

# **BYU Plant & Wildlife Sciences**

**COLLEGE OF LIFE SCIENCES**

## **Graduate Student Handbook**

**Dr. Neil Hansen**

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Graduate  
Coordinator

**Mariellen Tuckett**

Graduate Program  
Advisor



**2023-2024  
Academic Year**



## WELCOME

Dear Graduate Student,

Welcome to the Plant & Wildlife Sciences Graduate Program. We are pleased you have chosen Brigham Young University as the place to pursue your graduate education. Over the next few years, I look forward to working closely with you toward the successful completion of your academic program.

The PWS Department is committed to providing you with the best graduate education possible. Graduate school is not a job, but you are subsidized to complete a degree. We also offer supportive, mentored research. As a result, the department's contribution to your education is significant - our expectations are high and require a serious commitment.

Graduate students typically must expend far more effort and time to further their education. These efforts will include coursework, research, and if you have a teaching assistantship, you will need to make time for those responsibilities as well. All of this may often require arriving early and working late, and frequently coming back in the evenings and on Saturdays. The graduate student who only approaches their responsibilities as they would full-time employment will misunderstand the effort and time commitment needed for success.

We have compiled this handbook, which is an outline of policies and procedures to assist you through your program. The responsibility for complying with all Department and University requirements rests with you. In addition to this handbook, you should refer to the BYU Graduate Studies website which provides you with substantially more information about the university calendar, policies governing academic programs, including graduation requirements, degree requirements, and support services available to graduate students including library services, university privileges and mental health resources.

The rewards that come with the completion of a graduate degree are great and far-reaching. Your life and the lives of others will certainly be blessed for years to come. We are here to help you be successful. We wish you success and look forward to our collaboration.

Sincerely,

Mariellen Tuckett

Graduate Program Advisor

Department of Plant & Wildlife Sciences

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## PWS RESEARCH FACULTY DIRECTORY



### **Zachary T. Aanderud, Associate Professor**

**Education:** PhD, Soils and Biogeochemistry, University of California Davis, 2006.

**Research Interests:** Impacts of environmental and resource variability on ecosystem services, consequences of disturbance (e.g. fire and exotic invasion) on plant-soil-microbial interactions, applications of phyto-and-bioremediation

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### **Ben W. Abbott, Assistant Professor**

**Education:** PhD, Ecosystem Ecology, University of Alaska Fairbanks, 2014.

**Research Interests:** The response of carbon and nitrogen cycles to disturbance (permafrost degradation, agriculture, urbanization, and climate change). Ecohydrology, aquatic biogeochemistry, environmental and economic sustainability, expert assessment.

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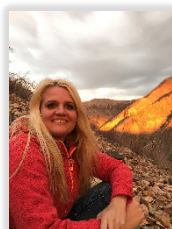


### **Phil S. Allen, Professor**

**Education:** PhD, Horticulture, University of Minnesota, 1990.

**Research Interests:** Ecological restoration, Seed biology, Plant and Landscape Systems

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### **Loreen Allphin, Associate Professor**

**Education:** PhD, Biology (Ecology and Evolution), University of Utah, 1996.

**Research Interests:** Plant ecology, Conservation biology, and Ecological genetics.

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**Val J. Anderson, Professor**

**Education:** PhD, Range Science, Texas A&M University, 1988.

**Research Interests:** Rangeland restoration methods and materials, Plant responses to environmental stress, Rangeland entomology.

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**Matt Arrington, Assistant Professor**

**Education:** PhD, Plant Physiology, Oregon State University.

**Research Interests:** Indoor agriculture systems development, non-conventional crop use in vertical farming, environmental control of indoor fruiting crops.

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**John M. Chaston, Assistant Professor**

**Education:** PhD, Microbiology Doctoral Training Program, University of Wisconsin Madison, 2011.

**Research Interests:** Genetics of beneficial host-microbe interactions

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**Craig E. Coleman, Associate Professor**

**Education:** PhD, Molecular and Cell Biology, Pennsylvania State University, 1992.

**Research Interests:** Plant molecular genetics and biotechnology

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**Paul B. Frandsen, Assistant Professor**

**Education:** PhD, Rutgers University, 2015.

**Research Interests:** Insect genomics

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**Brad Geary, Professor, Graduate Coordinator**

**Education:** PhD, Plant Pathology, Washington State University, 1999.

**Research Interests:** Endophytes in plants, Seed germination and survival of native Utah plants, Potato disease control, Quinoa disease control

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**Neil C. Hansen, Professor, Department Chair**

**Education:** PhD, Soil Physics, University of Minnesota, 1998.

**Research Interests:** Transport of Agricultural contaminants in overland flow.

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**Bryan G. Hopkins, Professor**

**Education:** PhD, Agronomy-Soil Chemistry, Kansas State University, 1995.

**Research Interests:** Environmental implications of soil, nutrient, and water management of managed and wildland systems.

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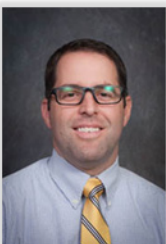


**April Hulet, Assistant Professor**

**Education:** PhD, Wildlife and Wildlands Conservation, Brigham Young University, 2012.

**Research Interests:** Conservation and restoration ecology, fire ecology, remote sensing and GIS applications on rangeland ecosystems.

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**David E. Jarvis, Assistant Professor**

**Education:** PhD, Plant Science, University of Arizona, 2014.

**Research Interests:** Plant genome sequencing and analysis, comparative genomics, mechanisms of plant salinity tolerance...

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**Eric N. Jellen, Professor, Associate Dean**

**Education:** PhD, Plant Breeding, University of Minnesota, 1992.

**Research Interests:** Genome ancestry of Quinoa (*Chenopodium quinoa*), polyploid cytogenetics, crop genetic resource conservation, Cytogenetics of oat (*Avena sativa*) and related species...

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**Randy T. Larsen, Professor**

**Education:** PhD, Wildlife Biology, Utah State University, 2008.

**Research Interests:** Avian biology, avian ecology, wildlife habitat relationships, biostatistics.

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**Matthew D. Madsen, Assistant Professor**

**Education:** PhD, Wildlife & Wildlands Conservation, Brigham Young University, 2010.

**Research Interests:** Methodologies and technologies for wildland restoration, seed technology, soil plant-water relationships.

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**Peter J. Maughan, Professor**

**Education:** PhD, Molecular Genetics, Virginia Polytechnic Institute and State University, 1996.

**Research Interests:** Plant genetics, Genetic marker analysis, Transgenic plants and gene expression

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**Brock R. McMillan, Professor**

**Education:** PhD, Biology, Kansas State University, 1999.

**Research Interests:** Population and community ecology of mammals and birds. Wildlife habitat associations, behavioral ecology of mammals and wildlife conservation.

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**Steven L. Petersen, Professor**

**Education:** PhD, Rangeland resources (Rangeland ecology and management), Oregon State University, 2004.

**Research Interests:** Landscape Ecology.

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**Todd F. Robinson, Associate Professor**

**Education:** PhD, Animal Science, Cornell University, 1996.

**Research Interests:** Growth biology, Metabolic processes, Wildlife nutrition, Animal diet reconstruction, Camelid nutrition.

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**Thomas S. Smith, Associate Professor**

**Education:** PhD, Wildlife Ecology, Brigham Young University, 1992.

**Research Interests:** Wildlife-habitat relationships, Wildlife management practices, North American bear ecology, Bear-human conflict research, Polar bear denning ecology, Bear safety and bear deterrents research, Mountain sheep ecology.

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**Sam St. Clair, Professor**

**Education:** PhD, Ecological and Molecular Plant Physiology, Penn State University, 2004.

**Research Interests:** Plant physiological ecology.

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**J. Ryan Stewart, Professor**

**Education:** PhD, Horticulture, Iowa State University, 2005.

**Research Interests:** Plant Ecophysiology.

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## **PWS OFFICE STAFF AND ADMINISTRATION**



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## REQUIREMENTS FOR MS DEGREE

- Elective coursework requirements are determined by Advisory Committee
- \*Alternatives may be available for this requirement through petition to the Department Graduate Coordinator when unusual circumstances apply

### Program Requirements for Wildlife and Wildlands Conservation, Environmental Science and Sustainability, and Genetics & Biotechnology

- 30 credit hours
  - **24 coursework or seminar**
    - PWS 694R (Seminar) 2 semesters
    - No more than 9 hours of senior credits can be applied toward the MS degree
    - No Independent Study classes may be applied toward the MS degree
  - **6 thesis hours, PWS 699R Only**
- Selection of Advisory Committee & Program of Study
- Prospectus
- Biannual progress evaluations with Advisory Committee
- At least one manuscript from thesis prepared for publication
- Final defense of thesis and oral examination.
- Department exit interview

### Additional Requirements for Environmental Science and Sustainability MS

- STAT 511

### Additional Requirements for Genetics & Biotechnology MS

- PWS 586 (Plant Cell Biology)
- PWS 672 (Comparative Genomics)
- PWS 673R (Cytogenetics)
- PWS 670 (Analysis of Complex Genomes)

More information is available on the Graduate Progress System

<https://gradprogress.sim.byu.edu/>

## MS PROGRAM DEADLINES

- Biannual Progress Evaluations are due the last day of classes in Fall & Winter Semesters
- Students must take 6.0 credits per academic year (August to August)
- International students are required to be registered as full-time students. To be considered full-time for tuition and immigration purposes, international students must register for at least 9.0 credit hours in both fall and winter semesters or at least 4.5 credit hours in a term.
- Students must be enrolled in 2.0 credits the semester they begin and the semester they graduate
- See College and University deadlines for graduation information

### **1<sup>st</sup> Progress Review (Due at the end of 1<sup>st</sup> semester)**

- Biannual Progress Review
- Selection of Advisory Committee & Program of Study

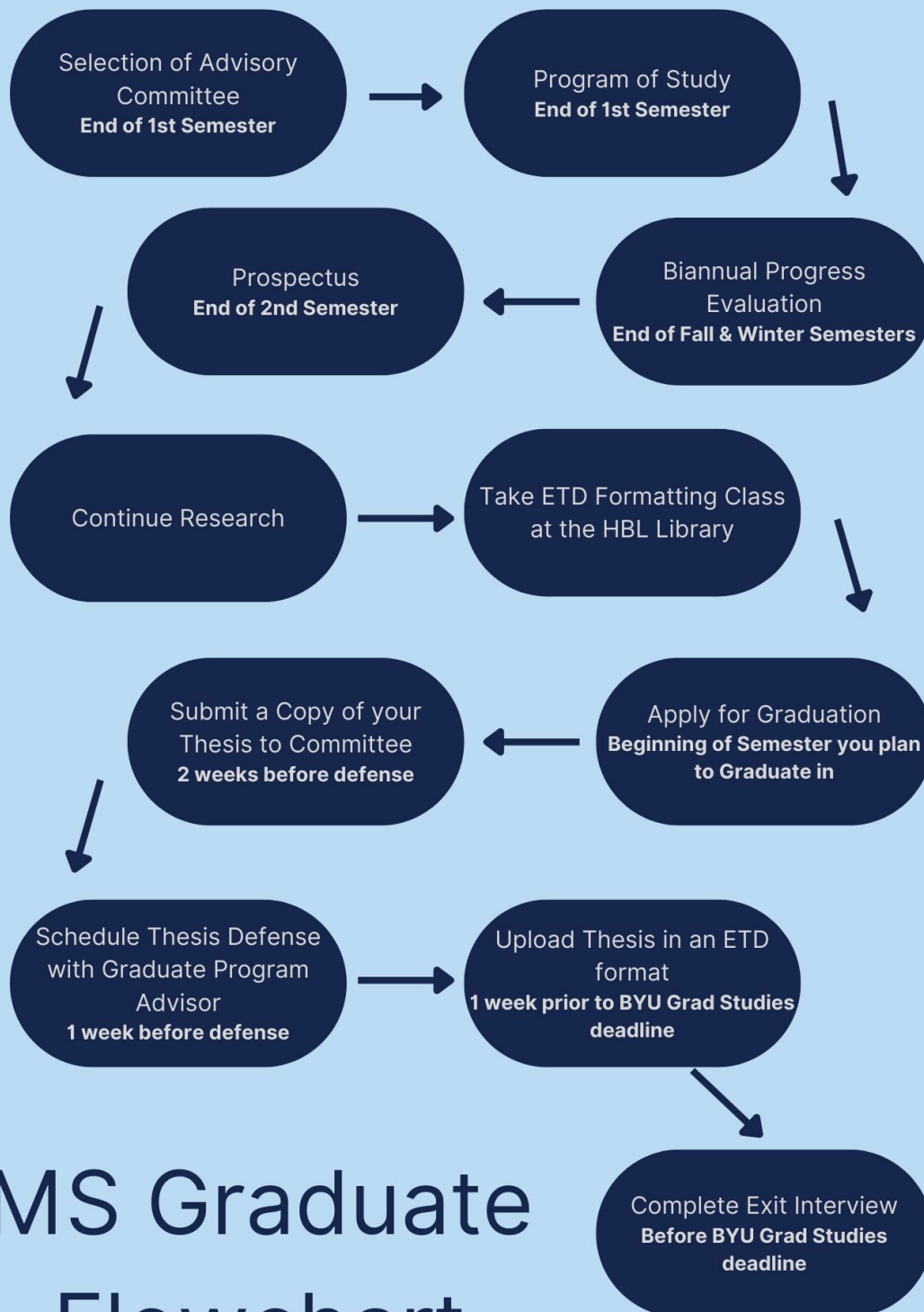
Note: The semester you start classes is considered your first semester

### **2<sup>nd</sup> Progress Review (Due at the end of 2<sup>nd</sup> semester)**

- Biannual Progress Review
- Approval of Prospectus & Oral Presentation to Committee

### **Subsequent Progress Reviews until Graduation**

- Biannual Progress Review EVERY Fall & Winter semester until you graduate
- At least one manuscript from thesis prepared for publication
- Apply for graduation (*first month of final semester*)
- Get draft of thesis to your Advisory Committee for approval (*at least two weeks prior to holding your defense*)
- Schedule thesis defense (*schedule at least one week before you want to hold it*)
- Hold & pass defense
- Format your thesis to the PWS Department formatting standards or publication standards (see <https://pws.byu.edu/0000017f-9491-d0d3-ab7f-bcf39b920000/pws-thesis-template>)
- Submit your formatted thesis in the Graduate Progress System. (*Must receive your thesis no later than one week before the Grad Studies deadline for the Dean's office review.*)
- Department exit interview



# MS Graduate Flowchart

# WILDLIFE AND WILDLANDS CONSERVATION PHD

## PROGRAM REQUIREMENTS

- Elective coursework requirement is determined by Advisory Committee
- \*Alternatives may be available for this requirement through petition to the Department Graduate Committee when unusual circumstances apply
  
- 54 credit hours
  - **36 coursework or seminar**
    - PWS 694R (Seminar) 4 semesters
    - May not include undergraduate courses (100 to 400 level)
    - Students who have earned an MS degree may use 18 course credits from their MS towards their doctoral coursework, with approval from graduate advisory committee
  - **18 doctoral dissertation hours, PWS 799R Only**
- Selection of Advisory Committee & Program of Study
- Prospectus
- Two consecutive six-hour semesters on BYU campus to fulfill the doctoral residency requirement.
- Comprehensive oral and written exam
- At least two manuscripts from dissertation prepared for publication
- Biannual progress evaluations with Advisory Committee
- Final defense of dissertation and oral examination
- Department exit interview and University doctoral interview

More information is available on the Graduate Progress System

<https://gradprogress.sim.byu.edu/>



## PROGRAM DEADLINES

- Biannual Progress Evaluations are due the last day of classes in Fall & Winter semesters
- Students must take 6.0 credits per academic year (August to August)
- International students are required to be registered as full-time students. To be considered full-time for tuition and immigration purposes, international students must register for at least 9.0 credit hours in both fall and winter semesters or at least 4.5 credit hours in a term.
- Students must be enrolled in 2.0 credits the semester they graduate

### **1<sup>st</sup> Progress Review (Due at the end of 1<sup>st</sup> semester)**

- Biannual Progress Review 1

*Note: The semester you start classes is considered your first semester.*

### **2<sup>nd</sup> Progress Review (Due at the end of 2<sup>nd</sup> semester)**

- Biannual Progress Review 2
- Selection of Advisory Committee & Program of Study

### **3<sup>rd</sup> Progress Review (Due at the end of 4<sup>th</sup> semester)**

- Biannual Progress Review 3
- Approval of Prospectus & Oral Presentation to Committee

*Note: Spring/Summer is calculated as a semester. For example, if you start in Fall semester of 2023, your Prospectus would be due Fall semester 2024*

### **4<sup>th</sup> Progress Review (Due at the end of 7<sup>th</sup> semester)**

- Biannual Progress Review 4
- Doctoral Comprehensive Exam

*Note: It is recommended that PhD students take their Graduate Comprehensive Exam at the end of their second year (sixth semester). However, the exam is not officially due until the end of the 7<sup>th</sup> semester. For example, if you start classes in Fall semester 2023, the last possible day to complete your exam would be the last day of Fall semester 2025.*

### Subsequent Progress Reviews until Graduation

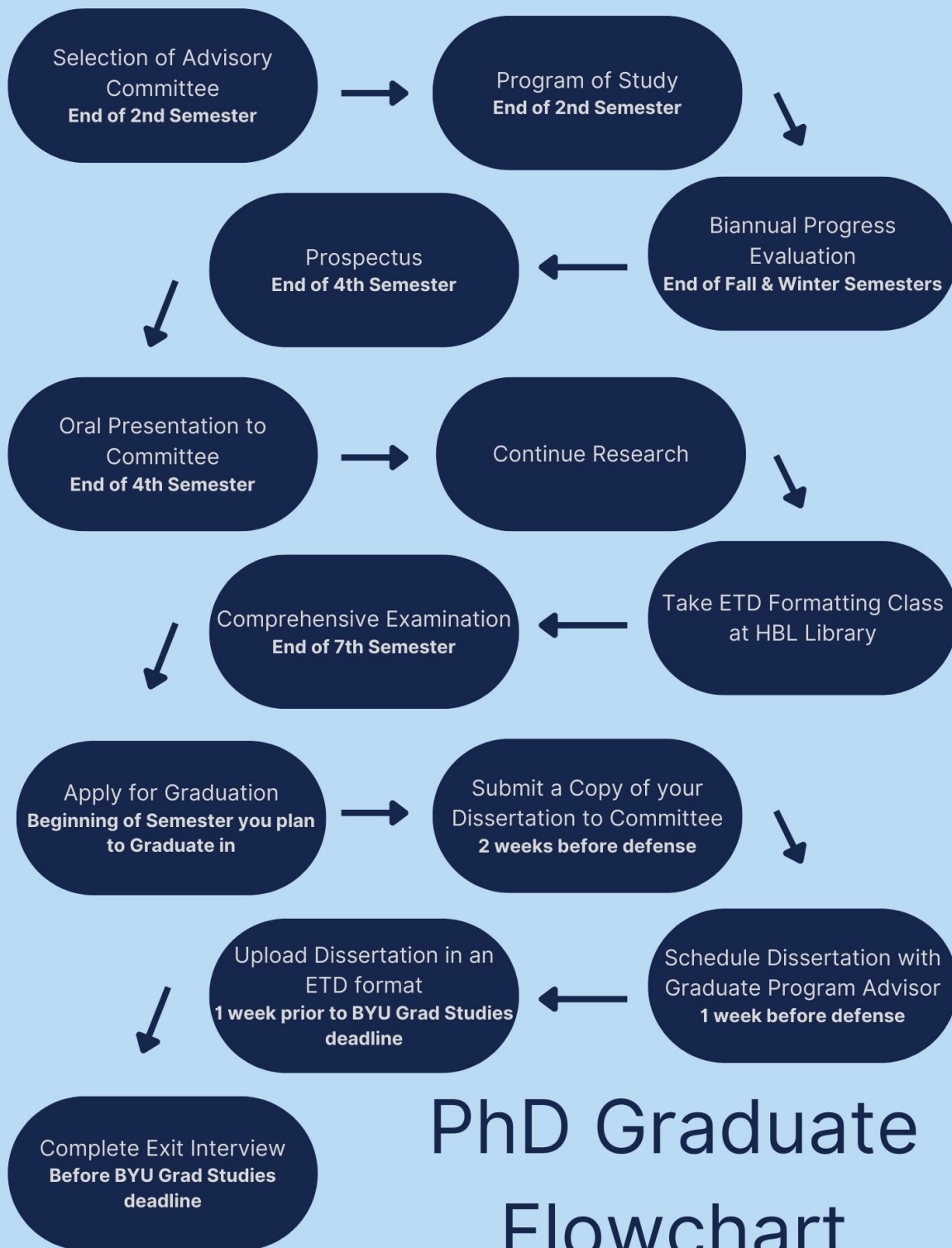
- Biannual Progress Review EVERY Fall & Winter semester until you graduate

### GRADUATION REQUIREMENTS

- At least two manuscripts from dissertation prepared for publication
- Apply for graduation (*first month of final semester*)
- Get draft of thesis to your Advisory Committee for approval (*at least two weeks prior to scheduling defense*)
- Schedule thesis defense (*schedule at least one week before you want to hold it*)
- Hold & pass defense and oral examination
- Format your dissertation to the PWS Department formatting standards (see <https://pws.byu.edu/0000017f-9492-d0d3-ab7f-bcf2963c0001/pws-dissertation-template>)
- Submit your formatted dissertation in the Graduate Progress System (Must receive your thesis no later than two weeks before the Grad Studies deadline for the Dean's office review)
- Department exit interview
- University doctoral survey

More information is available on the Graduate Progress System

<https://gradprogress.sim.byu.edu/>



## ADVISORY COMMITTEE

### Advisory Committee

The department uses a committee system to advise and evaluate students in its graduate programs. Each student is appointed to a Committee Chair upon admission. The role of the Committee Chair/Advisory Committee is to both guide and evaluate students in their coursework, research, professional development, and overall performance.

### Selection of Advisory Committee

Log in to <https://gradprogress.sim.byu.edu/> and select the 'Committee' milestone in the 'My Academic Journey' section. Click on the blue button that says "edit committee members". Using the dropdown menu, select your Advisory Committee. After you submit your Advisory Committee in the system, the blue "send invite" button will appear. By clicking this button, the system will send an email to your Graduate Advisory Committee member asking them to serve on your committee. By clicking accept in this email, the professor indicates that they agree to serve as a member of the graduate student's Advisory Committee. A green check mark will appear in the Committee milestone once all Advisory Committee members have been approved. In cooperation with the Committee Chair, the student should select committee members who will be of assistance to them during the graduate program.

*Note: the system will not officially let you select your Advisory Committee until the semester you start classes.*

### MS Programs Advisory Committee Members

The University requirement is three members for an Advisory Committee, including the Committee Chair. A minimum of two Graduate Faculty members should be from the Department. One may be from outside the Department. Additional appointments may be made to suit the needs of the program.

### PhD Program Advisory Committee Members

The University requirement is four members for an Advisory Committee, including the Committee Chair. Three Graduate Faculty members from the Department, including the Committee Chair, and one or two Graduate Faculty members from outside the Department constitute the Advisory Committee.

## **Procedure**

Potential Advisory Committee members must be cleared with the Committee Chair and the Graduate Program Advisor. Each member should be contacted individually and asked to be on an Advisory Committee. After the committee is established, the student should schedule a committee meeting to discuss a Program of Study. All members of the Advisory Committee and the Graduate Program Advisor must approve the Program of Study online form in the Graduate Progress System.

## **Advisory Committee Members from Other Universities or Organizations**

If the student has asked a Graduate Faculty member from another university or organization to be on their Committee, the Graduate Program Advisor must fill out a Petition for Exception. This is an online form that can be completed by working with the Graduate Program Advisor.

### **Petition for Exception Requirements:**

1. State the reason(s) for having the individual included on the Committee and what they provide that is not currently available at BYU. Graduate Studies requires that you be very specific with your reasons.
2. This outside member is required to send a curriculum vita to the Graduate Program Advisor.
3. The Petition for Exception must be approved by the Graduate Coordinator, Department Chair and Dean of the College of Life Sciences before being sent to the Graduate Studies Office for final approval.
4. The Graduate Program Advisor will notify the graduate student when the petition has been approved or denied.

## **The Roles of the Graduate Student and the Graduate Committee Chair**

In most instances, graduate students (with assistance from the Committee Chair) are expected to originate and plan their own research projects that will be acceptable to their Advisory Committees. Students should periodically discuss their research with their Advisory Committees; however, most detailed problems should be worked out with their Committee Chair in advance. The Committee Chair will serve as the graduate student's mentor for research. Therefore, the Committee Chair is expected to work closely with the graduate students in all aspects of the proposed research and in the writing of the thesis or dissertation. In order to get the most of the mentored research experience, students should be respectful of their Committee Chair.

## The Roles of Advisory Committee Members

The Advisory Committees are typically chosen for their expertise in particular areas. Members of Advisory Committees are expected to provide technical advice and expertise to support the students' research. **Students should not ask for technical help from faculty members not on their Advisory Committees unless they first obtain permission from their Committee Chair.**

## PROGRAM OF STUDY

### Program of Study

The Program of Study is an online form within the Graduate Progress system that students fill out in order to plan all of the courses they will take to fulfill their degree requirements. The Program of Study constitutes a contract between the students and the university. It is a necessary step on the path toward graduation. This online form is available at <https://gradprogress.sim.byu.edu/> . Instructional videos can be viewed at [pws.byu.edu/graduate-student-resources](https://pws.byu.edu/graduate-student-resources).

### How to fill out a Program of Study

Log in to <https://gradprogress.sim.byu.edu/> , and click on the 'Program of Study' milestone in the 'My Academic Journey' section. The core course requirements (required courses for your major) and your thesis/dissertation courses will automatically appear in the Program Requirements section. You will select your elective classes (classes you select based on your research and career goals) by selecting the green "add new course" button at the bottom of the page.

On your Program of Study, list all classes that you plan on taking in your graduate program at BYU. After you decide on your classes, review them with your Committee Chair, Advisory Committee and obtain the necessary approvals in the online system. All Advisory Committee members and the Graduate Program Advisor must approve the Program of Study in the online system. A green checkmark will appear in the Program of Study milestone when it is completed and approved.

A document with the list of the graduate courses offered by the PWS Department as well as commonly taken classes in other departments can be obtained on the PWS Department website in the Graduate Resources section, Admissions Information under the Courses Offered tab. <https://pws.byu.edu/admissions>

*Note: You must have your Advisory Committee established before the system will allow you to send your Program of Study for approval.*



## **Program of Study Requirements**

1. Elective coursework requirements are determined by your Advisory Committee
2. Must include 30 hours (24 coursework and 6 thesis) for MS students
3. Must include 54 hours (36 coursework and 18 dissertation hours) for PhD student with no MS degree
4. PhD students with an MS degree: (18 coursework & seminar and 18 dissertation hours)
5. Must include specific course requirements outlined by each major

## **Due Date for Program of Study**

Master's degree students- the last day of classes your first semester

Doctoral degree students- the last day of classes your second semester

## **How to Change the Program of Study**

You can make changes to your program if they are authorized by your Advisory Committee. To make changes to your Program of Study, log into the Graduate Progress System, delete the course you would like to change, add the new course and resend your Program of Study to your Advisory Committee for approval.

## **Relationship Between your Program of Study and your Progress Report**

Your progress report compares your individual study list with the courses you have actually taken. It summarizes your progress in your program: classes completed, current registration, classes still needed, and current grade point average. In addition, the progress report alerts you and your advisors to possible problems with academic status, GPA, prerequisites needed, minimum registration requirements, time limits, and so forth. Your progress report is available on AIM through MyBYU.

## **Classes that can be Funded by Department Scholarships**

Any department scholarship funding you will receive will cover tuition only for program prerequisites and classes on your approved Program of Study form. Tuition for any additional courses (not on your approved Program of Study) must be funded from other sources.

## Credit-Hour Requirements

You are required to take two credits during the semester you begin and the semester you graduate (defend your thesis). You are required to complete a minimum of six credits per academic year (Fall semester through the next Summer term) otherwise, you will be dropped from the graduate program by the university.

- International Students must register for nine credit hours for both Fall and Winter Semesters.

## MINIMUM REGISTRATION

- To retain active status and to qualify for subsequent registration, graduate students must register for at least **six semester hours** each academic calendar year (i.e. Fall 2023 through Summer 2024).
- Minimum registration for at least two credit hours during any semester (if a student has already completed 6 hours during fall and winter semesters, registration during spring/summer terms will be optional).
- International Students must register for nine credit hours for both Fall and Winter Semesters.
- Doctoral students must satisfy a residency requirement of two consecutive semesters of at least six credit hours each (this can take place at any time during the students' doctoral experience).
- **Registration of two credit hours' minimum is required of all students during the semester in which the student begins and finishes their graduate program.**
- To qualify for work on campus the student must be registered for at least (2) credits in the semester they receive a Teaching or Research Assistantship (See Financial Assistance section for more information).

## PROSPECTUS OF RESEARCH

### What is a Prospectus?

The prospectus is a written proposal of planned research. A prospectus is intended to be a proposal to the student's graduate Advisory Committee and to the department of the research that will be undertaken for a master's thesis or doctoral dissertation. It is to explain the proposed research, the significance of that research and the resources needed to successfully accomplish the research. A good prospectus will include a well-defined research problem and a reasonable research methodology. It should persuade the graduate Advisory Committee that the proposed work is both feasible and appropriate in significance, approach, and scope to qualify as a master's/doctoral level work.

### What Should I Include in my Prospectus?

Specific content in your prospectus will be determined by your Committee Chair/Advisory Committee. Generally, the main sections of the prospectus will include:

- TITLE (must contain good "retrieval" words- key words used in any journal database searches)
- INTRODUCTION (must include justification and objectives)
- HYPOTHESIS (unless inappropriate for descriptive or natural history studies)
- METHODS (must include experimental design, description of study site, etc.)
- PERTINENT LITERATURE (must include sufficient references to assure Advisory Committee members that student is familiar with the proposed research area)
- ANTICIPATED COSTS (must include information which will alert the Advisory Committee members if any expensive equipment or supplies will be needed that are not already available and how such expenditures are to be met)

### How do I Submit my Prospectus?

Log in to the Graduate Progress System and select the 'Prospectus' milestone in the 'My Academic Journey' section. Type the title of your prospectus in the 'Dissertation Title' box and click save. Upload a PDF copy of your prospectus by clicking on the blue 'Upload Prospectus' box at the bottom of the page. A blue button will then appear under the 'Prospectus Approvals' section that states "send request to members who have not certified". By clicking that button, an email will be sent to your Advisory Committee informing them that your prospectus has been uploaded and is ready for review. A green checkmark will appear when all Advisory Committee Members have approved the prospectus.

Your prospectus must be submitted and approved in a meeting with your Advisory Committee before the end of your second semester for MS students and by the end of the fourth semester for PhD students.

### **What if my Research Changes?**

If the research emphasis changes more than in a minor way after a prospectus is approved, the student must submit a new approved prospectus to the PWS Department as soon as possible and no later than one semester before graduation.

## **EVALUATIONS**

### **Informal Evaluations**

At the beginning of a graduate student's time in their program, they should expect to meet frequently with their advisor, at least weekly and perhaps more often. Over time, meetings may become less frequent as the student becomes more capable and comfortable with research. Such meetings will constitute informational evaluations of a student's work and progress.

### **Formal Evaluations: Biannual Reviews**

Students are encouraged to complete their degree programs in a timely fashion. Toward this end, the Plant & Wildlife Sciences Department will formally monitor each graduate student's progress twice during the calendar year and evaluations should be turned in no later than the last day of classes in the Fall and Winter semesters. Students will be notified in writing of their progress once the evaluation is completed.

### **Scheduling Biannual Reviews**

It is the graduate student's responsibility to schedule and ensure that evaluations take place.

### **When do I Schedule my Biannual Review?**

Students must be evaluated twice a year and submit their biannual evaluation by the last day of classes in Fall and Winter Semesters. The University will terminate any student who does not complete (2) evaluations per school year.

### **How do I Submit my Biannual Review?**

Your Committee Chair/Advisor will submit the biannual review through an online form sent to them by the Graduate Program Advisor.

### **How will I be Evaluated?**

Each student is rated as making satisfactory, marginal, or unsatisfactory progress. Performance may be evaluated in the following areas:

- Course work on schedule
- Course work grades
- Program of study approved
- Prospectus approved
- Research progress
- Graduate comprehensive exam completion
- TA evaluation
- Thesis/Dissertation preparation
- 

### **What is the Criteria for a Marginal or an Unsatisfactory Biannual Review?**

**Marginal or Unsatisfactory Progress** may include the following:

- Failure to submit program of study form
- Failure to establish a graduate committee
- Registering for thesis hours when little or no work has been done
- Failure to submit an approved thesis/dissertation prospectus
- Minimal contact with chair or Advisory Committee members
- Prospectus or thesis/dissertation draft not approved
- Limited progress toward courses and requirements on Program of Study
- Poor performance in research

**Unsatisfactory progress** may include the following:

- Grade in a course falling below B-
- Failure to complete program of study form
- Failure to establish a graduate committee
- Failing a course
- Registering for thesis hours when little or no work has been done
- Failure to submit an approved thesis/dissertation prospectus
- Failure of comprehensive exams
- Minimal or no contact with chair or Advisory Committee members
- Prospectus or thesis/dissertation draft not approved
- Lacking progress toward courses and requirements on study list
- Poor performance in clinical/externship/applied experience
- Rated as marginal in previous review and has not remediated weak areas

- Failure to resolve any problems or fulfill any requirements indicated in a previous marginal or unsatisfactory review.
- Concerns about ethical or professional behavior
- Poor performance in research

If a student receives either a marginal or an unsatisfactory rating, the student's funding may be suspended. If a student receives two marginal or unsatisfactory ratings in succession (or a combination thereof) the department will:

1. Terminate the student's program at the conclusion of the semester **OR**
2. The student will be temporarily suspended from departmental TA/RA funding until any missing requirements are met.
3. Submit a petition to Graduate Studies making a convincing case that the student be given another semester to demonstrate satisfactory progress.



## **COMPREHENSIVE EXAMINATION (PHD)**

### **What is the Doctoral Comprehensive Exam?**

The purpose of the Doctoral Comprehensive Exam is to determine if the student has the base knowledge, intellectual capacity, and critical thinking skills to be a Doctor of Philosophy. PhD students do not become a PhD candidate until they have successfully passed their Graduate Comprehensive Exam.

### **Degree Status**

The PWS Department will grant doctoral students PhD candidacy status after successful completion of two years of coursework (with no grades below a B-) and passing the Graduate Comprehensive Exam.

### **When is the Doctoral Comprehensive Exam Taken?**

It is recommended for students to take the exam by the end of their sixth semester, but it is required by the end of the seventh semester. For example, if a student starts in Fall semester of 2023, they would be required to complete their Doctoral Comprehensive Exam no later than the last day of classes in Fall semester 2025. Students who pass with qualifications will have a year from the date the exam is taken to successfully complete all qualifications. Failure to complete qualifications before the deadline will result in termination from the graduate program. No student will be allowed to continue as a graduate student without successful completion of their Graduate Comprehensive Exam.

### **How Do I Schedule my Comprehensive Exam?**

Each student must make arrangements with their Advisory Committee to schedule their comprehensive examination.

*Note: It is the graduate student's responsibility to schedule the oral portion of the exam with their Advisory Committee upon completion of the written exams. The senior committee member, who is coordinating the exam, will distribute the completed written exam to all of the Advisory Committee and will be the one to officially administer the oral examination.*

## Procedure

The senior member of the student's advisory committee (i.e., longest in the PWS Department) who is not the committee chair will conduct the exam.

## Can the Graduate Comprehensive Exam be Taken Remotely?

No, all graduate students must be physically present at their Graduate Comprehensive Exam.

## What does the Comprehensive Exam Consist of?

The comprehensive exam has two components

1. Writing assignment
2. Oral examination

## How is Student Performance on the Exam Measured?

The committee may vote to "pass," "pass with qualification," "recess," or "fail" the student.

- **Pass** (score 4 or 5)
- **Pass with Qualifications** (score of 3): Observed weakness in a student's academic preparation, writing abilities, or critical thinking may result in an Advisory Committee's recommendation for the student to:
  - Complete additional coursework
  - Complete additional readings in a topic area
  - Provide further writing exercises
- **Recess:** It is possible to "stop" the exam at any point if two or more examiners vote to recess. This permits the candidate to reschedule the exam a second time, but the recessed exam must be completed before the end of the seventh semester. If the student does not pass the exam the second attempt, the student will be terminated from the program.
- **Fail:** (score 2 or 1) if two or more examiners vote to fail, the examination is failed and the student is terminated.

**Note:** Any issue(s) may be revisited at the Advisory Committee's discretion. See University guidelines for more specifics.

## PART 1: WRITING ASSIGNMENT

### What will the Written Exam Consist of?

The student's Advisory Committee will determine the content of the written examination and will also determine a specified time period (time period can be one to six weeks) for the student to complete the written portion of the comprehensive exam. Advisory Committees may also determine the degree of outside help a student may have to complete the written assignment (i.e., whether the writing assignment is open or closed book, whether they may consult with other faculty members or students, etc.). The writing assignment **can** include any of the following:

- **Concept paper**
  - An in-depth discussion paper of a pertinent concept(s) that the Advisory Committee may deem as relevant to the student's education.
- **Formal literature review**
  - A thorough review of literature of the major theme(s) of the student's dissertation research in which the student has the flexibility to more fully develop ideas and to consider alternative or controversial points-of-view. This assignment permits the student to demonstrate an in-depth mastery and synthesis of the relevant literature.
- **Proposal for additional study**
  - The Advisory Committee may have the student design a study and write a formal proposal for that study.
- **Written response to a group of comprehensive questions**
  - Obtained from the Advisory Committee
  - These may be a list of specific questions from coursework. Advisory Committees, however, may wish to ask questions that have no right or wrong answers, but probe the student's ability to think deeply about complex topics/issues.

**Note:** The written portion of the exam must be the student's own independent writing.

## PART 2: ORAL EXAM

### What will the Oral Exam Consist of?

The oral examination will provide an opportunity for the Advisory Committee to probe in greater depth any issues they deem relevant for an assessment of the student's academic potential for a PhD. This oral exam may include coverage of previous coursework. The oral exam may also include discussion of weaknesses observed in the writing assignment. It should assess the students' background and breadth of knowledge in their field of study. The exam should also test the graduate student's ability to critically think about complex topics and ideas.

### What if I Fail a Portion of the Exam?

Observed weaknesses in a student's academic preparation, writing abilities, or critical thinking may result in an Advisory Committee's recommendation for the student to:

- Complete additional coursework
- Complete additional readings in a topic area
- Provide further writing exercises
- Be terminated as a PhD student in the Department of Plant & Wildlife Sciences

**Note:** Any issue(s) may be revisited at the Advisory Committee's discretion. See University guidelines for more specifics.

### Exam Submission

Upon satisfactory completion of the oral examination, the Committee should submit the Doctoral Comprehensive Examination Evaluation form to the Department Graduate Program Advisor. <https://pws.byu.edu/graduate-student-resources>

## THESIS/DISSERTATION REQUIREMENT OPTIONS

All theses, dissertation, and special projects will be submitted as ETDs to the library.

Graduate students in Plant & Wildlife Sciences may fulfill the thesis/dissertation requirements by completing one of the following options:

- A regular thesis/dissertation written in strict compliance with the guidelines found on our PWS website under Grad Resources, graduate student resources.

<https://pws.byu.edu/0000017f-9491-d0d3-ab7f-bcf39b920000/pws-thesis-template>

<https://pws.byu.edu/0000017f-9492-d0d3-ab7f-bcf2963c0001/pws-dissertation-template>

- Published article(s) in lieu of a regular thesis or dissertation. A minimum of one published article in lieu of a thesis and minimum of three published articles in lieu of a dissertation is required.
- In cases of co-authorship, the student's name must appear as senior author on at least one major paper in either degree level, and the work submitted must be recognized as a "full-length journal article" rather than a communication, preliminary note, abstract, or letter to the editor. The journal selected must be one in which the major works of the respective field are regularly published and must be refereed.
  - The work undertaken and the length of time required to complete the study should not be less than that ordinarily expected for a thesis or dissertation.
- An appropriate number of manuscripts accepted for publication, submitted for publication, or prepared for submission to such a journal as described above. Submitted (non-published) and non-submitted articles are subject to college formatting requirements.
- Any combination of requirements listed above that is acceptable to all members of the Advisory Committee and the Department Chair.

## ORAL DEFENSE OF THESIS/DISSERTATION RESEARCH

Each student must defend their thesis/dissertation before the Advisory Committee in a public seminar. Although the presentation of thesis is open to the public, only members of the Advisory Committee may vote on the student's performance.

## Oral Defense Part One

The first part of the examination will be a presentation of research and will be open to all interested individuals.

## Oral Defense Part Two

The second part will be an examination of research and the thesis/dissertation by the Advisory Committee.

### How do I get my Advisory Committee to Approve my Thesis/Dissertation so I can hold my Final Defense?

Upload a PDF copy of your thesis/dissertation in the Graduate Progress System under the 'Ready for Defense' milestone and put the title of your thesis/dissertation in the thesis/dissertation title box.

A blue button will then appear asking you to send your dissertation to your Advisory Committee to certify that you are ready to defend. By clicking that button, your Advisory Committee will receive an email notification that your thesis/dissertation is ready to be reviewed. Once all Advisory Committee members have approved of your thesis/dissertation, a green checkmark will appear in the 'Ready for Defense' milestone. The system will not allow you to schedule your defense until the green checkmark appears in the 'Ready for Defense' milestone.

**Note:** University policy states that **you must give your Advisory Committee at least two weeks to review your thesis** prior to scheduling your defense.

### How do I Schedule my Final Defense

Go to <https://gradprogress.sim.byu.edu/> and click on the 'Defense' milestone. Write in the date, time, and location of your defense before scheduling an appointment with the Graduate Program Advisor. Your final defense will not officially be approved until the Graduate Program Advisor approves your final defense. The scheduling option will not appear in the Graduate Progress System until the Advisory Committee has signed off that they have received your thesis/dissertation.

**Note:** Department policy states that you must **schedule your defense at least one week prior to holding your defense**. It is the graduate student's responsibility to find the date and time that their entire Advisory Committee are available to hold the final defense.



### Where will the Results of my Defense be Listed?

Any qualifications from your defense will be listed under the Defense milestone in the Graduate Progress System. A green checkmark will appear in the Defense milestone of the Graduate Progress System when the defense has been passed.

## FORMATTING AND SUBMISSION OF FINAL ETD

### Formatting Thesis/Dissertation for Submission

Students must submit their formatted thesis/dissertation electronically in the Graduate Progress system. The ETD Website, <https://gradprogress.sim.byu.edu/resources> has information on the electronic submission requirements and formatting guidelines. A template with the required PWS Department formatting guidelines as well as comprehensive tutorials to help prepare the electronic document are provided on the PWS Department website under the Graduate Student Resources section (<https://pws.byu.edu/graduate-student-resources>).

**The final responsibility for compliance** with all Departmental, College, and University regulations for thesis/dissertation preparation **rests solely with the graduate student.**

### Thesis/Dissertation Template

The Plant & Wildlife Sciences Department has a formatted thesis/dissertation template that is available on the department website or from the Graduate Program Advisor.

### ETD Classes

ETD Classes are available in the Harold B. Lee Library. For more detailed information on the classes, visit their website: <https://lib.byu.edu/services/software-training/> (Electronic Theses and Dissertation is the course name).

### How do I Submit my Thesis/Dissertation for Final Submission

Go to the 'ETD milestone' in the Graduate Progress system. Type in your thesis/dissertation title in the thesis/dissertation title box and click save. Fill out the online form that is under the 'Publication Details' section of the page. After the online form is complete, click on the 'Document' tab next to the 'Publication Details page'. Upload your formatted PDF document in the box provided.

After you upload your PDF document, the system will automatically notify Graduate Studies that your thesis/dissertation is in the queue for approval. Graduate Studies will look at the first four pages to make sure they comply with the university standards. If approved, the system will automatically send an e-mail to the PWS Department Graduate Program Advisor and subsequently the College of Life Science asking them to approve your thesis/dissertation in the system. Once it is approved by both the PWS Department and the College of Life Sciences, a more thorough review will be done at the Graduate Studies level.

### **What Release Availability Should I Select?**

Unless all of the chapters in the thesis/dissertation have already been published in a scholarly journal, it is recommended that you select the “Delay the release of the entire work for one year, for publication purpose”.

### **What is the Orcid ID and how do I get one?**

An Orcid ID is a digital identifier that is assigned to a researcher to distinguish them from other researchers. Visit [orcid.org](https://orcid.org) for more information about obtaining an Orcid ID.

### **How will I know when my Thesis/Dissertation has been Approved?**

In the ETD milestone of the Graduate Progress System, there is a box labeled Publishing Approvals that will give you the status of your thesis/dissertation. Your thesis/dissertation will need to be approved by Graduate Studies, the PWS Department, as well as the College of Life Sciences. A green checkmark will appear in the ETD milestone when this is complete.

## **ADDITIONAL GRADUATION REQUIREMENTS**

### **Department Exit Survey**

All graduate students are required to submit an online department Exit Survey that is available on our website. <https://pws.byu.edu/ms-phd-exit-form>

## **Additional Requirements for Wildlife and Wildlands Conservation PhD Students:**

### **ProQuest Submission**

The Graduate Progress online system will automatically submit your dissertation to ProQuest based on the release option selected in the ETD milestone. This puts your work into a national database of dissertations, of which BYU has been a long-time participant.

### **Survey of Earned Doctorates (SED)**

This survey is required of all BYU doctoral students before graduation. The Survey of Earned Doctorates is completed online. Additional information about completing this requirement can be found at: <https://gradprogress.sim.byu.edu/resources>

# Graduation Deadlines

## Fall 2023

- 9/15: apply for graduation
- 11/14: submit to committee & schedule defense
- 11/28: hold defense
- 12/7: upload ETD with final edits
- 12/14: receive all approvals on ETD section in GradProg & complete all exit surveys

## Winter 2024

- 1/26: apply for graduation
- 3/25: submit to committee & schedule defense
- 4/8: hold defense
- 4/17: upload ETD with final edits
- 4/24: receive all approvals on ETD section in GradProg & complete all exit surveys

\*complete task on or before the date

## INTERRUPTED GRADUATE PROGRAM

For students who are **admitted and enrolled** for at least one semester, who wish to interrupt their graduate program at BYU and not maintain six credit hours a year continuous registration, the following stipulations apply:

- If on LDS mission: Prior to leaving, complete University Form ADV #5 (Leave of Absence) <https://gradstudies.prod.brigham-young.psdops.com/00000172-80aa-db0b-a773-b6ef4e150000/adv-form-5-pdf>. Guaranteed reentry immediately after mission release if student has been registered for at least 1 semester of graduate school at BYU before leaving on mission. For those who are NOT admitted and enrolled for at least one semester, they will need to apply for graduate school after their mission is complete (There is no deferment of admission for graduate students).
- If not on LDS mission: If for some reason students need to leave BYU for an indefinite time period during the course of their graduate program and do not anticipate needing the services of the University or their Advisory Committees during that period of time, they must be terminated as a student with Form ADV7 Departmental Request to Expire (Terminate) Graduate Status. Upon return, a student must complete University GS Form #6 (Application to Resume Graduate Study) and GS Form #6a (Reapplication Honor Code Commitment and Ecclesiastical Endorsement) which are available from the Department Graduate Program Advisor or online at <https://graduatestudies.byu.edu/forms/forms.php> **A fee of \$600.00 is required with the application.**
- Students are ineligible for readmission when more than three (3) years have passed since their last semester of graduate registration. In such cases, students must complete a new application and be considered for admission with a new applicant pool.
- Readmission does not extend the time limit for completion of the degree (five years from the first admittance to a master's program, eight years from the first admittance to a doctoral program).
- The student may continue on the same research project (provided that project is still available) and with the support of the same Committee Chair and the same Advisory Committee (provided those individuals are still at the University and are willing to continue with the student).
- Irrespective of the circumstances involved, only one such form (Application to Resume Graduate Study) will be approved for any one graduate student during their graduate program time at BYU.

**Note:** No financial support is guaranteed for graduate students returning under this option unless the Department so specifies. Additional stipulations may be imposed on the student when they return; however, these stipulations will be clearly specified, in writing, at the time the form is evaluated by the Department.

## **FINANCIAL ASSISTANCE**

Financial assistance for all graduate students is contingent upon satisfactory progress as evaluated by the Graduate Committee.

### **On-Campus Employment**

- Graduate students are required to take a minimum of two credit hours during Fall and Winter semesters in order to be employed by BYU (this includes both TA and RA contracts). International students must take nine credit hours during Fall and Winter to be employed.
- Students who are enrolled for Winter semester and who will also be enrolled for the following Fall semester are eligible to work on campus during Spring and Summer terms without taking classes during either term. However, any student employee who is not enrolled in at least one credit hour during Spring term and during Summer term must pay the FICA tax during that term. International students are exempt from the FICA tax.

### **Outside Employment**

The department expectation for a full-time, degree-seeking graduate student is that the pursuit of such a degree should be the primary objective of that student. The department in turn makes a considerable investment in each student and their success. Hence, the department strongly discourages students from seeking or obtaining outside employment as a full-time student.

Working outside the department can jeopardize department support in the form of teaching or research assistantships. While there may be circumstances that necessitate employment outside the department, ongoing TA or RA support will require clearance from your committee chair.

### **Student Loans**

The university makes short-term loans available and has information about government-approved loans. No loans are available through the department. Information about student loans can be found by contacting BYU Financial Aid located in D-155 ASB.

To defer loan payments, students will need proof of full-time student status from BYU Graduate Studies. To qualify, students who have completed their coursework will need to be registered for a minimum of two credit hours and working on research full time. Students must fill out and return ADV Form 2a, "Request for Graduate Full-time Status," to BYU Graduate Studies. This form can be found at the Graduate Studies webpage <https://gradstudies.byu.edu/page/form-list>.

## TA/RA POSITIONS

The graduate program in the Department of Plant & Wildlife Sciences is a research-oriented degree program. As such, it strives to provide graduate students with the greatest possibility for productive, publishable research. Teaching Assistantships (TA) or Research Assistantships (RA) positions are determined by a students' advisor and/or Advisory Committee. Guidelines for assigning Plant & Wildlife Sciences graduate student TA's and RA's are as follows:

- MS students: 20-hour per week assistantships are offered for three semesters per year, for a two-year period. These assistantships are contingent on positive evaluations in teaching and research responsibilities.
- PhD students: 20-hour per week assistantships are offered for three semesters per year, for a four-year period. These assistantships are contingent on positive evaluation in teaching and research responsibilities.
- There is an expectation that graduate teaching assistants will put in 20-hours per week helping the professor with just the course you are assigned to as a TA. Research hours do not count towards the 20 TA hours per week.
- If for any reason a contract assistantship is submitted late to the Employment Office in a given semester (at the fault of the student), the student will be fined \$100. That rate may change if the Employment Office increases fines for late contracts and late 1-9's.
- As defined by the Affordable Care Act (ACA hours), students may not exceed 1000 hours within 365 days of their hire.



## GRADUATE STUDENT SCHOLARSHIPS

### Tuition Only Scholarship

Partial tuition assistance from the department is available to all graduate students. Students do not need to fill out an application to receive this assistance. Qualifications are as follows:

- Tuition awards are predicated on acceptable student progress as defined in the Graduate Student Handbook.
- Tuition Award candidates should have and maintain a minimum 3.0 GPA.
- Tuition awards are guaranteed for only the first two years of a Master's, and five years for a PhD candidate **(Fall and Winter semesters only)** and are dependent on satisfactory academic progress.

### PWS Department Graduate Student Exception Scholarship

Graduate students are eligible for academic scholarships through the Department of Plant & Wildlife Sciences only. Please submit your completed application no later than May 1 by 11:59pm. By submitting this single scholarship application, graduate students will be considered for all scholarships that they are eligible for. Students must be a graduate student in the PWS Department and be in good standing to be eligible for scholarships. Students who apply for the PWS Graduate Exception Scholarship but are not in good standing with the department will have their scholarship application withdrawn.

**Note:** Graduate students are not eligible for scholarships in the university online system.

## UNIVERSITY SPONSORED AWARDS

### Graduate Professional Presentation Awards

Graduate students presenting original research at conferences are eligible to receive a Professional Presentation Award (PPA) of \$400 from Graduate Studies. PPAs are awarded two times each year and are distributed within two months after the application deadline. The application deadline is in the middle of an award period which allows students to apply who have either already presented their research or who are planning to within the specified time period. Approximately one-third of the applicants receive an award. Visit <https://gradstudies.byu.edu/gss/professional-presentation-award> for more information about applying for a PPA.

### Three Minute Thesis

The Three Minute Thesis Competition (3MT) is an international research competition. The Department of Plant & Wildlife Sciences holds an initial competition in January, with the winner advancing to the college level. The winner of the college level will advance to the university level with awards ranging from \$1,000 to \$5,000.

## OPTIONAL GRADUATE STUDENT CLUBS

### BYU Graduate Student Society (GSS)

GSS hosts several events throughout the year, including barbeques, workshops, the Faith and Scholarship Symposium, the Grad Expo and the Three Minute Thesis Competition (3MT). More information can be found at [gss.byu.edu](http://gss.byu.edu) or [facebook.com/byugss](https://facebook.com/byugss).

### BYU Life Sciences Graduate Student Club (LSGSC)

A club of graduate students by graduate students. Goals are to supplement existing graduate programs with activities that encourage career networking/job skills, inter-departmental collaborations, and increase graduate student social opportunities. Meetings are held monthly and include career panels, resume/LinkedIn tutorials, mental health advice and science writing journal clubs. Additional information about the LSGSC is found on their Facebook page [facebook.com/byulsgsc](https://facebook.com/byulsgsc).

## GRADUATE STUDENT RESEARCH CONCLAVE

The Plant & Wildlife Sciences Department sponsor a graduate research conclave every November that is open to all graduate students in the PWS Department. The conclave is broken up into two sessions, the poster presentation session and the oral presentation session. Participants may only compete in one of the two sessions.

Graduate students are judged by the PWS faculty members and will receive written feedback from each judge. **Cash prizes are awarded** to each participant and vary depending on the award received. Graduate students are encouraged to participate and improve their research presentation skills.

## GRADUATE STUDENT TRAVEL FUNDS

To qualify for consideration of travel funding, students must:

- Be current on academic progress (see “Requirements for Degrees”, and “Student Progress”) and working toward timely completion of their degrees as assessed by the Graduate Committee.
- Give a talk or present a poster at the meeting (title and abstract must accompany travel funds request).
- Submit a travel pre-approval budget to the Department including transportation, registration, housing, and other expenses.
- Students must submit a “Presentation/Competition funding application - Graduates” form with an abstract attached. This must be signed online by the student and then it will be routed to the Committee Chair, and the Department Chair (or the Graduate Coordinator). This must be submitted with the Travel Pre-Approval. Forms can be on the PWS website. <https://pws.byu.edu/travel-and-financial-forms>
- The “Travel Pre-Approval” Form must be submitted 10 days before departure (for International travel 30 days). This is an estimated budget and must be signed by the traveler. The form must be filled out for insurance coverage.
  - To receive reimbursement, students must also turn in a “Travel Expense Report” form with all receipts within 15 days of arrival home.

**Note:** \$900 of department funds are available to each student per calendar year for travel related expenses. These funds are designated for graduate student travel to scientific meetings where the student is giving a scientific presentation.

## GRADUATE STUDENT ACADEMIC GRIEVANCE POLICY

Please see the Graduate Student Academic Grievance Procedure on the Graduate Studies webpage under the Faculty and Staff tab, Policy Handbook, Chapter 14 <https://gradstudies.byu.edu/0000017d-a6ee-dc8a-a37d-e7eeabda0001/graduate-studies-policy-handbook-updated-04-11-21>.

## OFFICE ALLOCATION

The Department has limited office space. The University defined priorities for assigning office space are: First faculty and staff; second visiting faculty, post docs, research associates, and part-time faculty; and third graduate students. The Department has dedicated a limited amount of department office space for category 2 and 3 individuals (available office space clearly falls short of the need). Assignment of office space to visiting faculty, post docs, research associates, part-time faculty, and graduate students is administered exclusively through the Department Chair. Individual faculty members do not control dedicated Department office space; therefore, all transactions regarding this space must be directed through the Department Chair's office. However, the Department Graduate Committee will work closely with the Department Chair to accommodate the office space needs of all graduate students. If a graduate student needs office space that cannot be accommodated by their Graduate Committee Chair, they should see the department office manager.

## BYU COUNSELING AND PSYCHOLOGICAL SERVICES

College has challenges at all levels. There are resources to help! **Counseling and Psychological Services** (CAPS) offers individual, group, and couples' treatment (or provides referrals to other agencies which provide similar services) for developmental, emotional, or interpersonal difficulties that arise during the educational process.

**CAPS** is located at 1500 WSC and can be contacted at [caps.byu.edu](http://caps.byu.edu) and 801.422.3035. We are here to help!

## APPENDIX

### GUIDELINES FOR DEPARTMENTAL USE OF RESEARCH FACILITIES

Laboratory, greenhouse, environmental chambers, field research, and computer facilities are provided by the University to the Department to achieve teaching and research objectives as approved by the College of Life Sciences. Equipment and supplies are purchased from either University and/or private grants, and the Department is accountable to these agencies for prudent and efficient use of these facilities.

#### Laboratories

1. Use of laboratory space, supplies, and equipment is under the direction of a faculty supervisor or your Committee Chair.
2. Laboratory facilities are for Department approved projects and not for personal use.
3. DO NOT BORROW ANYTHING without permission from the person responsible.
4. IF YOU GET IT DIRTY, CLEAN IT UP. Each person is responsible for cleaning up throughout the course of and after an experiment is completed.
5. IF YOU GET IT OUT, PUT IT BACK.
6. IF YOU BREAK IT, GET IT FIXED. Do not leave it for the next person.
7. OBTAIN PROPER TRAINING BEFORE USING EQUIPMENT. To help prevent breakage of expensive equipment you MUST know how to run it before you start. Random experimentation may be costly.
8. LEARN AND PRACTICE LABORATORY SAFETY PROCEDURES.
9. USE PROPER MAINTENANCE PROCEDURES AND TECHNIQUES ON ALL EQUIPMENT.
10. DO NO LOAN EQUIPMENT THAT IS NOT UNDER YOUR SUPERVISION.
11. LOCK ALL DOORS AND TURN OFF LIGHTS WHEN YOU LEAVE THE LABORATORY! Be cautious with items that have high theft risk.
12. PROTECTIVE GOGGLES OR GLASSES MUST BE WORN IN LABORATORIES WHERE CHEMICALS ARE USED.
13. EATING AND CHILDREN ARE NOT PERMITTED IN LABORATORIES. (THIS IS A UNIVERSITY POLICY).
14. HELP THOSE AROUND YOU TO ALSO FOLLOW THESE GUIDELINES.

## Greenhouse

1. Use of the greenhouse and supplies are under the jurisdiction of the Department and must be cleared with our Greenhouse Manager, or the person to whom they have delegated management responsibilities. Greenhouse Manager: 801-422-6209.
2. **PLACE EQUIPMENT BACK IN THEIR PROPER STORAGE AREAS** after you have completed an experiment.
3. **CLEAN UP THE AREA YOU HAVE USED!** This cleanup should be done during the course of the experiment, as well as after it is completed. Good housekeeping is a must in successful research work.
4. **ADVISE THE GREENHOUSE MANAGER IN WRITING** if watering is to be handled by the greenhouse staff.
5. **ADVISE THE GREENHOUSE MANAGER OF HOW LONG YOU WILL BE USING THE AREA.**

## Computer Facilities

It is the responsibility of each student to learn how to operate the computers and auxiliary equipment provided in the computer labs. **THIS MEANS THAT YOU MUST TAKE TIME TO READ THE INSTRUCTION MANUALS OR RECEIVE ADEQUATE INSTRUCTION.**

## FACILITIES AVAILABLE

### Laboratories and Equipment in the Department

Laboratories and associated equipment are available within the Department. Although they are usually set up for use in the research program of a specific professor, they may be available for general use through consultation with faculty or staff members in charge of each unit.

In addition, arrangements may be made with other departments on campus for special studies that require equipment unavailable within our department. Arrangement for use of these facilities will be coordinated through the student's Committee Chair.

### Greenhouse and Farm Facilities

Greenhouse facilities, environmental chambers, and horticultural gardens are also available for graduate research programs. The BYU Spanish Fork Agriculture Station is available for field-orientated research programs. Research conducted off campus on personal or corporate farms, USDA-ARS, or USDA- Forest Service is also possible under special circumstances. Clearance from responsible faculty or administrators for use of these facilities will be arranged in advance in consultation with the student's Committee Chair.

## Laboratory Safety and Etiquette

Dr. Tom Smith chairs the Departmental Safety Committee. Questions about safety and appropriate laboratory procedures should be directed to your Committee Chair, or to Dr. Tom Smith, 5050 LSB, 801-422-2151. A notebook containing the **Materials Safety Data Sheets (MSDS)** is located in the Environmental Analysis Laboratory and the Genetics Laboratory. Be sure you are familiar with the location of these notebooks. Students who work in laboratories are required to attend both Departmental and University safety meetings. The University **HAZCOM** program provides instructions in safe laboratory procedures.

Food and drink may not be stored or consumed in laboratories. Food waste and wrappers disposed of in lab waste containers are considered evidence of food consumption in the laboratory. Infants and young children are not allowed to enter laboratories.

Chemicals, glassware, and equipment used in graduate research are to be provided by the Committee Chair. Do not use laboratory supplies or equipment located in other laboratories without permission. Do not disturb chemicals or glassware on bench tops that may be in current use by others. These policies also apply to the use of materials and equipment and supplies in the Environmental Analysis Laboratory. Permission and instruction to use equipment and supplies in the EAL labs should be through Dr. Bryan Hopkins (5117 LSB).

All faculty, undergraduate, and graduate students are required to maintain clean workspaces on bench tops, in the greenhouse, in the growth chambers and on the farms. When experiments are completed, clean up the area. **Do not leave pots or plant materials in the growth chambers or greenhouse when experiments are completed. Glassware must be washed, dried and stored promptly.**

All experiments conducted in the greenhouse need to be reviewed by the Greenhouse Committee. The Greenhouse Coordinator and the students maintaining the greenhouse need to know to whom the experiment belongs, if watering is required, and when the experiment will be completed. Pots and plant material left unattended will be thrown out!

To schedule research conducted in any of the growth chambers please contact the professor/faculty member in charge of the lab.