

# **School of Natural Resources and the Environment**

## **Graduate Student Handbook**



(Last Revised 7/19/18)

## **Welcome to the School of Natural Resources and the Environment**

This handbook is designed to answer questions you may have while you proceed through your degree program. It highlights items specific to the School of Natural Resources and the Environment and complements materials on the Graduate College website: <http://grad.arizona.edu>. There are many resources available to you, including your major professor and advisory committee, the Academic Advisor, the staff and faculty of the School, and your peers.

The University of Arizona is a major land-grant university consistently ranked among the top public universities for education and for total research and development spending. It is the only Association of American Universities (AAU) member university in Arizona. AAU member universities are on the leading edge of innovation, scholarship, and solutions that contribute to the nation's economy, security, and well-being.

The School of Natural Resources and the Environment consists of 4 administrative programs, Natural Resources Studies, Ecology, Management and Restoration of Rangelands, Watershed Management and Ecohydrology, and Wildlife and Fisheries Conservation and Management. Each of these programs, headed by a Program Chair, has educational, research, and service responsibilities. The School deliberately avoided a department structure to encourage and facilitate inter-program affiliations and interdisciplinary teaching and research efforts.

Research is directed towards understanding natural resource systems and how to manage these systems in response to increasing demands placed on them. We develop management alternatives that combine the application of resource science with political, economic, social, and legal knowledge. Research by faculty and graduate students has helped increase rangeland productivity, reduce livestock/wildlife conflicts, increase forest and rangeland water yields, protect the state's wildlife and recreation resources, and improve systems for analysis of and public participation in natural resources decision-making. The Plant Materials Center, Santa Rita Experimental Range, Beaver Creek Watershed, Saguaro National Park, Coronado National Forest, and Buenos Aires National Wildlife Refuge offer a range of types of vegetation, soils, geological formations, and environments for conducting research on natural or modified ecosystems in the Southwest.

Welcome!

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## CONTACTS

### Director

Dr. John Koprowski  
 ENR2 N333,  
 621-5895  
[5quirrel1@email.arizona.edu](mailto:5quirrel1@email.arizona.edu)

### Associate Director

Dr. Stuart Marsh  
 ENR2 N333,  
 621-8574  
[smarsh@email.arizona.edu](mailto:smarsh@email.arizona.edu)

### Graduate Coordinators: Provide help with the logistics of your graduate program

Natural Resources  
 Katie Hughes  
 ENR2 N321, 621-7260  
[khughes@email.arizona.edu](mailto:khughes@email.arizona.edu)

Water, Society and Policy  
 Shannon Scott  
 ENR2 N322, 621-1792  
[sms8@email.arizona.edu](mailto:sms8@email.arizona.edu)

### Program Chairs (sign as “department head” or “Director of Graduate Studies”)

Ecology, Management and Restoration of  
 Rangelands

Dr. Mitch McClaran  
 BSE 102, 621-1384  
[mcclaran@email.arizona.edu](mailto:mcclaran@email.arizona.edu)

Natural Resources Studies  
 Dr. Laura Lopez-Hoffman  
 ENR2 N309, 621-1673  
[lauralh@email.arizona.edu](mailto:lauralh@email.arizona.edu)

Watershed Management and Ecohydrology

Dr. Rachel Gallery  
 ENR2 N221, 621-4685  
[rgallery@email.arizona.edu](mailto:rgallery@email.arizona.edu)

Wildlife Conservation and Management  
 Fisheries Conservation and Management  
 Dr. Bob Steidl  
 ENR2 N310, 621-3164  
[steidl@email.arizona.edu](mailto:steidl@email.arizona.edu)

**The Business Office:** school support staff, business and human resources, administrative details, reserving vehicles, reimbursement paperwork, personnel, travel, grants, payroll, purchasing, funding management, answers to many questions. **Visit** <http://snre.arizona.edu/snrebiz> **first for appropriate forms or other information, or send a general email to** [bizsnre@cals.arizona.edu](mailto:bizsnre@cals.arizona.edu) **and the right person will address the issue.**

Ashley Stewart, Coordinator, Administrative Services	Room N327	<a href="mailto:bizsnre@cals.arizona.edu">bizsnre@cals.arizona.edu</a>
Bethina Krogsgaard, Business Manager	Room N331	
Ruth Lingo, Accountant	Room N329	
Lindsey Fera, Program Coordinator	Room N326	
<u>For Coop students:</u>		
Ashleigh Grogan, Administrative Assistant	Room N325	621-1959

### Computing Support: Help with networking, technical, and computing support.

UITS provides support for UAccess, work and personal computers 24/7.

Andy Honaman  
[amh@email.arizona.edu](mailto:amh@email.arizona.edu)  
 ENR2 N455, 621-5517

UITS  
 24-hour-a-day tech support  
 (520) 626-TECH (8324)

## FACULTY IN SNRE (eligible to serve as committee chairs)

- Steve Archer  
*Terrestrial ecosystem science and plant ecology*
- Michael Bogan  
*Stream ecology, disturbance and dispersal processes*
- Scott Bonar  
*Aquatic wildlife ecology, fisheries management, endangered species management*
- David Breshears  
*Ecohydrology, vegetation dynamics, wind and water erosion, biophysical scaling, contaminant risks, global change*
- James Buizer  
*Climate adaptation, sustainability, and international development*
- David Christianson  
*Population biology, predator-prey ecology, behavioral ecology*
- Melanie Culver  
*Conservation genetics*
- Don Falk  
*Fire history and ecology, global change, dendroecology, and restoration ecology*
- Jeffrey Fehmi  
*Rangeland inventory and monitoring, land reclamation, restoration ecology, vehicle impacts, invasive species, plant ecology*
- Rachel Gallery  
*Plant-microbe community ecology, diversity, and function*
- Gregg Garfin  
*Climate services, climate variability and change, climate change adaptation, decision support, discussion support, drought, knowledge exchange, stakeholder engagement, U.S.-Mexico border*
- H. Randy Gimblett  
*Recreational impacts on natural resources in urban and urbanizing areas*
- Elise Gornish  
*Restoration, plants, invasion, arid rangelands*
- D. Phillip Guertin  
*Geographic information systems, watershed hydrology and management, riparian ecology, natural resource modeling and management, fire management*
- Leslie Gunatilaka  
*Natural products chemistry, metabolite synthesis*
- Larry Howery  
*Foraging behavior of large ungulates, noxious weeds*
- Jia Hu  
*Ecohydrology, plant ecophysiology, ecosystem ecology and stable isotope biogeochemistry*
- Charles Hutchinson (emeritus)  
*Geography, remote sensing and arid lands, monitoring techniques for agriculture and natural resources using satellite and aerial video systems*
- John Koprowski  
*Small mammal ecology, conservation biology*
- Laura Lopez-Hoffman  
*Conservation biology and policy, transboundary conservation, ecosystem services*
- R. William Mannan  
*Wildlife-forestry relationships, wildlife habitat measurement and analysis, avian ecology*

Stuart Marsh  
*Land Use and Land Cover Change; Impacts of Climate and Anthropogenic Change on Arid Lands; Remote Sensing; Application of Geospatial Technologies to Environmental Studies; Development of Decision Support Systems for Natural Resource Management*

William J. Matter (emeritus)  
*Stream ecology, ecology of native fish, population regulation*

Mitch P. McClaran  
*Rangeland ecology, rangeland policy*

Laura Meredith  
*Microbial imprint on the atmosphere*

Istvan Molnar  
*Biosynthetic engineering, microbial genetics, combinatorial biosynthesis, genomics, biocatalysis, industrial biotechnology, drug discovery, natural products, antibiotics, anticancer agents, biofuels*

David Moore  
*Global change biology, ecosystem modeling, plant ecophysiology, environmental monitoring and modeling.*

David Quanrud  
*Water quality, reclamation, wastewater treatment*

George B. Ruyle  
*Rangeland ecology and management, range livestock production, grazing management, livestock-wildlife interactions*

Cecil Schwalbe (emeritus)  
*Vertebrate ecology, especially amphibians and reptiles; wildlife management*

William W. Shaw  
*Socio-political aspects of wildlife conservation, non-game and urban wildlife management*

Steve Smith  
*Rangeland plant ecology and genetics*

William K. Smith  
*Remote sensing, geospatial analysis, ecological climatology*

Jose Soto  
*Economics of natural resources, forest carbon offsets, and invasive species*

Robert J. Steidl  
*Quantitative Ecology, Conservation Biology, Human Impacts on Wildlife Populations*

Willem JD van Leeuwan  
*Land Surface Phenology; Biogeography; Remote Sensing Science and Applications of Coupled Natural and Human Systems; Geospatial & Temporal Decision Support Systems and Tools for Land and Water management; Assessing Impact of Fire and Drought on Vegetation Response Drylands around the World*

Charles Van Riper (emeritus)  
*Ornithology, parasitology, avian wildlife diseases, conservation biology, avian ecology, avian management*

Craig Wissler  
*Geographic Information Science*

# CHECK LIST FOR NEW STUDENTS

## Get a University Email Account

You are required to have a University account: go to <https://account.arizona.edu/>. All University business is conducted via your UA email address. It is the official form of communication at the UA.

## Enroll in Classes

Work with your advisor to pick classes for your first semester. You can register using the on-line system UAccess. If you are unable to register, it may be because Campus Health doesn't have your complete immunization record. Check with them or with the graduate coordinator to determine if you have a registration hold.

## Get your ID

Once you're enrolled, obtain a Cat Card (UA ID card) from the Cat Card office in the Student Union.

## A Note on Funding and Graduate Assistantships

SNRE does not offer departmentally funded research assistantships for graduate students but a limited number of teaching assistantships (TAs) are available each semester with funding provided by the College of Agriculture and Life Sciences. Typically, the instructors with courses assigned TAs decide to whom these positions are awarded, with preference going to their own graduate students. In the case that the instructor does not have their own graduate student TA the course, preference is given to the most qualified available candidate.

if you were admitted to the program with funding, it is likely that your funding was derived from a faculty sponsored grant. Your advisor should submit paperwork to the Business Office regarding what kind of funding you have (if any). If you were awarded a research assistantship, work with the business office to be sure your assistantship contract is in order. If you have any questions about your funding or any other details related to your employment, please work with the business office ([bizsnre@cals.arizona.edu](mailto:bizsnre@cals.arizona.edu)) and your major advisor.

## Eligibility

Students should recognize that financial support is a privilege and is not guaranteed. In order to receive financial aid, SNRE requires that:

- Each student must exhibit full-time graduate status at the level of at least 10 registered units each semester; and
- Each student must maintain a cumulative GPA of 3.0 or higher while enrolled in the graduate program
- Additional requirements for financial aid eligibility apply to international applicants. Please see the following page for more information:  
<https://grad.arizona.edu/funding/ga/english-speaking-proficiency-evaluation>.

All MS and PhD students are encouraged to seek out funding from a variety of sources; the Graduate College has online resources which can facilitate this effort. Students are also strongly encouraged to apply for fellowship awards from local and national agencies.

Note: Graduate Certificate students are not eligible for financial assistance, unless concurrently enrolled in a separate MS or PhD program at the University of Arizona.

## Get your Keys and a Study Carrel

Once you have a Cat Card, you can get a study carrel with lockable storage if one is available as well as keyless access to the building. The graduate coordinator will help you with desk space and



keys, etc., normally during Orientation.

### **Add Yourself to the Website**

Go to <http://snre.arizona.edu/snrebiz/misc> and look under Website to download the Website Profile Form. Forms should be sent to [bizsnre@cals.arizona.edu](mailto:bizsnre@cals.arizona.edu).

### **Meet with the Graduate Coordinator**

See Katie Hughes in ENR2 N321 to update your contact information, subscribe to the graduate student listserv, and make sure you are set for the coming semester.

## **GETTING INFORMATION**

It is useful to stay in the information loop to make sure you hear about job and funding opportunities, professional societies and clubs, professional meetings, academic policies, seminars, and other miscellaneous details. Here's how to do it.

### **Listserv**

We have a grad student listserv. The graduate coordinator posts messages regularly about jobs and scholarships. To post to the listserv, send a message to the graduate coordinator for forwarding to all SNRE graduate students.

### **Major Professor**

Your major professor can help you not only with your research program, but also with professional development, opportunities for experience, guidance on course selection, and procedural details.

### **Graduate Student Forum**

There is a weekly (roughly) Graduate Student Forum where you can socialize and interact with peers about graduate student issues and research which you'll hear about on the listserv. More information is available on the Natural Resources Graduate Student Organization (NRGSO) website <http://sites.google.com/site/natresgradso/>. Grad Forum is usually followed by Happy Hour where you can learn about your fellow students and the program.

### **Committee Service**

There are a number of School committees with a graduate student representative, including strategic planning, curriculum, and student awards committees. It is a great way to provide grad student input into School business, and to ensure grad students hear about issues that affect them. Contact the graduate coordinator about serving on a committee. Also, consider participating in the GPSC, the Graduate and Professional Student Council <http://gpsc.arizona.edu>.

### **General Information and Forms**

Information about Graduate College policies, procedures, and forms (GradPath) can be found on the Graduate College Website (<http://grad.arizona.edu/gsas/degree-requirements>). You must acquaint yourself with these requirements and deadlines and remain informed of updates throughout your academic career as SNRE uses Graduate College policies as the basis for general requirements within the school, but many requirements and policies within SNRE and CALS are higher than those of the Graduate College. Information about School policies, forms, and other administrative services can be found on our website under the resources tab on the current students page: <http://snre.arizona.edu/>

Resources for parents, for professional development, for health and wellness, etc. can be found here: <http://grad.arizona.edu/new-and-current-students> as well as on the SNRE website.

### **Continuous Enrollment Policy**

Students must register each fall and spring for a minimum of 3 graduate units from original matriculation until all degree requirements are met. Students must maintain a 3.0 cumulative GPA. Nine units is considered full time enrollment; 6 units is part-time.

All students are required to enroll for a minimum of 10 units during the term(s) in which they are supported by a graduate assistantship/associateship, of which at least 6 must be graduate level units. Audited courses do not satisfy this requirement.

MS students who have finished all coursework on their plan of study may register for a minimum of one graduate level unit each semester until all requirements for the MS degree are met, provided they are not on an assistantship. Doctoral students who have completed all coursework, written and oral comprehensive exams, and 18 dissertation units may register for a minimum of one unit each semester until final copies of the dissertation are submitted to the Graduate Student Academic Services office, provided they are not on an associateship. If they have scholarships or tuition waivers, other degree requirements may apply. Check with the graduate coordinator and/or the organization providing the scholarship if you are unsure.

MS students graduating, taking exams, or using significant faculty time during the summer or winter session must register for a minimum of one unit in summer or winter session.

Doctoral students do not have to register for graduate units during summer sessions unless they plan to make use of University facilities or faculty time. If they plan to utilize facilities or faculty time they must enroll for a minimum of 1 unit of graduate credit. If only the Final Oral Exam (the defense) is completed during the summer or winter term, the student has maintained continuous enrollment, and has fulfilled all 18 required dissertation credits, registration is not required. Registration is required for library privileges. NOTE: International students must meet the appropriate registration requirement for their visas.

**NOTE: The Graduate College requirements are only a minimum requirement and do not override other requirements a student may have to meet.**

Unless excused by an official Leave of Absence, all students are subject to the Continuous Enrollment Policy. If students fail to maintain continuous enrollment, they will be required to apply for readmission and pay the Graduate College application fee. No tuition waivers will be applied retroactively.

### **Student Role in Departmental Governance**

Graduate Student representatives are elected by the graduate student body in SNRE for one-year terms. The Natural Resources Graduate Student Organization coordinates the election of the representative. The representative serves as an official liaison between the students and faculty of the program and serve on the Strategic Planning Committee for the department.

### **Incomplete Policy**

Students earning a grade of Incomplete, "I" for a course should submit a completed Report of Incomplete Grade form to the SWES Graduate Advisor for inclusion in their academic record. <http://registrar.arizona.edu/gradepolicy/incomplete.htm>. Incomplete grades should be completed in a timely manner and are submitted at the discretion of the course Instructor.

### **Student Appeal Policies**

Students have the right to formally request exceptions to department policies and procedures or formally appeal department decisions by submitting a petition to the Director of Graduate Studies <https://snre.arizona.edu/sites/snre.arizona.edu/files/Internal%20Graduate%20Petition%20SNRE.pdf>.

For grievances that can't be resolved at the school level, please contact the Graduate College.  
<https://grad.arizona.edu/policies/academic-policies/grievance-policy>

### **Academic Integrity**

<http://deanofstudents.arizona.edu/codeofacademicintegrity>(link is external)

### **University of Arizona General Catalog**

<http://catalog.arizona.edu/>(link is external)

## **INFORMATION FOR NATURAL RESOURCES MASTER'S STUDENTS**

### **Thesis option**

#### **Qualifying Meeting**

During your first semester you and your advisor will need to coordinate a meeting with the Chair of the departmental option, another faculty member in SNRE, your advisor, and yourself. The purpose of this qualifying meeting is to orient you to the program, go over degree requirements, and provide initial guidance regarding your first few semesters. During the meeting, the attendees will review your background, research interests, and course needs. You will outline a preliminary master's plan of study with the courses listed semester by semester, however, your final Plan of Study will be determined by your MS committee.

#### **Select Your Committee and schedule and hold a committee meeting**

By the end of the first semester, students should begin selecting committee members and preparing for a committee meeting to be held the second semester of residence. Students are responsible for scheduling committee meetings. At your first committee meeting, you typically review your plan of study and research proposal. You should select your committee and schedule your first committee meeting during your second semester. At your first committee meeting, you typically review your plan of study and preliminary research proposal. Most Options have specific requirements that can be found at the links below:

Ecology, Management, & Restoration of Rangelands  
Natural Resources Studies  
Watershed Management and Ecohydrology  
Wildlife and Fisheries Conservation and Management

Consult with your advisor as to what will be expected at the meeting. Be prepared to bring your Plan of Study, transcripts from previous universities attended, and your proposal.

#### **Committee Membership**

Master's thesis committees must consist of three members; at least two must be tenure-track or equivalent UA faculty members. If the third member is not a tenure-track or equivalent UA faculty member, he or she must be approved by the Graduate College as a special member. You may request a special member to your committee in consultation with your Major Advisor by submitting a request for special member approval form and resume to the graduate coordinator. The graduate coordinator will get department head approval and forward the request to the Graduate College for final approval.

The chair of the committee must be a tenure-track faculty member. Adjunct professors serving with special member approval can co-chair a committee, but cannot be the sole chair.

Committee membership can be changed if circumstances dictate that the change is necessary or

recommended.

### Annual Committee Meetings

You will need to schedule annual meetings with your committee to keep them apprised of your progress and obtain assistance with any obstacles towards degree completion that may arise. Your advisor must sign the Annual Committee Meeting form (available at

[http://snre.arizona.edu/sites/snre.arizona.edu/files/Annual\\_committee\\_meeting\\_form\\_SNRE.pdf](http://snre.arizona.edu/sites/snre.arizona.edu/files/Annual_committee_meeting_form_SNRE.pdf)) and you should submit this to the graduate coordinator to hold in your student file.

### What is the Responsible Conduct of Research Statement?

Once you have an idea of your project requirements, be sure to get any needed IACUC or IRB approvals and fill out the Responsible Conduct of Research statement in GradPath (UA GradPath Forms). This is the first form you must complete in GradPath and you cannot open the next form you need until this is completed. To see the form, click Create New. Make sure you've read the **General Information** section. Then, in the **Certified** section, read the statement and check the box. This form does not require any approvals; once submitted you are immediately able to access the next applicable form. To return to your forms page, click the **Return** button.

### Masters Plan of Study (MPOS)

The Plan of Study Form (UA GradPath Forms) will list the courses you will use towards completion of your degree requirements. You must submit your Plan of Study by the end of the second semester in the program. The Graduate College charges your bursar's account \$35 in graduate candidacy fees after processing this paperwork.

- Courses must be graduate level (500-level +) courses, at least half of which must be assigned letter grades (A, B, C. . .).
- Transfer credit cannot account for more than 20% of the minimum units required for your degree (6 units). If you anticipate using transfer courses, you can submit the 'Transfer Credit Evaluation' form (UA GradPath Forms) when you begin your program to ensure the desired courses are eligible for transfer.
- Do NOT list course work deficiencies unless they can be counted towards your degree
- DO list your thesis units (**no more than 6 units**).
- Submit the form.

You won't be able to print out a copy of your plan of study, but you can view it at any time in UAccess.

**To modify your plan of study once it has been approved**, use the Modify button in GradPath.

Students in the Natural Resource Studies option must also file a School-generated plan of study form (available online [http://snre.arizona.edu/sites/snre.arizona.edu/files/NRS\\_POS.pdf](http://snre.arizona.edu/sites/snre.arizona.edu/files/NRS_POS.pdf)) which must be approved prior to submitting the GradPath form. The form indicates how courses in the major must be structured to highlight interdisciplinary study that is the hallmark of this option. The School form is to be approved by the Program Chair prior to submitting the Grad Path form. Students in the Wildlife and Fisheries Conservation and Management, Watershed Management and Ecohydrology, or Ecology and Management of Rangelands options need only submit the Plan of Study available in GradPath.

### Unit Requirements

Program	Minimum Course Units	Max Thesis Units	Total Units
Fisheries Conservation & Management	24	6-10	30
Ecology, Mgmt. & Restoration of Rangelands	25	5	30
Natural Resource Studies (NRS)	30	6	36
Watershed Management	25	5	30
Wildlife Conservation & Management	24	6-10	30

### **Seminar Requirement**

All students are required to register for one seminar course per academic year. Courses should provide opportunities for advanced interactions with student colleagues and faculty and generally are numbered 595/695 or 596/696 to count towards this requirement. Seminar-style courses do not need to be in an SNRE housed prefix (RNR, RAM, WSM, or WFSC). These seminars MAY count towards your plan of study units with the approval of your committee.

Additionally, all students must register for RNR 696A section 001 (1 unit) and attend the weekly departmental seminar during their first two semesters. Should conflicts arise due to course scheduling or field work, you will be excused from that semester and you may register for a later semester. These seminars may count towards your plan of study unit requirements with your committee's approval.

### **Write your research proposal, take your courses, and work on your research**

Your primary goal as a graduate student is to conduct scholarly research. To that end, you will need to have an approved proposal for that research. Although your research may be part of a larger project and a funding proposal may already exist, you should write your own proposal to indicate your understanding of the work and distinguish it from the larger project. The proposal format is up to your advisor, but you may want to use the format for the leading journal in your field.

During this time you should submit your **Committee Approval Form** via GradPath (UA GradPath Forms). This will ensure that you have a valid committee for your defense. Remember that special members will need to be pre-approved before you can add them to your committee. Request special members via the graduate coordinator and your major advisor.

### **Complete your thesis**

Preparation of the thesis is your responsibility. You are expected to publish your research, and are encouraged to submit papers for publication within one year of completing your degree. This task becomes more difficult the longer it is delayed. If you do not meet this obligation, your major professor may assume the publication responsibility.

The Graduate College has prepared a Manual of Theses and Dissertations to guide the physical format of your thesis: <https://arizona.app.box.com/v/grad-gsas-thesisformat>. It is your responsibility to see that your thesis conforms to the requirements.

### **Final Defense**

Your defense is composed of two parts—a < 30 minute public presentation with time for questions, followed by a closed-door defense of your work before your committee.

You must also send an email to the graduate coordinator announcing your defense (include the time, date, place, title, and abstract), one week in advance.

Room reservations may be made with the graduate coordinator. Examinations are a maximum of 3 hours in length.

If you fail the final examination you may, upon recommendation of your advisory committee be granted a second examination after at least 4 months. The outcome of the second examination is final.

Bring the "Master's/Specialist Completion of Degree Requirements" (CDR) Form

<http://snre.arizona.edu/academics/current-students/masters-degrees> to your final defense along with 2 copies of your Approval Page (page 2 of your thesis) for your committee to sign. After your defense, turn

the CDR in to the graduate coordinator. You will turn in your approval pages when you turn in your thesis.

Deadlines for completing your requirements can be found on the Graduate College website (<http://grad.arizona.edu/academics/degree-certification/deadlines-for-graduation>). In Fall and Spring the deadline is always the last day of finals for that semester.

### **Turn in your thesis**

Please submit an electronic copy of your project to the graduate coordinator for inclusion in the School database. Often, your advisor can use an account number to pay for binding. Work with the graduate coordinator to arrange for bound copies.

The Graduate College requires that all theses and dissertations be submitted to ProQuest for archiving (<http://www.etdadmin.com/cgi-bin/school?siteId=63>). For detailed information about submitting your thesis for archival please read the information found at this link: <http://grad.arizona.edu/gsas/dissertaions-theses/submitting-and-archiving-your-thesis>

### **See copywriting your theses/dissertation in Miscellaneous Details**

#### **Clear all fees with the Bursar's office**

An outstanding balance with the University of Arizona means you won't get your diploma.

#### **Time Limit for Degree Completion**

MS students are expected to complete their programs within 3 years or 6 semesters. All work for the M.S. must be completed within a 6-year period, beginning with the earliest (UA or transfer) course on the Plan of Study or coursework begins expiring.

*Should you and your advisor decide that you will continue into a PhD program in SNRE, you must have written support from your advisor in the form of a letter of recommendation, apply to the program in GradApp, and pay the mandatory application fee.*

## **INFORMATION FOR NATURAL RESOURCES MASTER'S STUDENTS**

### **Non-Thesis option (any option within the Natural Resources Major)**

The course of study will focus on producing professionals who are able to represent and communicate the substance of their field to a broader audience and recommend applications for resource management rather than primarily a research focus. Because of this orientation, the candidate will be expected to complete course work, a major project, and a final oral exam.

In contrast to a thesis option, where research experience is emphasized, this option will emphasize the development and application of skills through advanced courses, independent projects, and/or internships. Therefore, the non-thesis student will develop skills and knowledge about their particular disciplinary focus and about how to translate that information to professional and lay audiences.

**Because most faculty expect students to write a thesis, it is particularly important that you communicate with your faculty advisor as soon as possible (e.g., during the admissions process or shortly thereafter) about your desire to pursue a non-thesis option.**

#### **What is the Responsible Conduct of Research Statement?**

Once you have an idea of your project requirements, be sure to get any needed IACUC or IRB approvals and fill out the Responsible Conduct of Research statement in GradPath (UA GradPath Forms). This is the first form you must complete in GradPath and you cannot open the next form you need until this is

completed. To see the form, click Create New. Make sure you've read the **General Information** section. Then, in the **Certified** section, read the statement and check the box. This form does not require any approvals; once submitted you are immediately able to access the next applicable form. To return to your forms page, click the **Return** button.

### **Qualifying Meeting**

During your first semester you and your advisor will need to coordinate a meeting with the Chair of the departmental option, another faculty member in SNRE, your advisor, and yourself. The purpose of this qualifying meeting is to orient you to the program, go over degree requirements, and provide initial guidance regarding your first few semesters. During the meeting, the attendees will review your background, research interests, and course needs. You will outline a preliminary master's plan of study with the courses listed semester by semester, however, your final Plan of Study will be determined by your MS committee.

### **Select Your Committee and schedule and hold a committee meeting**

By the end of the first semester, students should begin selecting committee members and prepare for a committee meeting to be held the second semester of residence. Students are responsible for scheduling committee meetings. At your first committee meeting, you typically review your plan of study and research proposal. You should select your committee and schedule your first committee meeting during your second semester. At your first committee meeting, you typically review your plan of study and preliminary research proposal. Most Options have specific requirements that can be found at the links below:

Ecology, Management, & Restoration of Rangelands  
Natural Resources Studies  
Watershed Management and Ecohydrology  
Wildlife and Fisheries Conservation and Management

Consult with your advisor as to what will be expected at the meeting. Be prepared to bring your Plan of Study, transcripts from previous universities attended, and your proposed project summary.

### **Committee Membership**

Non-thesis Master's committees must consist of three members. The major professor serves as the chair of the advisory committee; the chair and at least one other advisory committee member must be tenure-track or equivalent UA faculty members. If the third member is not a tenure-track or equivalent UA faculty member, he or she must be approved by the Graduate College as a special member. You may request a special member to your committee in consultation with your Major Advisor by submitting a request for special member approval form and resume to the graduate coordinator. The graduate coordinator will get department head approval and forward the request to the Graduate College.

The advising committee will also be the oral examining committee for the final defense.

A member who is not tenure-track will not be eligible to serve as sole chair of the committee but can serve as co-chair if approved to do so by the Graduate College via this same form.

Committee membership can be changed if circumstances dictate that the change is necessary or recommended.

### **Annual Committee Meetings**

You will need to schedule annual meetings with your committee to keep them apprised of your progress and obtain assistance with any obstacles towards degree completion that may arise. Your advisor must

sign the Annual Committee Meeting form (available at [http://snre.arizona.edu/sites/snre.arizona.edu/files/Annual\\_committee\\_meeting\\_form\\_SNRE.pdf](http://snre.arizona.edu/sites/snre.arizona.edu/files/Annual_committee_meeting_form_SNRE.pdf)) and you should submit this to the graduate coordinator to hold in your student file.

### **Masters Plan of Study (MPOS)**

The Plan of Study Form (available in GradPath from your UAccess Student Services Center; UA GradPath Forms) will list the courses you will use towards completion of your degree requirements. You must submit your Plan of Study by the end of the second semester in the program. The Graduate College charges your bursar's account \$35 in graduate candidacy fees after processing this paperwork.

- Courses must be graduate level (500-level +) courses, at least half of which must be assigned letter grades (A, B, C. . .).
- Transfer credit cannot account for more than 20% of the minimum units required for your degree (6 units). If you anticipate using transfer courses, you can submit the 'Evaluation of Transfer Credit' form (UA GradPath Forms) when you begin your program to ensure the desired courses are eligible for transfer.
- Do NOT list course work deficiencies unless they can be counted towards your degree
- DO list your Report units (RNR 909; **no more than 6 units**).
- Submit the form.

**To modify your plan of study once it has been approved**, use the Modify button in GradPath.

Students in Natural Resource Studies must also file a School-generated plan of study form (available online [http://snre.arizona.edu/sites/snre.arizona.edu/files/NRS\\_POS.pdf](http://snre.arizona.edu/sites/snre.arizona.edu/files/NRS_POS.pdf) which must be approved prior to submitting the Graduate College form. The form indicates how courses in the major must be structured to highlight interdisciplinary study that is the hallmark of this option.

The School form is to be approved by the Program Chair prior to submitting the Graduate College form. Students in the Wildlife and Fisheries Conservation and Management, Watershed Management and Ecohydrology, or Ecology and Management of Rangelands options need only submit the Plan of Study available from the Graduate College.

### **Number of graduate credits required**

The degree will require a minimum of 36 graduate credits under the guidance of a committee of three faculty. A minimum of 30 graduate coursework units and 6 Master's Report units (RNR 909) is required for all options within the major.

### **Seminar Requirement**

All students are required to register for one seminar course per academic year. Courses should provide opportunities for advanced interactions with student colleagues and faculty and generally are numbered 595/695 or 596/696 to count towards this requirement. Seminar-style courses do not need to be in an SNRE housed prefix (RNR, RAM, WSM, or WFSC). These seminars MAY count towards your plan of study units with the approval of your committee.

Additionally, all students must register for RNR 696A section 001 (1 unit) and attend the weekly departmental seminar during their first two semesters. Should conflicts arise due to course scheduling or field work, you will be excused from that semester and you may register for a later semester. These seminars may count towards your plan of study unit requirements with your committee's approval.

### **Complete your coursework and the major project**

The project to meet this requirement will be selected by the student in consultation with their advisory committee and is based on a proposal presented to and approved by your committee before the end of the second semester. Options include: a professional paper, internship report, a series of public presentations, public outreach activity with associated background materials, or other substantive



product deemed suitable by your committee.

During this time you should submit your **Committee Approval Form** via GradPath (UA GradPath Forms). This will ensure that you have a valid committee for your defense. Remember that special members will need to be pre-approved before you can add them to your committee.

### **Final oral exam**

Upon completion of your coursework and your major project, you must pass a final oral exam. Your advising committee will serve as the examining committee. The type and nature of the final exam should be agreed upon ahead of time by you and your committee. You must also send an email to the graduate coordinator announcing your defense (include the time, date, place, title, and abstract), one week in advance. Room reservations may be made with the graduate coordinator. Examinations are a maximum of 3 hours in length.

If you fail the final examination you may, upon recommendation of your advisory committee, be granted a second examination after at least 4 months. The outcome of the second examination is final.

Bring the "Master's/Specialist Completion of Degree Requirements" (CDR) Form (<http://snre.arizona.edu/academics/current-students/masters-degrees>) to your final defense along with 2 copies of your Approval Page (page 2 of your thesis) for your committee to sign. After your defense, turn the CDR in to the graduate coordinator. You will turn in your approval pages when you turn in your thesis.

Deadlines for completing your requirements can be found on the Graduate College website (<http://grad.arizona.edu/academics/degree-certification/deadlines-for-graduation>). In Fall and Spring the deadline is always the last day of finals for that semester.

### **Turn in your project**

Please submit an electronic copy of your thesis to the graduate coordinator for inclusion in the School database. You must also submit one unbound printed copy to the graduate coordinator to be bound. The School will pay to bind one copy for the School library. This copy should be single-sided and printed on acid-free paper (available in 20# weight at OfficeMax for ~\$7/ream). Additional bound copies may be ordered for \$29/copy; you provide each additional unbound printed copy. Often, your advisor can use an account number to pay for additional copying and binding. Work with the graduate coordinator to arrange for bound copies.

### **See copywriting your theses/dissertation in Miscellaneous Details**

### **Clear all fees with the Bursar's office**

### **Time Limit for Degree Completion**

MS students are expected to complete their programs within 3 years or 6 semesters. All work for the M.S. must be completed within a 6-year period, beginning with the earliest (UA or transfer) course on the Plan of Study or coursework begins expiring.

*Should you and your advisor decide that you should continue into a PhD program in SNRE, you must have written support from your advisor in the form of a letter of recommendation, apply to the program in GradApp, and pay the mandatory application fee.*

## INFORMATION FOR MS WATER, SOCIETY AND POLICY STUDENTS

Graduates of the program are able to understand the basic principles of hydrology, social science, management, law, and policy and are able to contribute to making informed decisions regarding water resources.

### Meet with your Advisor

At the beginning of the first semester, students should meet with their advisors. At your meeting, you typically review your plan of study and discuss potential MS projects. Be prepared to bring a draft Plan of Study, transcripts from previous universities attended, and proposed project ideas.

### What is the Responsible Conduct of Research Statement?

Once you have an idea of your project requirements, be sure to get any needed IACUC or IRB approvals and fill out the Responsible Conduct of Research statement in GradPath (UA GradPath Forms). This is the first form you must complete in GradPath and you cannot open the next form you need until this is completed. To see the form, click Create New. Make sure you've read the **General Information** section. Then, in the **Certified** section, read the statement and check the box. This form does not require any approvals; once submitted you are immediately able to access the next applicable form. To return to your forms page, click the **Return** button.

### Committee Membership

The major professor serves as the chair and sole member of the advisory committee; the chair must be a tenure-track or equivalent UA faculty member. Your advisor will be the final approver for your MS Project.

### Masters Plan of Study (MPOS)

The Plan of Study Form (UA GradPath Forms) will list the courses you will use towards completion of your degree requirements. You must submit your Plan of Study by the end of the second semester in the program. The Graduate College charges your bursar's account \$35 in graduate candidacy fees after processing this paperwork.

- Courses must be graduate level (500-level +) courses, at least half of which must be assigned letter grades (A, B, C. . .).
- Transfer credit cannot account for more than 20% of the minimum units required for your degree (6 units). If you anticipate using transfer courses, you can submit the 'Evaluation of Transfer Credit' form (UA GradPath Forms) when you begin your program to ensure the desired courses are eligible for transfer.
- Do NOT list course work deficiencies unless they can be counted towards your degree
- DO list your Report units (RNR 909; no more than 6 units).
- Submit the form.

**To modify your plan of study once it has been approved**, use the Modify button in GradPath.

### Academic Course Requirements

The MSWSP degree requires completion of 32 units, distributed as follows:

Policy Core courses	9 units
Science Core Courses	3-4 units
Water, Society and Policy Seminar	2 units
Electives	12-14
units	
Master's Project	6 units

Any of the Policy and Science core courses may be taken as electives if they are not used to satisfy core requirements. Substitutions to the core courses or exceptions to the list of approved electives must be approved through the SNRE petition process.

### **Complete your coursework and the major project**

Students are required to complete a major project for the MS WSP degree. You will select the project topic during your first year of study in consultation with your advisor. The project should focus on a water policy issue of importance, ideally in a semi-arid environment. You will prepare for your advisor's approval a brief (2 to 3 pages) proposal outlining the objectives of the project, work plan, and deliverables. The project may stem from an internship; however, a formal internship is not required. The time and effort invested should represent six-units of academic credit. According to the Arizona Board of Regents, each unit awarded should represent 45 hours of study. However, the acceptability of the final project is the decision of your advisor. The final deliverables are for you and your advisor to determine. However, at a minimum a written report and an oral presentation are required. The project is to be completed by the end of the second year of study or by the expected graduation date, whichever comes later.

During this time you should submit your **Committee Approval Form** via GradPath (UA GradPath Forms). This will ensure that you have a valid committee (your advisor is an official UA faculty member) for the approval of your completion of degree requirements.

### **Final Project submission.**

Upon completion of your coursework and your major project,

Bring the "Master's/Specialist Completion of Degree Requirements" (CDR) Form <http://snre.arizona.edu/academics/current-students/masters-degrees> to your advisor when you complete your project. Your advisor will need to sign two copies of your Approval Page (page 2 of your written paper) if you have completed a written project. After are finished, turn the CDR in to the graduate coordinator. (You will turn in your approval pages when you turn in your paper).

Deadlines for completing your requirements can be found on the Graduate College website (<http://grad.arizona.edu/academics/degree-certification/deadlines-for-graduation>). In Fall and Spring the deadline is always the last day of finals for that semester.

### **Turn in your project**

Please submit an electronic copy of your project to the graduate coordinator for inclusion in the School database.

### **Clear all fees with the Bursar's office**

### **Time Limit for Degree Completion**

MS students are expected to complete their programs within 3 years or 6 semesters. All work for the M.S. must be completed within a 6-year period, beginning with the earliest (UA or transfer) course on the Plan of Study or coursework begins expiring.

*Should you and your advisor decide that you should continue into a PhD program in SNRE, you must have written support from your advisor in the form of a letter of recommendation, apply to the program in GradApp, and pay the mandatory application fee.*

# INFORMATION FOR PHD STUDENTS IN NATURAL RESOURCES

## **Qualifying Meeting**

During your first semester you and your advisor will need to coordinate a meeting with the Chair of the departmental option, another faculty member in SNRE, your advisor, and yourself. The purpose of this qualifying meeting is to orient you to the program, go over degree requirements, and provide initial guidance regarding your first few semesters. During the meeting, the attendees will review your background, research interests, and course needs. The group will evaluate MS courses that potentially transfer into your PhD program, so you must bring syllabi for the courses you would like to transfer to this meeting to the extent that this is possible. You will outline a preliminary doctoral plan of study with the courses listed semester by semester, but your final Plan of Study will be determined by your comps/dissertation committee.

## **Select Your Committee, schedule and hold a committee meeting**

A note on committees

There are three types of committees, the qualifying “committee” (which is not really a committee and is described above), the comprehensive examination committee (minimum 4 members), and the dissertation committee (minimum 3 members). Some or all of the members on each type of committee will be present on all of your committees throughout your tenure as a graduate student, and others may change. From now on when we refer to your committee, we mean the committee you will use for your comprehensive exams and your dissertation defense—there is often little change between the two, but your “official” (dissertation) committee is appointed after you pass your comprehensive exam.

You should select your committee and schedule your first committee meeting during your second semester. At your first committee meeting, you typically review your plan of study and preliminary research proposal. Most Options have specific requirements that can be found at the links below:

Ecology, Management, & Restoration of Rangelands  
Natural Resources Studies  
Watershed Management and Ecohydrology  
Wildlife and Fisheries Conservation and Management

PhD Committees consist of at least four people: three from the major and one from the minor or two from the major and two from the minor. Of the four, three must be regular, tenure-track or equivalent UA faculty. The fourth (or additional members) may be non-tenure track University personnel or come from outside the University and are considered special members. You may request a special member to your committee in consultation with your Major Advisor by submitting a request for special member approval form and resume to the graduate coordinator. The graduate coordinator will get department head approval and forward the request to the Graduate College for final approval. The chair of the committee must be a tenure-track faculty member. Adjunct professors serving with special member approval can co-chair a committee, but cannot be the sole chair. A faculty member cannot simultaneously serve as a major and minor committee member.

We strongly encourage students to have three faculty members from the major and one from the minor, noting that some minor departments require two faculty members serve on the minor committee. (The comprehensive exam committee requires a fourth person because it must cover the minor). The four member committee minimum is only necessary for the comprehensive exams. For the final defense, the committee can drop down to three members, all three of which must be currently tenured/tenure track,

or equivalent faculty at the UA.

Committee membership can be changed if circumstances dictate that the change is necessary or recommended.

### **Annual Committee Meetings**

You will need to schedule annual meetings with your committee to keep them apprised of your progress and obtain assistance with any obstacles towards degree completion that may arise. Your advisor must sign the Annual Committee Meeting form (available at <http://snre.arizona.edu/academics/current-students>) and you should submit this to the graduate coordinator to hold in your student file.

### **Doctoral Plan of Study (DPOS)**

The Plan of Study Form (UA GradPath Forms) outlines courses you will use towards completion of degree requirements.

You must list at least 36 units of coursework for the major and at least 9 units for the minor. Transfer courses are assumed to count toward the major unless noted as counting toward the minor. The required 18 units of dissertation are not listed on the Plan of Study, as that requirement is the same for all doctoral students.

- At least 23 units must have a letter grade.
- Up to 30 units of transfer course work is acceptable. If you anticipate using transfer courses, you can submit the 'Evaluation of Transfer Credit' form (UA GradPath Forms) when you begin your program to ensure the desired courses are eligible for transfer.
- Courses listed must be graduate (500-level +) courses, at least half of which must be assigned letter grades (A, B, C. . .).
- You may NOT list course work deficiencies; they don't count toward your degree.
- Do NOT include dissertation units; the Graduate College tallies those separately.

**To modify your plan of study once it has been approved**, use the Modify button in GradPath.

Students in Natural Resource Studies must also file a School-generated plan of study form (available online [http://snre.arizona.edu/sites/snre.arizona.edu/files/NRS\\_POS.pdf](http://snre.arizona.edu/sites/snre.arizona.edu/files/NRS_POS.pdf)) which must be approved prior to submitting the Graduate College form. The form indicates how courses in the major must be structured to highlight interdisciplinary study that is the hallmark of this option. The School form is to be approved by the Program Chair prior to submitting the Graduate College form. Students in the Wildlife and Fisheries Conservation and Management, Watershed Management and Ecohydrology, or Ecology and Management of Rangelands options need only submit the Plan of Study available from the Graduate College.

### **Seminar Requirement**

All students are required to register for one seminar course per academic year. Courses should provide opportunities for advanced interactions with student colleagues and faculty and generally are numbered 595/695 or 596/696 to count towards this requirement. Seminar-style courses do not need to be in an SNRE housed prefix (RNR, RAM, WSM, or WFSC). These seminars MAY count towards your plan of study units with the approval of your committee.

Additionally, all students must register for RNR 696A section 001 (1 unit) and attend the weekly departmental seminar during their first two semesters. Should conflicts arise due to course scheduling or field work, you will be excused from that semester and you may register for a later semester. These seminars may count towards your plan of study unit requirements with your committee's approval.

### **Information on Minors**

All PhD students must complete a minor. Course work for the minor depends on the requirements outlined by the minor department or program, but will be at least 9 units. Candidates in all emphases are able to minor within the School.

For minors in Natural Resources, 12 units of course work (6 units must be taught by SNRE faculty members) must be approved by your minor committee member. Students with a minor outside the School must identify a minor advisor who will determine which courses are required.

### **Start your proposal**

Your primary goal as a graduate student is to conduct scholarly research. To that end, you will need to have an approved proposal for that research. Although your research may be part of a larger project and a funding proposal may already exist, you should write your own proposal to indicate your understanding of the work and distinguish it from the larger project. This proposal is due to your committee by the end of the 4<sup>th</sup> semester and should be in the format for NSF Doctoral Dissertation Improvement Grants ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)).

### **Written and Oral Comprehensive Exams**

PhD students are required to take a two-part (written and oral) comprehensive exam prior to advancement to degree candidacy. These exams determine your subject matter competency in major and minor fields of study. Talk to your advisory committee and peers for guidance on how best to prepare. Comprehensive exams—both written and oral—must include the minor. The exams should be scheduled sometime during your 3<sup>rd</sup> year in residence or within one semester of finishing coursework.

*\*\*\*You must submit 3 forms associated with the comprehensive exams.*

1. The Comp Exam Committee Appointment Form (UA GradPath Forms).
2. The Announcement of Doctoral Comprehensive Exam form (UA GradPath Forms).
3. The Prospectus/Proposal Confirmation form (also through UA GradPath Forms). To have this form approved, you must submit a pdf of your approved research proposal to the graduate coordinator.

### **First the Writing Portion**

You are required to pass your written exam(s) prior to the oral comprehensive exam. The written exam generally takes place over 1 week, but the time can vary depending on the program and committee. If the minor is in a different program, they will determine the timeframe and form of written examination to be completed. All questions on the written exam must be passed in order to proceed to the oral exam. One retake of the written exam will be allowed within 6 weeks of the failed exam if any portion of it is failed the first time taken. However, should you fail the written exam a second time, you will not be allowed to proceed to the oral exam and you will be dismissed from the program.

### **Then the orals**

After passing the written exams, your advisor (committee chair) will submit the Results of the Comprehensive Examination form available via GradPath. You will be able to view the form in your GradPath forms.

No students will be permitted a second attempt to pass the oral comprehensive exam except upon recommendation of the examining committee and the School.

The oral comprehensive exam will be scheduled no later than 3 months prior to your final defense. You should expect to be questioned further on subjects covered in the written exam and on any areas of the major and minor fields. The exam is to last between 2 and 3 hours. Bring the Results of the Oral

Comprehensive Examination form (with the written exam results) to the oral comprehensive exam. The committee will record the result of the oral exam and will sign the form to certify the result; you will also be asked to sign to confirm that you have been informed of the results. Submit the Results of the Oral Comprehensive Examination form to the Graduate Student Academic Services within 24 hours of completion or at the soonest time possible after that.

### **Policies and Procedures for the Oral Comprehensive Examination for Doctoral Candidacy**

<https://arizona.app.box.com/v/grad-gsas-comporalexam>

### **Advancement to Candidacy**

After you have passed the written and oral parts of the comprehensive exam, the Graduate College will advance you to doctoral candidacy, assuming you have completed the required coursework listed on your approved Plan of Study and have no other obstacles to graduation aside from completion of your dissertation. Your bursar's account will be charged \$35 in candidacy fees. (Fees are subject to change.) You will be notified by e-mail when you have been advanced to candidacy and charged the fees.

### **Doctoral Dissertation Committee Appointment Form**

NOTE: Before you can submit the Doctoral Dissertation Committee Appointment Form in GradPath, you must ensure that the department has an approved Research Proposal/Prospectus on file.

After you pass the comprehensive exams and are advanced to candidacy, you will submit the Doctoral Dissertation Committee Appointment Form (UA GradPath Forms). This form allows the Graduate College to make sure you are using a valid dissertation committee (see

<http://grad.arizona.edu/academics/program-requirements/doctor-of-philosophy/dissertation-committee>). The four member committee minimum is only necessary for the comprehensive exams. For the final defense, the committee can drop down to three members, all three of which must be currently tenured/tenure track, or equivalent faculty at the UA. It also reports your planned graduation term and your dissertation title, either of which can be updated as needed.

### **Complete your dissertation**

Preparation of the dissertation is your responsibility. You are expected to publish your research, and are encouraged to submit your papers for publication within one year after completing your degree. This task becomes more difficult the longer it is delayed; if you do not meet this obligation, your major professor may assume responsibility for publication. The Graduate College has prepared a Manual with requirements for the format of your dissertation: <http://grad.arizona.edu/gsas/dissertations-theses>. You must follow this format.

### **Announcement of Final Defense**

After you have satisfied all degree requirements and your committee has approved the penultimate draft of your dissertation, plan to defend your dissertation work. When you have finished, or nearly finished, your dissertation, and have set a date with your committee, you should schedule your final defense by submitting the Announcement of Final Oral Examination form (GradPath Forms) at least 7 working days before the exam. You must also send an email to the graduate coordinator announcing your defense (include the time, date, place, title, and abstract), one week in advance. Room reservations may be made with the graduate coordinator. Examinations are a maximum of 3 hours in length.

The Graduate College has recommended dates for the defense in order to meet the deadline for submitting the dissertation for archiving (see <http://grad.arizona.edu/academics/degree-certification/deadlines-for-graduation>). Because you must defend and gain final committee approval of your dissertation (with any post-defense revisions completed) before making the submission, plan your defense early enough to meet the submission deadline.

### **Final Defense**

You will give a professional, 30 to 40-minute seminar, open to the public, followed by a brief question and answer session. Then all but you and your committee are asked to leave, and the remainder of the oral defense takes place privately (~2 hours).

You will take the penultimate draft and 2 printed Approval Pages (page two of your dissertation) to the oral defense examination. (You will receive information from the Graduate College about preparing your approval pages.)

Your major professor will inform you of the results and submit the **Results of the Final Defense** form via GradPath immediately after the exam. If revisions are required by the student, the Director or Graduate Coordinator must notify (by email) Graduate Degree Certification when the revisions have been completed. Instructions for Final Oral Exam: <https://grad.arizona.edu/forms/>  
Please note: More than one negative or abstaining vote will result in failure of the exam. In other words, two or more negative/abstaining votes mean a failure.

### **Time Limit for Degree Completion**

All work for the PhD must be completed by the end of the 5<sup>th</sup> year (10<sup>th</sup> semester of residence). The graduate college requires that your degree is completed within 5 years of passing the comprehensive exam, after which time students will be required to retake the exam.

### **Turn in your dissertation**

PhD students must submit an electronic copy of their dissertation to the Graduate College once they have final committee approval. The submission is made at <http://www.etdadmin.com/cgi-bin/school?siteId=63%20> and must meet the Graduate College deadline for graduation in that semester or term (<http://grad.arizona.edu/gsas/degree-requirements/important-degree-dates-and-deadlines>).

There are two publishing options to choose from when submitting the dissertation. What's important to know is that the University Library makes all dissertations available for free from their archive (<http://arizona.openrepository.com/arizona/handle/10150/129649/>) regardless of which publishing option you choose. So even if you choose traditional publishing, if someone finds your dissertation through our Library rather than through UMI/ProQuest, they will not have to pay for it.

### **For SNRE**

Please submit an electronic copy of your Dissertation to the graduate coordinator for inclusion in the School database. The School will pay to bind one dissertation for the School library. Often, your advisor can use an account number to pay for additional copying and binding. Work with the graduate coordinator to arrange for bound copies.

### **Clear all fees with the Bursar's office**

An outstanding balance with the University of Arizona means you won't get your diploma.



## **GRADUATE SATISFACTORY PROGRESS POLICY**

School of Natural Resources and the Environment

Graduate students in the School of Natural Resources and the Environment will be evaluated for satisfactory progress based on their grade point average and overall progress towards completion of degree requirements.

Grade point average:

A high level of performance is expected of students in our graduate degree program. Students must maintain a minimum of a 3.0 cumulative GPA, and a 3.0 semester average.

Students failing to meet GPA requirements will be placed on probation by the Graduate College for one semester. If the cumulative GPA is not raised to the minimum required in the following semester (i.e., within one semester), the student's advisor and advisory committee will decide whether to 1) dismiss the student from the program or 2) with Graduate College approval, allow the student to continue on probation upon approval of a remediation plan.

Graduate Mileposts

The Graduate Milepost table indicates the semester in which certain administrative steps should happen in order to satisfactorily progress towards the completion of degree requirements. These steps include scheduling annual committee meetings, comprehensive exams, submission of research proposals, and timely filing of paperwork (e.g., plans of study). No later than one month after final grades are posted in the spring, a form generated by the graduate coordinator will be distributed to faculty for each of their graduate, degree-seeking advisees. The form will highlight GPA deficiencies and whether the student has completed the appropriate Mileposts (e.g., plan of study, committee appointment) during the recommended semester. The faculty advisor will make comments and sign the form, which will then be distributed to the student and the graduate coordinator. Students who fail to make satisfactory academic or research progress will be notified in writing of their status (with a copy of the letter going to the Graduate College).

Time to completion:

It is in the best interests of students and the School for degrees to be earned in a timely fashion. MS students who have not completed degree requirements in 3 years, or PhD students who have not completed degrees in 5 years will receive a letter strongly encouraging them to complete all degree requirements within 1 year. Students who fail to meet this deadline will be sent another letter (with a copy going to the Graduate College) and will be required to submit a letter requesting and justifying a time extension. A letter of endorsement from the faculty advisor and advisory committee must accompany the student's letter of request. This process will be repeated annually, with faculty being reminded of their ability to dismiss a student from the program should they choose.

Students who fail to complete requirements and fail to submit a letter requesting a time extension will be automatically dropped from the program at the end of the academic year. Students who request a time extension and fail to meet it may request another provided they have faculty and committee endorsement. The time extension is requested via the Graduate Petition process and is subject to Graduate College approval. Students dismissed from the program are eligible to reapply.

### Graduate Milestones

This table is a guide to the administrative steps toward earning each degree. Required forms are available online on the SNRE website or via GradPath in UAccess.

<b>When</b>	<b>M.S. Degree task</b>	<b>Ph.D. Degree task</b>
Start of 1 <sup>st</sup> semester	Orientation and initial advising; plan coursework	Orientation, initial advising
End of 1 <sup>st</sup> semester	Begin selecting committee members	Qualifying Meeting
End of 2 <sup>nd</sup> semester	Schedule and hold a committee meeting; submit research proposal to committee; submit Plan of Study Form	Schedule and hold committee meeting
End of 3 <sup>rd</sup> semester	Submit Committee Appointment Form	Submit Doctoral Plan of Study
4 <sup>th</sup> semester	Schedule and hold a committee meeting; Thesis research	Schedule and hold a committee meeting; submit Research Proposal (Prospectus); Plan comprehensive exam
5 <sup>th</sup> – 6 <sup>th</sup> semester	Thesis research and writing  Present and defend Thesis (Thesis option); Hold Final Exam (Non-thesis option)  Submit SNRE Completion of Degree Requirements Form and printed copy of thesis or project to Graduate Coordinator	Submit Comp Exam Committee Appointment form; submit the Announcement of Doctoral Comp Exam form; take the Comprehensive Examination (written and oral portions)  Ensure the Department has an update and approved Research Proposal on file  Schedule and hold a committee meeting; submit Doctoral Dissertation Committee Appointment Form
7 <sup>th</sup> + semesters	NA	Dissertation research and writing  Schedule and hold annual committee meetings  Submit Announcement of Final Oral Exam form  Present and Defend Dissertation by the end of the 10 <sup>th</sup> semester; online submission of dissertation to GC and printed version to SNRE.

## STUDENT RESPONSIBILITIES AND PROFESSIONAL CONDUCT

Individual faculty advisors have preferences for how their students conduct themselves and it is important that you have a conversation with your faculty advisor (PI) about their preferences. Topics that should be discussed include, but are not limited to, the following list. Examples of general faculty expectations are included, but are not reflective of all SNRE faculty which is why you need to understand your advisor's expectations. SNRE and UA policies listed below are not negotiable except by petition.

- **Lab meetings** Attending lab meetings is mandatory. Every effort will be made to accommodate regularly scheduled work-related events (i.e., classes and department seminars).
- **Conference and workshop attendance:** Lab funding may be available only if the event relates to the grant or project on which the employee is funded. PI consent must be obtained *prior to conference registration/abstract submission*. Requests for attending conferences, workshops & lab funding must be via email.
- **Travel Authorizations, Advances & Reimbursements:** UA policy states that a travel authorization must be filed prior to all University-related travel. Please file your travel authorization and travel advance requests with the SNRE business office.
- **Department Purchasing Card (PCard):** Employees must obtain written permission (i.e., via email) from the PI prior to initiating a PCard purchase. The request must contain the exact price. After the purchase, the PI requires a hardcopy (photocopy) of the receipt or invoice.
- **Intellectual Property Right and Copyrights:** The Arizona Board of Regents holds the intellectual property rights and copyrights to most of our work. See UA handbook for Appointed Personnel for details: <http://uhap.web.arizona.edu/>
- **Contact Information Directory** After graduation, or termination of work in the lab, it is the student's responsibility to provide the PI with current email and contact. This ensures that contributions to lab research publications and products will be properly attributed.
- **Timesheets:** To ensure that timesheet are approved in a timely manner, and avoid delays in pay, the student must alert the PI via email after completing the timesheet.

### Progress Report Procedures

- The student and the PI will meet *at least* twice a month to discuss progress towards monthly goals and set goals for the following month.  
The student will email the PI a weekly progress report (these should be sent on Fridays). The report will list the week's work accomplishments and plans for the following week.
- **Research expectations:** The Master's and PhD are research degrees, as such the role of the advisor to help the student become an independent researcher. The challenge for the advisor to nurture a student researcher's independence while helping the student avoid pitfalls that might overly delay completion of thesis/dissertation. Please know that occasionally the advisor will be required to make unforeseeable decisions to help the student complete graduate school in a timely manner.
- **Thesis and Dissertation Defense Scheduling:** Dissertation and thesis defense dates must be scheduled in a timely manner to allow the committee ample time to read the thesis, and the student ample time to revise the thesis prior to grad college deadlines. Note that graduation dates have been delayed because students did not allow ample time.

- **When is the thesis/dissertation ready to give to the committee?** The thesis or dissertation is not ready to give to the committee until the advisor/PI says its ready. The advisor/PI must be given ample time (at least one month) to read and comment on the thesis.
- **Publication expectations:** Master's students are expected to produce at least one to two peer-reviewed journal articles. PhD students are expected to produce at least three peer-reviewed journal articles, but four to five articles is ideal.
- **Authorship Policy:** Authorship on Project publications is given to those who (a) conceive the ideas or study design; (b) participate actively in the execution of the study; (c) analyze and interpret the data; or (d) help write the manuscript.

Authorship order is determined just prior to manuscript submission. Typically, the person actually *writes* the paper – and leads the process of soliciting feedback from the co-authors – is listed as first author. The order of co-authors is based on the degree to which they actively participate in one or more of the above items. Even if co-authors were primarily involved in activities a-c, in order to be listed as a co-author, they must review and comment the manuscript prior to submission, and consent to submission in writing. The final determination about authorship and authorship order is vested with the PI/advisor in consultation with the student.

- **Timing of completion of publications:** If the publications resulting from graduate work are not in press at the time of graduation, the student and advisor will agree upon a time frame for submitting/revising the publications. This is typically within two-four months of graduation. If the publications are not submitted within the agreed upon time frame, the advisor or another lab member will take over the writing and submission of the manuscripts. As per the authorship policy above, the advisor will be first author and the student will be a co-author (assuming s/he meets the co-authorship criteria above).
- **Policies Subject to Change:** These policies are subject to change. Should changes be made to the policies, the student will be notified in writing and will have the opportunity to discuss the changes in person with the PI/advisor.

## MISCELLANEOUS DETAILS

### Copyrighting your Thesis/Dissertation

You own the copyright in your work from the time it is fixed in a tangible medium. There is nothing more you have to do. You can, however, for a fee, register your copyright with the Copyright Office in the Library of Congress if you so choose. Registering it gives you the ability to sue for infringement and recover statutory damages beyond actual damages.

Copyright is actually a bundle of rights. These include the right to reproduce the work, to create derivative works (such as a screenplay from a novel), to distribute copies, to perform the work, and to display the work. What UMI/ProQuest and the University are asking for is the *\*non-exclusive\** right to distribute your work. You still own the copyright. You still control everything the statute grants you.

Unless you restrict the distribution of your dissertation or thesis, UMI/ProQuest will list your thesis in their archive and sell electronic or print copies to anyone who asks. (Normally, you would get a small royalty from the sale.) You will also sign the Library's Reproduction and Distribution Rights form,

allowing them to make your dissertation/thesis available (at no charge) from their open access archive and to include it in the Networked Digital Library of Theses and Dissertations. (Again, it is possible to restrict the distribution of your dissertation or thesis from the Library's archive.)

Even though the dissertation or thesis is in the open access repository, you still control the copyright and could grant anyone else the non-exclusive right to distribute the work or the exclusive right to reproduce the work, etc.

If you have further questions, please feel free to contact:

Dan Lee

Director, Office of Copyright Management & Scholarly Communication

leed@u.library.arizona.edu

(520) 621-6433

### **Office Space**

Office space or study carrels may be available in your major professor's lab or in the open student desk space on the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> floors of ENR2 north. Desks/carrels are assigned with the following preferences:

- Funded PhD students
- Funded MS students
- Unfunded PhD students
- Unfunded MS students

In general, PhD students are assigned the larger desks. Check with the graduate coordinator to see if office space is available for you.

If you find that you are not using your desk space, please let the graduate coordinator know so that your space can be allocated to others as needed.

### **Computing Facilities**

The School of Natural Resources has developed extensive computing

facilities. OCF: Open Computing Facility

The Open Computing Facility is in BSE 326. This facility is for students of the School, not having access to personal computers, to engage in uncompleted course work, read email, and other pedestrian computer activities. The OCF is NOT an open CCIT lab nor is it to be used for research work. The computers are available on a first-come first-served basis. Students are assigned accounts by virtue of registration in computing-bases courses, or by the lab support staff. No fees.

ICF N250: Instructing Computing Facility

The ICF is reserved for regularly offered courses in SNRE and special workshops and seminars. Students who are registered in classes will have active accounts and access to computers in the ICF during regularly scheduled lab times. The ICF does not, normally, support open access times the way that the OCF does. Currently, courses offered in the ICF have a special fee of \$50 per class. SNRE reserves the right to change the special fee rate for access in the ICF.

RCF: Research Computing Facility

The Research Computing Facility housed in ART (Advanced Resource Technology) ENR2 N455, is a GIS (Geographic Information Systems) service center for research projects. The facility offers support and

software access for spatial and tabular research data sets; as well as a large format plotting services. Students are assigned accounts by the support staff only. Currently, there is a fee of \$3/hour for system access (student self service).

ART: Advanced Resource Technology Group (<http://ag.arizona.edu/art/>)

The Advanced Resource Technology Group (ART) was formed in 1988 to provide leadership in such areas as GIS institutional development, GIS environmental database design and development, application of cartographic and spatial analysis for agriculture, natural resources, and rural development. The ART Group provides GIS support services for research and extension, and the College of Agriculture and Life Sciences. ART can help with GIS hardware and software selection, provides advice and training on GIS database development and analysis, and offers technical review of proposals. Furthermore, as an integral component of research and extension, ART faculty promotes and assists in the development of GIS instructional resources and curriculum.

### **Mail**

School of Natural Resources and the Environment  
Environment and Natural Resources 2, Room N384  
University of Arizona  
Tucson, AZ 85721

OR (for Fed Ex)  
Environment and Natural Resources 2, Room N384  
1064 East Lowell Street  
Tucson Arizona 85719

Graduate student mailboxes are located in ENR2 N384 and mail is sorted in alphabetical batches (e.g., A-F, etc.)

### **Office Equipment**

Xerox machines, fax machines, and typewriter are available on a limited basis. Check with the business office for availability, and your faculty advisor for a project specific code for copying.

### **Parking Permits**

Contact Parking and Transportation for a parking permit and information on discounted bus passes (<https://parking.arizona.edu/>). Biking to campus is encouraged and free.

### **Purchasing and Supplies**

Before making any purchases on a grant, you will need to make sure you have an account number and an object code for the item to be purchased. Purchasing Forms and instructions are available at <http://snre.arizona.edu/snrebiz/purchasing>. Contact [bizsnre@cals.arizona.edu](mailto:bizsnre@cals.arizona.edu) for assistance.

If you have purchased items and wish to be reimbursed, make sure to save your receipts. Find the forms at the above link and then work with the business office to get reimbursed.

### **Vehicles and Travel**

Details on the paperwork that needs to be processed through Motor Pool can be obtained with approval of your major professor at <http://snre.arizona.edu/snrebiz/travel>. Travel Authorization

Forms can also be found here. If you will be doing many weekend trips to your field site within Arizona, request a blanket travel authorization for a given period of time (i.e., the duration of your project)

### **Financial Assistance**

The bursar's office assesses out-of-state tuition and registration fees. See <http://bursar.arizona.edu/> for current rates.

#### Assistantship/Associateship

Students are required to enroll for a minimum of 10 units during the term(s) in which they are supported by a graduate assistantship/associateship, of which at least 6 must be graduate level units. This applies even if the assistantship is outside the department/CALS. Audited courses do not satisfy this requirement. You must maintain a 3.0 cumulative GPA. Assistantships include health insurance, a remission of in-state tuition, and a waiver of non-resident tuition. **RAs and TAs are required to pay their expected registration fees (not tuition and insurance) by the first day of the semester in order to avoid late registration charges.**

#### Teaching Assistantship/Associateships

All new teaching assistants are required to participate in GATO (Graduate Assistants in Teaching Orientation) AND TATO (Teaching Assistant Training Online <http://oia.arizona.edu/project/teaching-assistant-training-online-tato>). International students are required to have: (a) a TOEFL score of 550 (written) or 213 (computer) or higher or a degree from a US institution and a TSE with a score of 50, a SPEAK score of 230 or higher, a TOEFL score of 24 or better on the spoken portion, or (b) be a citizen of an English-speaking country.

#### Graduate Tuition and Registration Scholarships

Each spring, the Graduate College allocates a lump sum to SNRE to distribute as tuition scholarships (they can ONLY be used for this purpose, and ONLY for fall or spring, not summer, sessions). The application process is announced each spring. **Recipients are required to pay their expected registration fees (not tuition and insurance) in a timely manner in order to avoid late registration charges.** Please see <http://grad.arizona.edu/funding/opportunities/graduate-tuition-waivers-rc-waivers> for eligibility.

#### Thesis/Dissertation Scholarships

Students who have completed their academic program and have only writing and the defense to complete may be eligible for a thesis/dissertation scholarship, which covers **non-resident tuition only**. **Recipients are required to pay their expected registration fees (not tuition and insurance) in a timely manner in order to avoid late registration charges.** If you think this applies to you, please contact the graduate coordinator. Please see <http://grad.arizona.edu/funding> for eligibility.

#### School Wages

Opportunities are available for graduate students to earn hourly wages for work on specific research projects or School Programs. Interested students should contact their major professor. Occasionally job notices are posted on SNRE bulletin boards. Full time domestic students are allowed to work 25 hrs./wk. on campus while international students are limited to 20 hrs./wk. while enrolled in classes. You must be enrolled in at least 6 units to earn hourly wages.

#### College of Agriculture and Life Sciences Scholarships

Applications for various CALS scholarships, including several scholarships earmarked for SNRE students, can be obtained online at <http://cals.arizona.edu/> each spring.

#### Travel:

Limited funds are available from the Graduate and Professional Student Council. See <http://gpsc.arizona.edu/travel-grants>

#### Office of Student Financial Aid (203 Administration Building)

Students interested in any financial program administered by the Office of Student Financial Aid must complete a SAFE (Student Assistance Financial Evaluation) application, which requires a small fee. Students are notified of the financial need for which they qualify within about 8 weeks.

Scholarship Universe: <https://scholarshipuniverse.arizona.edu/suha>