., on-campus or at an off-campus station) during the semester that the thesis or dissertation is prepared so that the full benefit of consultation with the thesis committee can be realized.

The following schedule allows a reasonable amount of time for completion of each step and for details of post-thesis approval and for the preparation of a manuscript for publication. Since faculty members are usually involved with other reviews, as well as regular duties, the following guidelines are suggested:

2 to 6 weeks	Submit drafts to major thesis/dissertation advisor, and campus advisor if appropriate, and allow time for incorporation of the appropriate number of corrections and revisions. Allow 7 to 10 days for each revision by advisor(s) and allow sufficient time for discussion with them.
2 weeks	Submit a revised draft for review by your graduate committee. Because of the greater number of reviewers, allow <i>at least</i> two weeks for return of this draft.
2 to 4 weeks	Revise and correct draft. This is a critical time because you will be getting comments on the draft from your committee for the first time.
2 weeks	Resubmit the draft to the committee or to selected committee members. All technical aspects of the thesis or dissertation should be worked out at this point. Don't present any surprises to the committee at your final exam.
2 weeks	Submit a "final" draft to each committee member and to the department chair <i>at least</i> 10 days prior to scheduling your final exam. Submit a "final oral scheduling form" and copy of your thesis or dissertation to the Graduate School.

The student is required by the Graduate School to give an approved copy of the thesis or dissertation to the department chair and to deposit the thesis or dissertation abstract in the Fischer Agriculture Library at least 10 days prior to the oral examination.

Concluding Comments. Normally, a minimum of 12 to 16 weeks is required from the time you submit your initial draft of your thesis or dissertation to your advisor to the time of your final oral exam.

## **Standards of Conduct**

**Plagiarism and misconduct in research will NOT be tolerated.** Students failing to follow standards of conduct dictated by the [Office of Student Conduct](#) may face dismissal from Washington State University. If you are not sure what constitutes plagiarism, consult the [WSU Plagiarism Information site](#). If you are unsure what constitutes academic integrity, please review the information presented on the [WSU Academic Integrity site](#)

## **MAJOR EXAMINATIONS**

### **Crop Science Preliminary Doctoral Examination**

The preliminary exam is an exam to determine if a student is qualified to be admitted into candidacy for the PhD degree. The exam assesses knowledge of crop science, ability to think critically and independently, and ability to conduct independent research (form hypotheses, design experiments, collect and analyze data, put the research in context of the current state of knowledge, draw conclusions). Ph.D. preliminary examinations in Crops consist of two parts, Crops 511 (Research Proposal Development), and an oral exam. Crops 511 should be taken during the second semester and the oral exam should be taken during the fourth semester (you will be sent a reminder by the Academic Coordinator). This permits appraisal of the student's ability and background before a major amount of time has been invested in a Ph.D. program.

Crops 511, a 2-credit course is to be taken during student's second semester and consists of the following:

1. The student will develop a 15-page (minimum) research proposal on his/her dissertation topic. The graduate coordinator will meet with all students enrolled in Crops511 at least twice at the beginning of each semester to review recommended proposal formats. The draft proposal will be reviewed by the major advisor. After revisions, the proposal will be distributed to members of the committee, as well as the graduate coordinator, 3 weeks prior to the oral presentation. This proposal must be a unique document prepared by the student that demonstrates his/her understanding of the objectives of this research, as well as the strategies and procedures that will be used to address these objectives. A copy of the proposal also will be available in the main office for faculty review.
2. The student will prepare and deliver an oral presentation related to the proposal, which will be open to faculty, staff and students.
3. Following the presentation, the student will participate in a 1 to 2 hour question and answer session with committee members and interested faculty. Suggestions offered up by faculty outside of the student's committee should be taken into consideration, however, these suggestions should not be deemed as mandatory points that must be changed.
4. A satisfactory grade for the course will be assigned to the student based on the average of grades issued by the committee members and participating faculty (grade options: A through C, where "A" indicates that the student demonstrated an excellent understanding of the topic and C indicates that the student failed to successfully demonstrate an understanding of the topic). If a satisfactory grade is received, the students will pass this stage of the process and will be qualified to take the oral prelims. If the student receives an unsatisfactory/fail grade, students will have a 3-4 month period to revise the proposal and prepare another presentation. If the student fails on the second attempt, he/she will not be allowed to continue their graduate training program in Crop Science.

The oral preliminary examination must be scheduled with the Graduate School using a "Preliminary Exam Scheduling Form" found at <http://www.gradsch.wsu.edu/>. The oral should be scheduled in the fourth semester. All committee members must attend and vote. Other members of faculty may attend and members of the graduate faculty in the department may also vote. The purpose of the oral exam is to allow faculty to have the opportunity to probe the depth of a student's knowledge of the whole field of Crop Science and the ability of the student to think critically and independently.

A student who fails the prelim exam will be given the opportunity to retake the exam. See the graduate school website for policies. A student who fails the prelim exam the second time is terminated from the graduate program.

### **Soil Science Preliminary Doctoral Examination**

The preliminary examinations are designed to evaluate the suitability of the student to become a candidate for the Ph.D. in Soil Science. It is also an opportunity for the student and his/her committee to re-evaluate the appropriateness of remaining coursework, either to correct academic weaknesses or enhance scholarly interests that may surface during these examinations. The exams evaluate the candidate's disciplinary knowledge as well as his/her ability to think creatively, analyze, synthesize, evaluate knowledge and information, and apply that information to establishing new hypotheses for creative research and problem solving. The doctoral committee and chair will coordinate the preliminary doctoral exams. Students should become familiar with the purpose and scope of preliminary examinations well in advance of the time the examination is scheduled.

The preliminary doctoral examinations in Soils, to be completed by the end of the fourth semester, consist of a written evaluation and an oral exam. The options for these requirements are:

#### ***Written Evaluation***

##### **1. Traditional Written Exam**

As the best preparation for the oral exam the faculty encourages the traditional written exam. The committee will solicit questions from the faculty in four of the five sub-discipline areas in Soils (chemistry, fertility, morphology, biology, and physics), which must include one area of major emphasis. For the Interdisciplinary Soils Ph.D. three areas of Soils (including one major area) and the identified non-Soils discipline will be tested. The thesis committee will determine the format for the written exam. Generally the time allotted for completing the questions are three hours for each non-major area and six hours for the major area. A passing grade for each discipline in the exam must be a B or higher.

##### **2. Research Proposal**

In some cases the student and doctoral committee may decide that a proposal is the best option for meeting the written portion of the exam. The proposal should evidence the student's breadth and depth of knowledge of Soil Science. The proposal may fall within the area of the student's dissertation, but it must be an original document written solely by the student. The committee will be responsible for seeing that the document is not taken from a previously written proposal. The committee chair should not revise the document before the whole committee reviews it. The research proposal portion should be initiated no later than the second semester into the Ph.D. program. The entire committee will mentor the proposal development. The committee and any appropriate Soils faculty will evaluate the final proposal. The format should be appropriate for submission to a major funding agency such as USDA-AFRI or NSF. A passing grade for the research proposal will be a B or higher from all reviewers.

The results of the written or research proposal portion of the exam will be available to all CSS faculty for review prior to the oral exam.

#### ***Oral Exam***

Ph.D. graduate students must take 400 and/or 500 level courses in all five sub-disciplines of Soil Science and will be expected to defend these areas at the 400 level in the oral preliminary exam. For the

Interdisciplinary Soils Ph.D. four areas of Soils and the non-Soils discipline must be defended. A passing grade for the oral exam must be a B or higher in each discipline.

***The oral portion of the preliminary exam must be completed within five weeks after successfully completing the written portion of the preliminary exam. If this time schedule is not followed, students must retake both the written and oral exams.***

Alternatives and exceptions to the above guidelines must be submitted to the Soils Faculty by the student's advisor for approval no later than the end of the student's second semester of graduate study.

### ***Guidelines for Scheduling the Preliminary Doctoral Examinations***

The student with approval from his/her advisor and committee is responsible for scheduling the preliminary examination with the graduate school. Do not delay, as delaying the preliminary examination can, if the student is unsuccessful, reduce alternative options for a career.

1. Graduate students should set a tentative date for the preliminary examination at the time they develop an academic program. This is normally during the second semester of study for the Ph.D.
2. Graduate students preparation should be consistent with the requirements in the Graduate School policy and procedures – “that a substantial portion of the required coursework has been completed”.
3. If the written evaluation is graded below a B level, the student is given a second opportunity. The re-examination must be in the form of the traditional exam, followed within five weeks by the oral exam. If the written exam is passed but the oral exam is unsuccessful, the oral exam may be repeated. In either case there must be at least one month before re-examination but less than three months.

Alternatives and exceptions to the above guidelines must be submitted to the Soils Faculty by the student's advisor for approval no later than the end of the student's second semester of graduate study.

### **Crop Science and Soil Science Final Oral Exam**

*Note: It is also the student's responsibility to comply with the CSS Department policies and procedures found in 'Graduation' section of this handbook.*

The final exam has two parts: a seminar and a defense.

The seminar is usually presented before the defense and is a public presentation highlighting the research results and major accomplishments, as previously described. Please refer 'Seminar' in the Departmental Requirements section of this handbook for more information

After preliminary approval of the thesis/dissertation by the committee and department chair, and approval of the schedule by the committee, the final exam can be scheduled through the Graduate School. The student is responsible for obtaining signatures on the necessary forms and for securing the required number of copies of the thesis or dissertation.

The defense is an oral exam at which the student defends the approach, methods, conclusions, background, etc., of the research. Faculty are encouraged to attend the exam and ask questions, but only members of the thesis or dissertation committee and the graduate faculty may vote. Questions asked during the final exam do not have to relate to the thesis or dissertation research.

Members of the thesis or dissertation committee are responsible for checking the thesis or dissertation for style and format. They certify their approval when they sign the “final oral scheduling form”. Committee members cannot sign off on a final exam schedule form if they have not had ample time to review the final draft of the thesis/dissertation. A copy of your thesis/dissertation with the title page and scheduling form signed by your major advisor must be given to both your committee and the department chair for approval.

The completed [Dissertation Acceptance/Final Examination Scheduling](#) form must be submitted to the Graduate School at least 10 (ten) working days in advance of the examination date. It is necessary to present an electronic or paper draft copy of the dissertation that is complete in format at the time of scheduling. The examination must be scheduled at least four months, but less than three years, after satisfactory completion of the preliminary examination.

The Graduate School requirements for the dissertation are as follows:

After passing the final examination, an electronic copy of the corrected dissertation/thesis must be submitted following the Graduate School's guidelines for digital submission within five working days of the final oral examination. Students should use the [Final Dissertation/Thesis Acceptance Checklist](#) when preparing the electronic copy for submission.

In addition, the following must be submitted to the Dissertation/Thesis Acceptance clerk in the Graduate School within five working days of the final oral dissertation:

1. All students must submit a 100% cotton fiber paper copy of the title page, abstract page, and signature page signed in black ink by all committee members.
2. All students must submit a completed [Hold Harmless/Copyright Acknowledgement](#) form.
3. All doctoral candidates must submit an extra copy of the title page and abstract on standard white paper (not 100% cotton).
4. Doctoral candidates have the option of submitting a copyright request for their dissertation when submitting it for publication.
5. All doctoral candidates should submit a completed and signed [Survey of Earned Doctorates](#) (strongly recommended).

## GRADUATE ASSISTANTSHIPS

### Upon Arrival

Upon arrival in Pullman, students appointed to assistantships (TA or RA) should contact the Academic Coordinator on or before the first date of employment to complete required forms such as an [I-9](#) for employment eligibility and W-4 for withholding taxes. **Section 1 of the I-9 must be completed on or before the date of employment.** Section 2 must be completed by WSU staff within the first 72 hours of employment. We prefer to take care of both sections prior to employment. WSU subscribes to the electronic submission process; paper copies are not accepted. Contact department personnel staff for assistance.

A variety of documents can be presented to show employment eligibility and are described in the I-9 link above, but most often we see drivers license and social security cards or state-issued birth certificates for domestic students, and passports and visa documents for international students.

Assistantships are considered to be taxable income in the state of Washington and Federal tax will be deducted from your paycheck. There is no Washington State income tax.

Withholding guidelines for the W-4 are available on the [Payroll](#) website, for both domestic and international hires. The W-4 requires a [Social Security](#) card. If you do not have a social security card, you need to obtain one as soon as possible

For ease, international students can apply for a social security card during the required International Student Orientation. A letter is required from the department in order to apply. This receipt given to the student needs to be presented to our department personnel staff as soon as possible to complete the appointment and assure a timely paycheck.

Alternatively, students can obtain a social security card at a local office (Moscow, or Lewiston), but it is preferable to take advantage of the orientation session as these offices keep limited hours and contact by phone is difficult. Information and forms are available [here](#).

## **Payroll**

Fall assistantships begin August 16, and end December 31<sup>st</sup>. Spring assistantships begin January 1<sup>st</sup> and end May 15<sup>th</sup>. Payroll checks for the last half of the month are issued 10 days later (your first check will be September 10 or January 25). Payroll checks for the first half of the month are issued 10 days later, generally on the 25<sup>th</sup> of the month. Direct deposit arrangements with the [Payroll](#) office are encouraged.

## **Residency Requirement and Tuition Waiver**

The assistantship appointment will exempt you from paying in-state tuition **if you live in Washington State** during your enrollment at WSU. WSU will provide you with an out-of-state tuition waiver during your first year of studies if you are not a resident of Washington State; however, the out-of-state tuition waiver cannot be guaranteed beyond one year. If you are not a resident of Washington State, you should begin the process immediately to establish residency. Most required documents need to be in place for one year. Please review the [requirements](#) upon your arrival to ensure a successful application. Students who have not established Washington State residency by the one-year limit will be required to pay out-of-state tuition, even if they have an assistantship.

Residency waivers are not up to departmental discretion, and the Graduate School will only grant out of state tuition waivers to domestic students for two semesters.

International students are not eligible to become residents. For international students, the assistantship appointment will exempt you from paying the out-of-state and in-state tuition if you live in Washington State during your enrollment at WSU.

## **No Tuition Allowed**

There are some instances where tuition is not allowed on grants; the student is instead appointed as a Project Assistant at an inflated salary which covers the resident tuition normally charged to the grant and the student is advised to register for payroll deduction of the tuition.

## **Residual and Mandatory Fees**

All students on an assistantship are required to pay a residual and mandatory fees (i.e., fees not covered by the tuition waiver) each semester of approximately \$1,000. The residual fee pays for Health and Wellness Services, Pullman Transit, the Student Recreation Center, and a small portion of tuition not covered by the assistantship. Graduate assistants may choose to enroll in the university's payroll deduction plan to have these fees automatically deducted from their paycheck over the period of 8 pay cycles. Students may check with their department for more information when they arrive. Waiver of the mandatory fees will be requested by the Academic Coordinator for those students not residing in Pullman to take advantage of the service.

## **Responsible Conduct of Research Training**

The Graduate School requires all graduate students on an assistantship to complete the web-based [Responsible Conduct of Research Training](#). The paperwork for your assistantship cannot be processed until the training has been completed, so please notify our office of the date you completed it.

## **Health Insurance**

Students on a graduate student assistantship are provided health insurance at no charge. Dependent/spouse coverage is not automatically provided, but is available for a fee.

Representatives are available at Health and Wellness Services to answer your questions about WSU Medical Insurance, [studentinsurance@wsu.edu](mailto:studentinsurance@wsu.edu) or 509-335-3575. Temporary insurance cards are also available online. You may obtain these by creating an account on the [Maksin](#) website. A permanent card will be mailed to your local address on file with the university and will arrive within two weeks of sign up.

For more information about the Graduate Student Medical and Dental Insurance Plan, please visit [here](#).

Students on appointment for the academic year and/or spring semester will be automatically covered throughout the summer.

Once your assistantship has ended you are not eligible for COBRA.

## Reappointments

Graduate School policy sets time limits for teaching and research assistant positions: two years (4 academic year semesters) for master's candidates, four years (8 academic year semesters) for doctoral candidates without a Master's degree, and six years for doctoral candidates without a Master's. Students must maintain a 3.0 Grade point average to be eligible for assistantships and be making satisfactory progress. Reappointment is also contingent upon the availability of funds.

## English Proficiency Exam

The University requires that TA's (whose native language is not English) pass an [English proficiency exam](#) prior to beginning their TA duties. International Students must attend New International Student Orientation through the Office of International Students and Scholars.

## International Students and Scholars

International students should remain in contact with the International Programs Office, and the Office of International Students and Scholars, both prior to starting their studies at Washington State University and throughout the duration of their studies. This will help to ensure that all deadlines, procedures, and policies with regard to international student status are met. Contact information follows.

### International Programs

IP Administration Office, Bryan 206; Phone: 509-335-2541

<http://www.ip.wsu.edu/>

### The Office of International Students and Scholars

Bryan Hall 108; Phone: 509-335-4508; Fax 509-335-2373

<http://www.ip.wsu.edu/oiss/index.html>

## Terms and Expectations

Graduate students on appointments enter into an agreement with the University that both parties are expected to honor. Graduate assistants must maintain a cumulative 3.0 GPA in all coursework subsequent to admission, and maintain full-time enrollment (10-18 credit hours) for an entire semester.

A half-time appointment requires graduate appointees to work 20 hours per week in addition to their coursework and to **be at work each workday, including periods when the University is not in session (e.g., Spring and Thanksgiving Break), with the exception of legal holidays.** Graduate students do not earn sick leave or annual leave. Therefore, all leave and absences during normal work hours must also be arranged with a student's major advisor and, if applicable, campus advisor.

It is important to note that any change to the duration of the appointment that causes it to be for a period less than a full semester or any change in the percent of appointment may cause an immediate termination of the Qualified Tuition Reduction (QTR), Operating Fee Waiver (OFW) and/or non-resident waiver (NR). If a student decides to terminate employment mid-semester, or if the FTE percentage is changed, **the waivers may be removed and the student may be responsible for paying the full tuition charges.** If a student's employment is terminated for academic performance and/or enrollment is cancelled, the student retains the OFW and non-resident tuition waivers, with the QTR ending when the employment is terminated.

Since dropping below 20 hours per week can jeopardize non-resident tuition waivers, department policy permits exceptions for students to work less than half-time while taking heavy course loads, but full-time during summers and other periods with light academic responsibilities. Research Assistant responsibilities may include research assigned by the student's advisor as well as thesis or dissertation research. Most Teaching Assistants should expect to spend up to 20 hours per week on TA duties. Work schedules must be arranged with the thesis or dissertation advisor and/or TA supervisors.

Students making satisfactory progress can expect funding for 2 to 2.5 years for a M.S. degree. Students working towards a Ph.D. can expect funding for 2 to 3 years beyond the M.S. or 4 years beyond the B.S.

Students who want to withdraw from the appointment should always submit a letter of resignation to the Department Chairman. For details on resignation, contact the Academic Coordinator, Johnson Hall Room 205.

### **Hourly Appointments (Timeslip)**

Summer hourly appointments are for one to three months at a rate that is equivalent to the normal RA appointment rate. On-campus students on hourly appointments should see Katrina Shelton, Johnson Hall 207W, as well as the Academic coordinator before the first day of work.

## **BUSINESS POLICIES**

### **Keys and Card Access**

To obtain keys for Johnson Hall, PBS I, your office, labs, greenhouses, etc., see the Office Staff in Johnson 291D. There is no initial charge for the keys, however, in the event that they are lost or the student leaves the University without returning them, the student will be billed a \$3.00 replacement fee per key. If the keys are not returned transcripts may be held by the Registrar's Office. Security is the responsibility of everyone, so please assume responsibility for locking your office and lab doors after regular hours. Access to Vogel and the Plant Growth Facility is made with your WSU Cougar Card. Coordinate this access with your thesis or dissertation advisor.

### **Offices and Desks**

The Department of Crop and Soil Sciences will provide office space and desks for students on regular appointments. Office space is limited and you may have to wait for an opening. Contact the Academic Coordinator for a desk and space assignment.

### **Telephone**

WSU telephones are available for local calls. Most graduate student offices have telephones or one can be found nearby. Students should consult their advisor or main office regarding authorization codes for long distance calls. In most cases, phones are restricted and an authorization code is required.

## **Email and List Serves**

Students must obtain a WSU [network ID](#) and email address. Students must regularly check their WSU email accounts which is the primary communication tool from all points at WSU. This address will also be included in the CSS graduate student list serve. [Additional list serves](#) are described on our website.

## **Mail**

Graduate students share mailboxes in Johnson hall 291D, marked A-Z. Please check this box regularly. Mail sent and received at the university should be official correspondence only. Personal mail should be sent to and from your private residence. Business correspondence can be left in the Main Office for mailing. Letters and packages should not be stamped, and must have the correct departmental return address:

Department of Crop and Soil Sciences  
Washington State University  
PO Box 646420  
Pullman, WA 99164-6420

## **Photocopying**

The copy machine in Johnson 291D is to be used only for copying materials that are clearly related to a faculty research project, or to copy course materials for the course in which the student is a TA. Graduate students may not use the CSS copy machine to copy any personal material such as classroom notes, term papers, books, theses, etc. When in doubt, consult your advisor. Copy machines available for personal use on campus are located at the Fischer Ag Science Library (Johnson Hall Annex) and at Cougar Copies in the CUB.

## **Purchasing**

No student purchases can be made without approval from their advisor. Most research supervisors maintain "blanket" purchase orders at WSU facilities (Central Stores, Chemical Stores, Surplus Stores, Technical Stores, etc.) and service centers (Physical Plant, Technical Services, etc.). To purchase supplies, an authorization number must be obtained from your supervisor. If unforeseen needs arise in the field, contact your advisor and/or the main office for authorization of an emergency purchase order. Students will not receive reimbursement for items purchased from outside vendors without advance authorization.

## **Greenhouses and Growth Chambers**

The Agricultural Research Center operates the [Plant Growth Facility](#), a modern greenhouse for research on wheat and legumes, and other greenhouses along Grimes Way. Growth chambers are located in both sets of the greenhouses. To schedule greenhouse and growth chamber space, contact the greenhouse supervisor Dan Dreesmann [dreesmann@wsu.edu](mailto:dreesmann@wsu.edu), (509)-335-5824.. Greenhouse policies and regulations can be found there, along with the space request form. Greenhouse and growth chamber space is subject to charge and must be coordinated with the thesis or dissertation advisor. All people who use the greenhouses must take a Worker Protection Training course (about 1 hour) that is offered periodically by the greenhouse crew.

## **Safety**

Safety at WSU is regulated by the [Washington State Department of Labor and Industries](#) and the US [Occupational Safety and Health Administration](#) (OSHA), through WSU [Occupational Health and Safety](#). A safe and healthy working environment at WSU is to be maintained at all times.

It is the responsibility of each graduate student to become familiar with safety policies and to follow safe procedures. Departmental policies and procedures regarding safety are detailed in the WSU Safety Policies and Procedures Manual (SPPM) available at the [Office of Procedures, Records and Forms](#), while policies and procedures specific to individual labs are detailed in the Laboratory Safety Manual located in each lab. Information regarding physical and health hazards, entry routes, permissible exposure limits and precautions or controls for safe use, including emergency first aid procedures, and the name, address and telephone number of the chemical manufacturer or supplier for all chemicals is available on [Material Safety Data Sheets](#) (MSDS) located in the individual labs in which the chemicals are used. [Environmental Health and Safety](#) (EH&S) is also responsible for laboratory and workplace safety, public health and environmental issues, hazardous materials and wastes (except radioactive materials), and training. All disposals of hazardous chemical wastes must be made through EH&S's [Environmental Services](#).

The [CSS Department Safety](#) Committee is chaired by John Rumph [jrumph@wsu.edu](mailto:jrumph@wsu.edu) and is a resource for all Pullman departmental safety-related issues, except for radioisotope use, which is handled by the WSU [Radiation Safety Office](#). Students using radioactive materials, must complete online [Radiation Safety Training](#) prior to their use. Greenhouse users on the Pullman campus must attend [Worker Protection Standard Training](#). This training is offered each semester by the CAHNRS Plant Growth Facility Manager, Dan Dreesmann, [dreesmann@wsu.edu](mailto:dreesmann@wsu.edu), 509- 335-5824. Students located at branch campuses or Research and Extension Centers should consult the safety committee and specific safety requirements at those locations. Many departmental employees have First Aid training. American Red Cross First Aid and CPR/AED classes are available to all graduate students through WSU [University Recreation](#). Report all accidents and injuries, however minor, to the CSS administrative office (Johnson Hall 291D in Pullman) and complete an electronic accident/[illness Incident Report Form](#).

### **Staff Assistance**

Graduate students may request secretarial assistance only in limited situations. Administrative Assistants will not type personal letters, class reports or similar materials for students. Typing of your thesis or dissertation is considered personal work. Students may request assistance with mailing or sending fed-ex packages if they are clearly related to faculty led research work. All requests for staff assistance should be coordinated with your thesis/dissertation advisor.

### **Thesis Library**

CSS maintains a thesis/dissertation library for graduates in Crops, Soils, and the former Agronomy degree. It is located in Johnson Hal 202. Please be sure to use the checkout card provided in the volume. If none present, be sure to give checkout information to the Academic Coordinator in Johnson Hal 205.

### **Travel**

For liability and reimbursement purposes, all students must complete a Travel Authority form for any trip they take that is outside of Pullman (or any other station for off-campus students). This and other forms are available in the CSS main office or on our [website](#). This form must be submitted, signed by the department chair, and initialed by your advisor at least 21 days before a trip. In some circumstances, travel advances may be obtained by submitting a request at least four weeks before the trip. Reimbursement for travel expenses is made by completing and submitting a Travel Expense Voucher within one week upon return.

Students are strongly urged to attend professional meetings; however, the department often does not have funds to pay travel expenses of students on appointment. Advisors may use grant or project monies to pay partial travel expenses for graduate students attending meetings. The Graduate School does disburse some grant-in-aid travel funds, which can be used for travel to professional meetings. Application forms for student travel grants may be obtained from the [Graduate School](#). The Crop and Soil Sciences Department also has the O.A. Vogel Washington State Crop Improvement Association Travel

and Education Grant, as well as the Harry E. Goldsworthy Fund that can be used for travel. Check with the Academic Coordinator about the availability of these departmental awards. It is advisable to apply for a travel grant if you are presenting a quality paper at a professional meeting. In addition, space may be available in University vehicles or some faculty members may share travel expenses.

The department owns several vehicles available for department business. They are intended only to provide low-cost transportation to local sites and businesses. Vehicles are checked out in the main office, and specific policies are available at the front desk.

### **Checkout/Exit**

Before departure from CSS, students must leave a forwarding address with the Academic Programs Coordinator, schedule an exit interview with the Department Chair, return all keys to the main office, and consult with the advisor about cleaning up samples, chemicals, etc., from the student's research and office space.

## **CENTRAL STUDENT SERVICES AND FACILITIES**

### **Campus Student and Hourly Employment Office**

141 French Administration; (509) 335-1969

<http://www.hrs.wsu.edu/>

### **Career Services**

Lighty 180; (509) 335-2546

[www.careers.wsu.edu/](http://www.careers.wsu.edu/)

### **Center for Advising and Career Development**

Lighty 190; (509) 335-6000

<http://www.salc.wsu.edu/>

### **Center for Human Rights**

French Administration 225; (509) 335-8288

[www.chr.wsu.edu/](http://www.chr.wsu.edu/)

### **Child Care**

(509) 335-8847

[www.childrenscenter.wsu.edu/](http://www.childrenscenter.wsu.edu/)

### **Counseling and Testing Services**

Lighty 280; (509) 335-4511

[www.counsel.wsu.edu/](http://www.counsel.wsu.edu/)

### **Disability Resource Center**

Administration Annex, Room 205; (509) 335-1566

[www.drc.wsu.edu/](http://www.drc.wsu.edu/)

### **Human Resource Services**

139 French Administration Building; (509) 335-4521

[www.hrs.wsu.edu/](http://www.hrs.wsu.edu/)

### **Gender Identity/Expression & Sexual Orientation Center**

Smith Gym 303; (509) 335-6388

[www.thecenter.wsu.edu/](http://www.thecenter.wsu.edu/)

**Graduate and Professional Student Association**

Administrative Annex, 203; (509) 335-9545

[www.wsu.edu/~gpsa/](http://www.wsu.edu/~gpsa/)

**Health and Wellness Services**

(509) 335-3575

<http://www.hws.wsu.edu/>

**Housing Services**

McCartan Office Suite, Streit-Perham Hall;

(509) 335-4577

[www.livingat.wsu.edu/hdrl/](http://www.livingat.wsu.edu/hdrl/)

**Intensive American Language Center (IALC)**

McAllister Hall, Room 116; (509) 335-6675

[www.ialc.wsu.edu](http://www.ialc.wsu.edu)

**International Center**

Compton Union L46 (509) 335-4223

<http://www.ip.wsu.edu/intlcenter/index.html>

**International Programs****Office of International Students and Scholars**

Bryan 108; (509) 335-4508

<http://www.ip.wsu.edu/oiss/>

**Multicultural Student Services**

Compton Union Building, 409;

(509) 335-7852

[www.mss.wsu.edu/](http://www.mss.wsu.edu/)

**Office of Student Affairs**

Lighty 360; (509) 335-4531

<http://www.studentaffairs.wsu.edu/>

**Ombudsman's Office**

Wilson Hall 2; (509) 335-1195

[www.wsu.edu/~ombuds/](http://www.wsu.edu/~ombuds/)

**Parking, Vehicle, and Driver Licensing**

Parking & Transportation Bldg.; (509) 335-PARK

<http://www.wsu.edu/parking/>

**Psychology Clinic**

Johnson Tower 233; (509) 335-3587

[www.wsu.edu/psychology/psychologyclinic/](http://www.wsu.edu/psychology/psychologyclinic/)

**Speech and Hearing Clinic**

Daggy Hall 133; (509) 335-1509

<http://www.libarts.wsu.edu/speechhearing/clinic/>

**Student Legal Services/Housing Commission**

(509) 335-9539

**University Recreation**

(509)335-8732

<http://www.urec.wsu.edu/urec/index.jsp/>

**Women's Resource Center**

Wilson Hall 8; (509) 335-6849

[www.women.wsu.edu](http://www.women.wsu.edu)

**Women's Transit Program**

(509) 335-6830

[www.women.wsu.edu/Transit/](http://www.women.wsu.edu/Transit/)

**Veterans Affairs**

French Administration, Room 345, 509-335-1875

<http://www.va.wsu.edu/>

## APPENDIX