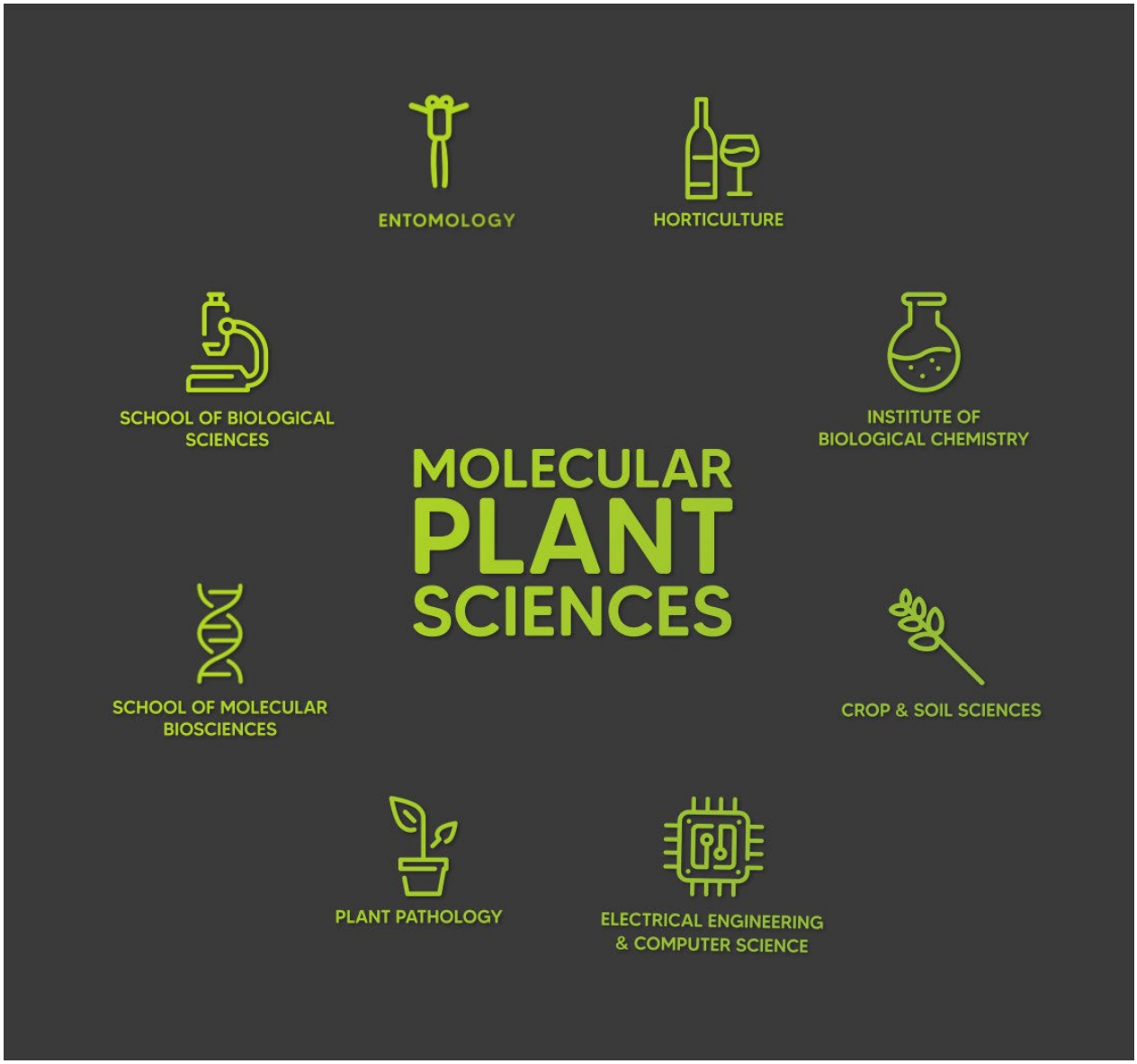
GRADUATE STUDENT HANDBOOK

2022-2023



PHD PROGRAM

MOLECULAR PLANT SCIENCES

Molecular Plant Sciences

Graduate Program

2022-2023

Graduate Student Handbook

Contents

See http://registrar.wsu.edu/academic-calendar/ for the full WSU academic calendar.

PROGRAM DIRECTORY

Washington State University
Molecular Plant Sciences Graduate Program
P.O. Box 641030
Pullman, WA 99164-1030
Campus Mail Code: 1030

Molecular Plant Sciences Graduate Program

Alec Brown MPS Academic Coordinator French Administration Building 324 509-335-7619 Alec.brown@wsu.edu	Orientation, academic matters (scheduling, changes, errors, deadlines, advising), seminar series, all things MPS
Michael Neff, MPS Director Johnson 387 509-335-7705 mmneff@wsu.edu	Orientation, first-semester class scheduling, rotations, academic matters, all things MPS
Hanjo Hellmann, MPS Assistant Director Abelson 435A 509-335-2762 hellmann@wsu.edu	Orientation, first-semester class scheduling, rotations, academic matters, all things MPS
Mayra Young or Joe Merrill French Administration Building 324 509-335-6424 Mayra.young@wsu.edu or joem@wsu.edu	Financial assistance
Lisa Gloss, Dean of Graduate School French Administration Building 324 509-335-6424 lmngloss@wsu.edu	Dean of the Graduate School
Your Advisor	Classes, proposals, program of study, lab work
Your Thesis Committee	Proposals, program of study, scheduling exams

Department of Crop and Soil Sciences

Deb Marsh Academic Coordinator Johnson Hall 125 509-335-2615 marshdj@wsu.edu	Mary Lou Bricker Finance/Budget Coordinator Johnson Hall 115 509-335-0584 m.bricker@wsu.edu

Department of Horticulture

Deb Marsh Academic Coordinator Johnson Hall 131 509-335-2615 marshdj@wsu.edu	Jill Staab Student Services Coordinator Johnson 131 509-335-9503 lorie@wsu.edu

Institute of Biological Chemistry

Jeff Bowman Administrative Manager Plant Sciences Building 101D 509-335-8383 milllerhm@wsu.edu	Teresa Beckvold Principal Assistant Plant Sciences Building 101B 509-335-8382 teresa.beckvold@wsu.edu

Department of Plant Pathology

Lisa Lujan Academic Coordinator Johnson Hall 131 509-335-9542 llujan@wsu.edu	Tammy Cunningham Administrative Manager Johnson Hall 345 509-335-4852 t.cunningham@wsu.edu

School of Biological Sciences

Janice Raykovich Academic Coordinator/Advisor 509-335-2300 janice.raykovich@wsu.edu	Kiersten Oliver Administrative Manager Abelson Hall 305A 509-335-1801 kiersten.stubbers@wsu.edu

School of Electrical Engineering and Computer Sciences

Jessica Cross Graduate Coordinator/Advisor EME 303 509-335-6636 j.cross@wsu.edu	Gwen Miller Administrative Manager EME 102E 509-335-6604 gwen.kyllo@wsu.edu

School of Molecular Biosciences

Tami Breske Academic Coordinator BLS 102 509-335-4318 tamara.breske@wsu.edu	Laurilee Kramer Administrative Manager BLS 202E 509-335-1553 lkramer@wsu.edu

FACULTY DIRECTORY

Because Molecular Plant Sciences in an interdisciplinary program, all faculty members are part of one or more of the following departments – Crop and Soil Sciences (CSS), Electrical Engineering and Computer Sciences (EECS), Horticulture and Landscape Architecture (Hort), the Institute of Biological Chemistry (IBC), Plath Pathology (Pl Path), the School of Molecular Biosciences (SMB), and the School of Biological Sciences (SBS).

Name and contact information	**Area of research**
Laura Bartley IBC, Plant Sciences Building 273 509-335-7211 laura.bartley@wsu.edu	Molecular genetics, systems biology, and biochemistry to develop and test hypotheses of grass-diverged aspects of cell wall content biosynthesis and regulation
Philip Bates IBC, Plant Sciences Building 243 509-335-0553 phil_bates@wsu.edu	Biochemistry and metabolism of plant oils and membrane lipids, Lipid metabolic flux, Engineering plant oils for increased nutrition or chemical feedstocks, and biofuels.
Blauer, Jacob HORT, Johnson Hall (509)-335-6647 jblauer@wsu.edu	Potato plant physiology, both in-field and postharvest, and the impact and interactions of biochemistry and molecular biology on yield, postharvest quality, and grower and industry practices.
John Browse IBC, Plant Sciences Building 241 509-335-2293 jab@wsu.edu	Lipid and membrane biochemistry; pathways and regulation of lipid synthesis and membrane formation in higher plants; chilling and freezing tolerance in plant
Bob Brueggeman CSS, Johnson 215 509-335-5272 bob.brueggeman@wsu.edu	Development of malt, food, and feed varieties with high quality and yield utilizing molecular genetics, genomics, and functional analysis tools to explore underlying biotic and abiotic stress resistances in barley
Ian Burke CSS, Johnson 163 509-335-2858 icburke@wsu.edu	Herbicide biochemistry, physiology, and fate; physiological and genetic bases for herbicide resistance in weedy plants
Jeremiah Busch SBS, Eastlick 387 509-335-1246 jwbusch@wsu.edu	The evolution of self-incompatibility mechanisms and plant population genetics
Kimberly Garland-Campbell CSS/USDA, Johnson 379 509-335-0582 kgcamp@wsu.edu	Wheat breeding and genetics, improving resistance to biotic and abiotic stress, quantitative genetics to describe genotype by environment interactions
Arron Carter CSS, Johnson 383 509-335-6198 ahcarter@wsu.edu	Winter wheat breeding and genetics, breeding improved wheat varieties, high-yield, disease resistant.
Weidong Chen USDA-ARCS, Vogel 227 509-335-9178 w-chen@wsu.edu	Interactions between legume hosts and fungal pathogens, molecular mechanisms of fungal pathogenesis, fungal effectors that mediate host response to infection

Asaph Cousins SBS, Abelson 406BA 509-335-7218 acousins@wsu.edu	Plant metabolism and physiology; plant energy metabolism; carbon and oxygen isotope exchange in plants
David Crowder Entomology, 166 FSNH 509-335-7965 dcrowder@wsu.edu	Understanding how farming practices, land-use, and abiotic conditions impact insect communities and plant interactions

Stephen Ficklin Hort, Johnson 158 509-335-4295 stephen.ficklin@wsu.edu	System Genetics
Marin L. Friesen Pl-Path, Johnson 319/321 509-335-5805 m.friesen@wsu.edu	Biological nitrogen-fixation, evolutionary ecology, population genomics, mathematical modeling
David Gang IBC, Plant Sciences Building 111B 509-335-0550 gangd@wsu.edu	Use and development of metabolomic, proteomic and transcriptomic tools to investigate the structure, regulation and control of metabolism in individual cell types such as trichomes and specialized organs such as plant rhizomes
Kulvinder Gill CSS 509-335-4666 ksgill@wsu.edu	Molecular basis of chromosome pairing control; genome organization and amplification; distribution of genes and recombination; characterization of agronomically important traits
Cynthia Gleason Pl Path, Plant Sciences Building 509-335-3742 cynthia.gleason@wsu.edu	Plant parasitic nematodes, root-know nematodes, interactions with host plants
Hanjo Hellmann SBS, Abelson 435A 509- 335-2762 hellmann@wsu.edu	The ubiquitin proteasome pathway; vitamin B6 biosynthesis
Scot Hulbert Pl Path, Johnson 307 509-335-3722 scot_hulbert@wsu.edu	Molecular genetics and evolution of the interactions between pathogens and plants
Michael Kahn IBC, Plant Sciences Building 343 509-335-8327 kahn@wsu.edu	Nitrogen fixation; interactions between plant and bacterial metabolism to support symbiotic nitrogen fixation
Ananth Kalyanaraman EECS, EME 237 509-335-6760 anath@wsu.edu	Computational biology and bioinformatics; high-performance computing; combinatorial pattern matching

Chulhee Kang SMB, Fulmer 264 509-335-1409 chkang@wsu.edu	Cellular calcium regulation mechanism, Bioremediation of the major organic pollutants, UV-Damaged DNA and its Repair mechanism

Helmut Kirchhoff IBC, Plant Sciences Building 283 509-335-3304 kirchhh@wsu.edu	Plant physiology, photosynthesis, biomembranes, macromolecular crowding, and stress physiology
Michael Knoblauch SBS, Abelson 318 509-335-3052 knoblauch@wsu.edu	Cell biology and the physiology of plant tissues, especially the phloem
N. Richard Knowles Hort, Johnson 43 509- 335-3451 rknowles@wsu.edu	Potato agronomy, physiology & variety development; postharvest physiology; oxidative stress & associated effects on intermediary metabolism
B. Mark Lange IBC, Plant Sciences Building 373 509-335-3794 lange-m@wsu.edu	Use and development of tools for the integration of post-genomic technologies (microarrays, proteomics, metabolite profiling) to study the global regulation of metabolic pathways; particular interest in isoprenoid metabolism
Norman Lewis IBC, Clark 467 509-335-2682 lewisn@wsu.edu	Biochemistry of plant phenolics; biochemistry of plant cell-wall synthesis and unique plant constituents; effects of gravity on metabolic pathways in plants
Andrew McCubbin SBS, Abelson 440B 509- 335-7916 amccubbin@wsu.edu	Pollen tube growth; pollen pistil interactions; floral development
Michael Neff CSS, Plant Sciences Building 341 509-335-7705 mmneff@wsu.edu	Crop biotechnology; photomorphogenesis; hormone-mediated development; the role of brassinosteroid inactivation in plant development; biochemical and molecular-genetic analysis of the AT-hook nuclear localizing (AHL) gene family in Arabidopsis
Thomas Okita IBC, Plant Sciences Building 361 509-335-3391 okita@wsu.edu	Biochemistry of starch synthesis and protein localization ; metabolic genetic engineering of plants for increased productivity; mRNA localization and the role of the cytoskeleton and endoplasmic reticulum
Hanu Pappu Pl Path, Johnson 345 509-335-3752 hrp@wsu.edu	Virus genomics and proteomics, plant-virus interactions, molecular epidemiology, crop biotechnology/virus resistant transgenic plants

John Peters IBC, Plant Sciences Building 101E 509-335-3412 jw.peters@wsu.edu	Fundamental electron transfer reactions relevant to energy and agriculture
B.W. Poovaiah Hort, Johnson 155W 509-335-2487 poovaiah@wsu.edu	Molecular and biochemical aspects of calcium/calmodulin-mediated signaling in plants
Michael Pumphrey CSS, Johnson 381 509-335-0509 m.pumphrey@wsu.edu	Development of biotic and abiotic stress tolerant, high-yielding, and high-quality spring wheat varieties for diverse production environments

Eric Roalson SBS, Abelson 339 509-335-7921 eric_roalson@wsu.edu	Molecular phylogenetics, genomics, and evolutionary origins of characters of interest, notably photosynthetic pathway novelties
Sanja Roje IBC, Plant Sciences Building 381 509-335-3008 sanja@wsu.edu	Metabolism of tetrahydrofolate-bound one-carbon units in plastids; biosynthesis of riboflavin in plants
Karen Sanguinet CSC, Johnson Hall 255 506-335-3662 karen.sanguinet@wsu.edu	The Sanguinet lab focus on factors that modulate growth and development. Study of root architecture of the Pooideae subfamily of temperate grasses using developmental, genetic and genomics approaches.
Tarah Sullivan 231 Johnson Hall 509-335-4837 t.sullivan@wsu.edu	Soil-plant-microbiome interactions, metals biogeochemistry and bioremediation, soil microbiome factors linking soil health, crop success, and human micronutrient nutrition.
Andrei Smertenko IBC, Clark 207 509-335-5795 andrei.smertenko@wsu.edu	Molecular mechanisms of phragmoplast organization and plant cytokinesis, regulation of plant cell wall synthesis by cytoskeleton, and plant programmed cell deaths.
Camille Steber CSS/USDA, Plant Sciences Building 281 509-335-2887 csteber@wsu.edu	Molecular genetic studies of the control of seed dormancy and germination by GA and ABA hormone signaling, mechanisms of wheat preharvest sprouting tolerance, and wheat drought tolerance
Kiwamu Tanaka Pl Path, Johnson 355 509-335-6418 kiwamu.tanaka@wsu.edu	Molecular plant-microbe interactions and plant innate immunity
Mechthild Tegeder SBS, Abelson 401B 509-335-7545 tegeder@wsu.edu	Molecular and physiological mechanisms of nitrogen transport; regulation of transport; flower/seed development; plant productivity
Linda Thomashow Pl Path 509-335-0930 thomashow@wsu.edu	Genetics, biochemistry and physiology of plant-microbe interactions; plant growth-promoting rhizobacteria; rhizosphere microbiology and ecology; mechanisms of gene regulation and expression; microbial genomics
John Wyrick SMB, BLS 241 509-335-8785 jwyrick@wsu.edu	Functional genomics; regulation of gene expression; chromatin structure; covalent histone modifications

Zhiwu Zhang CSS, Johnson 105 509-335-8674 zhiwu.zhang@wsu.edu	Research focusing on developing statistical methods and computing tools for genomic research and applications

Molecular Plant Sciences PhD Program Quick Overview

1. 72 credits in total to graduate
    a. 15 credits of graded classes (A-F)
        i. 3 credits of MPS 525 are required
2. 4 credits of S/U graded classes
    a. 2 credits of MPS 515
    b. 2 credits of MPS 570

Remaining credits (72-19= 53) are dissertation credits (MPS 800)
Must enroll in 10 credits per semester ***and*** have a 3.0 GPA

Other MPS Requirements

Present two seminar talks in MPS 515
Draft and defend two research proposals

Semester	**Task**
1st Semester	Find a lab
2nd Semester	Pick an advisor and PhD Committee
3rd Semester	Complete first proposal and submit program of study
4th Semester	Begin research on first proposal topic (dissertation topic)
5th Semester	Complete second research proposal and take preliminary exam
6th Semester+	Continue research on first proposal topic (dissertation topic) **and** present second seminar talk
Final Semester	Present second seminar talk on dissertation **and** take Final Exam/ Defend dissertation

ORIENTATION & TO-DO LIST

We highly recommend arriving in Pullman at least a week before classes begin in August so that you can attend several orientations and have enough time to settle in before the semester begins. The following is a list of important items to do once you arrive on campus.

- Participate in orientations, including:

    - Graduate School Orientation – Online (including international students): All orientation materials will be available online this year to complete prior to the first day of instruction. Topics include payroll and benefits services, health insurance, university resources, Research Assistant/Teaching Assistant (RA/TA) workshops. Link will be provided via email.
    - New Graduate Student Meet and Greet - to meet Graduate School staff and learn about important resources. Information will be provided via email.
    - Office of International Programs will have a hybrid online/in- person International Graduate Student Tutorial. New students will receive a link to the International Graduate Student Tutorial hosted on Canvas. Please check your WSU email for an email. If you cannot find the email, please call this number; 1-509-335-4508 or email: ip.interservices@wsu.edu. The Online International Graduate Student Tutorial will include immigration regulations, cultural adjustment, plagiarism/academic integrity rules, and more. New international graduate students will also be expected to attend the in-person portion of the International Graduate Student Tutorial**.** Times and locations will be sent to you later in the summer. Find more information on their website https://ip.wsu.edu/on-campus/new-graduate-students/ Please note: All new International Graduate Students are **required** to go through Orientation
    - Molecular Plant Sciences Graduate Program Orientation – (first year coursework, lab rotations, and other important program information) Meet and Greet with current students and faculty will follow the MPS orientation.
    - The orientation for the department where you TA, if applicable

□ Fill out personnel paperwork

- U.S. students: bring your driver's license, original social security card, and covid vaccine verification to the Graduate School offices (324 French Administration Building) and fill out the I-9 forms, Personnel Action Form, and covid attestation which are necessary for processing tuition waivers, stipend, insurance, etc.
- International students: bring your passport, I-94, I-20, and social security card to the Graduate School Offices (324 French Administration Building) to fill out the necessary forms. If you do not have a social security card, you will be able to apply for one during the International Programs Orientation.

Continued on next page

□ Obtain a WSU ID card

- Take your WSU ID number and at least one photo ID to the Cougar Card Center, which is located in the Compton Union Building (CUB), room 60, to obtain your WSU ID.

□ Obtain a parking permit, if needed

- Bring your WSU ID number to the Parking and Transportation Building on the corner of Colorado St. and D. St.
    - Or sign-up online at: https://parking.wsu.edu/

□ Obtain keys

- Please see your advisor to obtain keys for the labs you work in.

□ Update contact information

- Once you have established a local mailing address and phone number please update your contact information in MyWSU and Work Day. This will update your address with the Graduate School, payroll, benefits services, etc.

□ Order your textbooks at the Bookie

- You can order online here: https://wsubookie.bncollege.com/
    - And get some WSU swag too!
- The Bookie is located in the Compton Union Building (CUB) on campus

□ Review the Graduate Student Bill of Rights

- This document outlines your rights as a WSU Graduate Student
    - This is in the handbook Appendix

SPECIAL INSTRUCTIONS FOR INTERNATIONAL STUDENTS

There are many forms and helpful information available on the International Programs website, http://ip.wsu.edu/global-services, including a pre-arrival information request form, information on obtaining a visa, a welcome packet, and the orientation registration form. The office can also put you in contact with other students from your home country that may be able to help you find housing. You'll want to bookmark their web page: https://ip.wsu.edu/future-students/graduate-students/

Fall 2022 will have a hybrid online/in-person International Graduate Student Tutorial. **New Students will receive a link to the International Graduate Student Tutorial hosted on Canvas.** Please check your WSU email for an email with the subject line "Attend International Student Tutorial!" If you cannot find the email, please email ip.intlservices@wsu.edu The online International Graduate Student Tutorial will include immigration regulations, cultural adjustment, plagiarism/academic integrity rules, and more. **This Tutorial is in ADDITION to the WSU Graduate Student Online Orientation.** New international graduate students will also be expected to attend the in-person portion of the **International Graduate Student Tutorial.** Times and locations will be sent to you later in the summer. All international graduate students will be charged a **nonrefundable $50 international student tutorial fee** after course registration. The fee will be charged to your WSU account and can be paid along with your tuition through myWSU.

The Cougar Food Pantry is a fully stocked pantry that provides free food to Pullman students experiencing food insecurity. The pantry stocks non-perishable pantry staples that let students create nutritious, filling meals and snacks. The food pantry is open to current Pullman students (undergraduate and graduate) who are experiencing food insecurity **including international students**. Use of the Cougar Food Pantry **does not qualify as aid**, and will not impact a future green card application. The food pantry is located on the ground floor of the Compton Union Building near Washington State Employees Credit Union (WSECU) and the entrance to Terrell Library. Students in need can stop by any time the pantry is open to shop for food. Please bring your Cougar Card for entry. The Food Pantry is open Monday-Friday | 10 a.m.-6 p.m. And Saturday - Sunday | 10 a.m.-2 p.m. If you aren't able to shop during the pantry's walk-in hours, you can sign up to have your food delivered to you. Alternatively, you can email cougar.pantry@wsu.edu or call 509-335-0046 and we will work with you on other arrangements. Deliveries will be made on Mondays.

RESPONSIBLE CONDUCT OF RESEARCH TRAINING

Mandatory training on the Responsible Conduct of Research is required of all WSU graduate students. The training is web-based and is located at https://myresearch.wsu.edu (the training module is addressed to Principal Investigators but is the same for everyone). And the required CITI training can be found here: https://irb.wsu.edu/training/. Every new MPS student should complete the training by August 30th. If you have any questions, contact your Academic Coordinator, Alec Brown @ alec.brown@wsu.edu.

Graduate students will not be eligible for employment until the training is completed, but a grace period of one semester is allowed.

Incoming students can take the training once a WSU network ID (the first part of your email before the '@') and password are created. We recommend that this is done before arriving on campus. Questions about the subject matter should be directed to your faculty advisor.

Effective **January 1, 2020,** the Vice President for Research, Dr. Chris Keane, announced a policy that expanded the Responsible Conduct in Research (RCR) requirements. This new policy requires that all graduate students must take the Collaborative Institutional Training Initiative (CITI) RCR program. Information and how to take the training can be found here: https://irb.wsu.edu/training/

DISCRIMINATION AND SEXUAL HARASSMENT PREVENTION

Mandatory employee training on Discrimination and Sexual Harassment Prevention will be required of all graduate students on assistantships. This is a Web based training located at http://hrs.wsu.edu/dshp, students are encouraged to take this training as soon as possible.

- Graduate students appointed Fall Semester will need to complete their training by September 30th
- Graduate students appointed Spring Semester will need to complete their training by January 31st
- Graduate Student appointed Summer Semester will need to complete their training by June 30th

Failure to fully complete this training may result in future ineligibility of any financial support or benefit of your appointment. All employees will be required to repeat this training every five years from the date of initial training.

Questions regarding this training may be directed at Human Resources Services at 509-335-4521 or hrs@wsu.edu. Questions about sexual harassment or discrimination can be directed to the Office of Equal Opportunity at 509-335-8288 or oeo@wsu.edu.

A student may review their completion of training by logging into *WSU Online Training* account, select the *"My Progress"* button from the left side menu, then select the *"Completed"* tab for a list of your training history *(note the date range criteria above the "Completed" tab).* Click on the red ribbon icon if you would like to print a Certificate of Completion.

ESTABLISHING WASHINGTON RESIDENCY

This section applies **only to U.S. citizens and permanent residents**; international students will receive out-of-state tuition waivers for each semester of study provided they continue to be funded on an assistantship.

For the first year that you are enrolled in the MPS Program at WSU, you will receive a special waiver that allows you to pay in-state tuition if your place of residence is not Washington State. However, in order for this to continue, you **MUST** be a legal Washington resident at the beginning of your second year of study or you will be charged out-of-state tuition. The MPS program will not cover the difference between in-state and out-of-state tuition.

In order to gain and maintain residency, it is important that you do the following.

1. Live in Washington State for your entire first year of graduate school.
2. Keep a copy of your lease(s) to show that you have maintained a physical residence in the state.
3. Obtain a Washington State driver's license (or a Washington ID card if you don't drive). This should be done as soon as you move to Pullman so that it will be at least 12 months old when you apply for residency. Keep a copy of your license and receipt in case you lose it and have to get a replacement at a later date.
4. If you have a car, register it immediately in Washington State and transfer your car insurance to a local agent if your insurance company doesn't have a local branch. You must register any car you own or use within 30 days of your arrival. If the car belongs to someone else (parent, spouse, sibling, friend), it still must be registered in the state of Washington if you are using it as a regular means of transportation while residing in this state.
5. Obtain a voter registration card as soon as you move to Pullman (can be done at the same time you get your driver's license).
6. Establish an account at a local bank.
7. If you are ≤24 years of age, you must prove that you have been financially independent for the 12 months you have resided in Washington. This means that you cannot be listed as a dependent on your parents' tax returns in the year preceding the year that you file your paperwork.

It is a very good idea to also keep copies of bills, bank statements, etc. that show your local address to support your residency application. More information about the process can be found at the following web site: https://gradschool.wsu.edu/establishing-residency/. If you have any questions or concerns regarding your residency status, please contact the MPS academic coordinator or the Graduate School.

INSURANCE AND PAYROLL

Graduate Student Insurance

Washington State University automatically pays health and dental insurance for students who have assistantships and provides the Cougar Health Services clinic on campus. Cougar Health services are offered for free or at a reduced cost to WSU students. CHS provides medical, minor surgical, urgent care, mental health, and wellness programs for students who have paid the university health and wellness fee (but not their dependents). Basic visits to the clinic are free, although you may be charged for x-ray, laboratory, and physical therapy services, and for filled prescriptions. For a complete description of CHS services, go to https://cougarhealth.wsu.edu/.

To make an appointment with Cougar Health, call: 509- 335- 3575.
To reach the Cougar Health Pharmacy, call: 509 – 335 - 5742.
To reach Counseling and Psychological Services call: 509-335-4511 (initial consultations are same day scheduling only).
The vision clinic can be reached at: 509-335-0360
The 24 hour nurse line can be reached at: 509-335-3575

The Graduate Student Assistant Medical and Dental Insurance Plan (https://cougarhealth.wsu.edu/studentinsurance/graduate-students/) is designed to help you pay for expenses you may incur outside of the CHS clinic. Coverage is available worldwide. WSU's medical policy is underwritten by United Healthcare Student Resources (UHCSR) and for complete information about their policies and an online claim form, go to https://cougarhealth.wsu.edu/studentinsurance/graduate-students/#C7 It is also possible to obtain the claim form from Health and Wellness Services and Benefits Services in French Administration Building 232 (335-9575).
WSU's dental policy is underwritten by Washington Dental Service, www.deltadentalwa.com. Most local dentists are members of Washington Dental Service. If you have any questions about the Graduate Student Health Insurance plan, please call 509-335-3575 or email: student.insurance@wsu.edu.

It is possible to arrange for one's spouse or same-sex domestic partner and children to be included in the Graduate Student Assistant Medical Insurance Plan at the following rates for students on an assistantship. Dependents are not eligible for dental insurance.

See https://cougarhealth.wsu.edu/studentinsurance/graduate-students/ for more details.

Pay Checks, Deductions, and Graduate Fees

Pay checks are issued on the 10th and 25th of each month (or the closest working day if pay day falls on a weekend). It is possible to arrange direct deposit so that your check is automatically deposited that day; otherwise, it will be sent through regular mail. **DIRECT DEPOSIT IS HIGHLY RECOMMENDED**. Direct deposit can be set up online through Work Day. For instructions on how to set-up direct deposit, use the following link: https://confluence.esg.wsu.edu/pages/viewpage.action?spaceKey=WKB&title=Complete+Payment+Elections. If you have any questions on how to sign-up for direct deposit, contact Alec Brown @ alec.brown@wsu.edu or 509-335-7619.

Payroll deduction allows graduate fees to be withdrawn from your paychecks over eight pay periods. Or you can elect to play all fees in a lump sum. You must be on an assistantship and sign-up for payroll deduction in Work Day before your first paycheck (Aug 25th). This is an optional service provided at a fee of $8 per semester. **W S U fees are approximately $562 per semester.** More exact numbers can be found at this link: https://financialaid.wsu.edu/tuition-expenses/.[1] If you elect to not enroll in payroll deduction, your fees must be paid in full on the day that tuition is due. It is recommended that you sign up for payroll deduction. The instructions to sign-up for payroll deduction in Work Day can be found here: https://payroll.wsu.edu/graduate-student-payroll-deduction/. If you have any questions, contact Alec Brown @ alec.brown@wsu.edu or call 509-335-7619.

See https://gradschool.wsu.edu/student-finance-page/ for more details.

[1] This value does not include summer.

LEAVE & VACATION

During the term of their appointments (9 months, beginning in August), all graduate assistants (Research Assistants and Teaching Assistants) are expected to be at work each normal workday (M-F), **including periods when the University is not in session with the exception of the legal holidays designated by the Board of Regents.**

All University holidays are designated by the Board of Regents and are published and posted on the Web at https://policies.wsu.edu/prf/index/manuals/60-00-personnel/60-76-wsu-holidays/ .

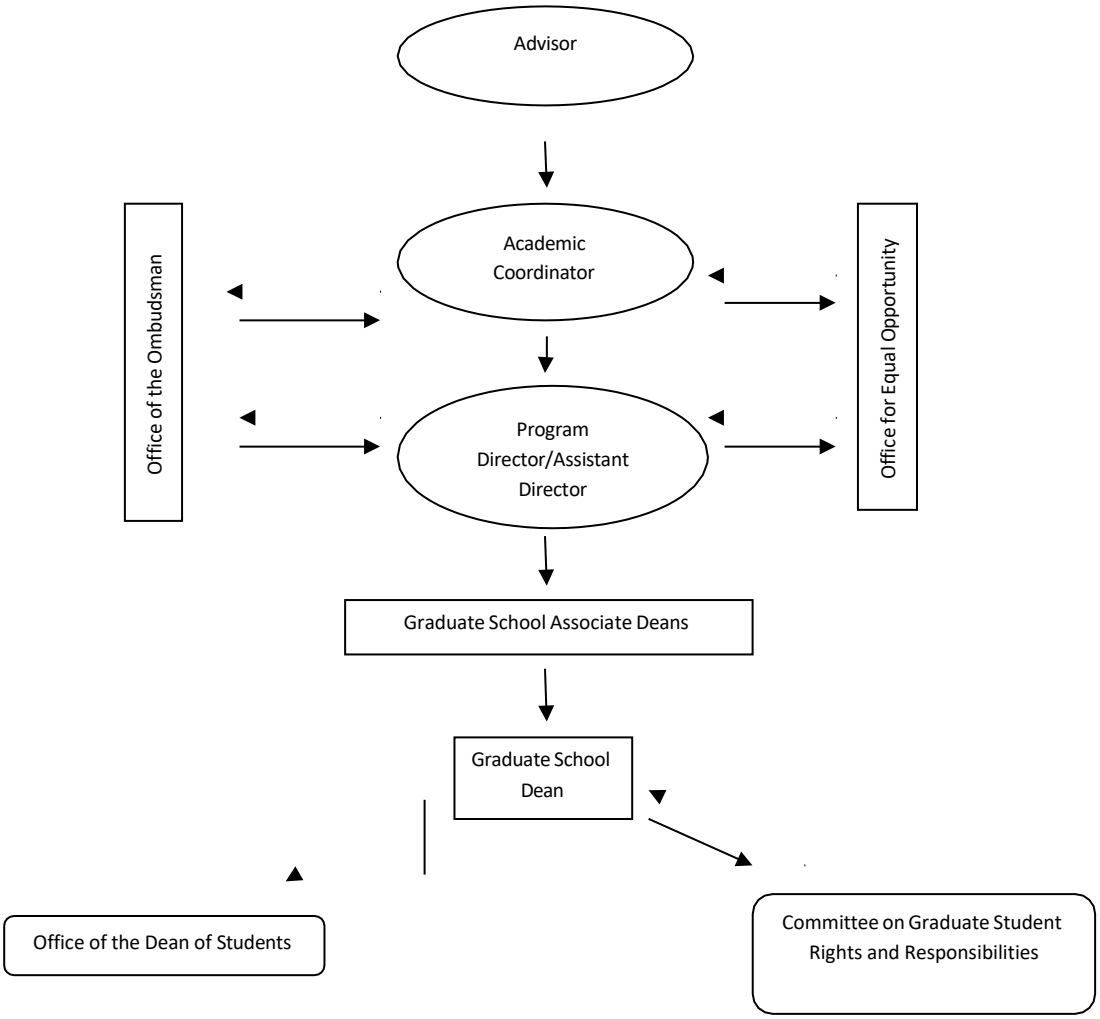
Graduate students on appointment **do not** earn annual leave or sick leave. Please speak with your advisor or rotating faculty if you are sick. If you are sick, please discuss arrangements with your advisor or lab supervisor that you are rotating in. If you need time off, please also discuss this with your advisor or your rotating lab. If you are on an hourly appointment, you do have sick and vacation days. Please refer to your balances in Work Day. If you would like to use your sick or vacation, please discuss this with your advisor or rotating lab. Please refer to this link for further information on sick and vacation for hourly student workers: https://policies.wsu.edu/prf/index/manuals/60-00-personnel/60-43-paid-sick-leave-temporary-hourly-employees/. If you have any questions on sick and leave policy, please call HRS and they can assist you: 509-335-4521.

If you encounter difficulties arranging sick or vacation time with your advisor or rotating lab, please contact the MPS Program leadership: Dr. Michael Neff (mmneff@wsu.edu), Dr. Hanjo Hellmann (hellmann@wsu.edu), or Dr. Alec Brown (alec.brown@wsu.edu). Additional advocacy is also available from the Graduate and Professional Student Association (GPSA). Your GPSA Senator's contact information can be found here: https://gpsa.wsu.edu/about/people/

GRADUATE SCHOOL & MPS PROGRAM RESOURCES

WSU and the MPS program are committed to maintaining a social and academic environment conducive to the education mission of the institution. While it is hoped that each student's experiences at WSU will be positive, difficulties can and do occasionally arise. If concerns arise, it is imperative for graduate students to know of options available for resolution.

The chart below contains a summary of how student concerns are normally handled at WSU. The course of action is to seek resolution at the lowest possible level with one's advisor, any of one's doctoral committee members, the academic coordinator, the program director or program assistant director. If a student is unable to remedy the situation through these means, or if there is a reason why these individuals cannot be approached, problems can be taken directly to another appropriate office. [2]



[2] The Graduate School at WSU is currently undergoing restructuring and transitioning from a Dean of the Graduate School to a Vice-Provost of Graduate Education. The role of Vice Provost has yet to be filled, and the Current Dean will leave her role on June 30th, 2022.

Because of the wide variety of issues that may beset students, there are several options available in addition to the Graduate School. Students may, for instance, consult the Office of the Ombudsman, the Office of Equal Opportunity, The Dean of Students, and the Office of Compliance, the WSU and Pullman Police Departments, and the Office of Compliance and Civil Rights at any point in working toward the resolution of a problem. See Additional University Resources (the next section) for more details on the types of problems that different offices might be best equipped to handle. Concerns which are brought to the Graduate School may likewise draw on these or other resources within the University, as necessary.

Strict academic issues brought before the Graduate School are typically handled by the Associate Deans of the Graduate School. Appeals of college or unit level decisions are handled by the Vice Provost of Graduate Education in consultation with the Associate Deans. Graduate students' appeals process involves several steps: adjudication at the unit level, adjudication at the college level with, if necessary and appropriate, a final appeal to the Vice Provost of Graduate Education. Unusual academic matters and some combinations of conduct and academic matters may be referred to the Committee on Graduate Student Rights and Responsibilities (CGSRR) (https://gradschool.wsu.edu/rights-and-responsibilities/). In the case of strictly academic matters, the CGSRR consists of graduate faculty only. In matters consisting of both academic and conduct issues, the CGSRR is composed of graduate faculty and graduate students recommended by the Graduate Studies Committee. The CGSRR will operate with due respect to the rights of graduate students and graduate faculty, including the conduct of confidential interviews, the rights of all parties to review and address allegations, and rights to a fair hearing. Once allegations are brought to the Graduate School in writing, the CGSRR will be formed within 30 days and will deliberate and render a recommendation to the Vice Provost of Graduate Education within 60 days. This recommendation will be acted upon by the Vice Provost of Graduate Education in consultation with the Provost and the Attorney General. The final outcome of this process may be appealed to the Dean of the Graduate School, who will then follow the procedures outlined above.

Appeals can be brought before the Provost. The Provost will consider appeals based on procedural irregularity and will not reopen cases only for the purpose of re-investigating the grievance.

In all instances, the University seeks fair and expeditious action on academic and conduct issues. Resolutions must uphold the highest standards of academic freedom and integrity, while honoring the rights and dignity of all individuals in the University community.

For more information on the Graduate Student Bill of Rights, see https://gpsa.wsu.edu/resources/student-bill-of-rights/
For more information about the Graduate Student Code, see https://gradschool.wsu.edu/rights-and-responsibilities/

ADDITIONAL UNIVERSITY RESOURCES

Cougar Health – Clinic, WSU Pharmacy, Access Center, Vision Clinic, and Counseling and Psychological Services

Located at: 1125 NE Washington St, Pullman, WA 99164.

Medical Clinic: 509-335-3575
Pharmacy: 509-335-5742
Access Center: 509-335-3417 or email access.testing@wsu.edu.
Vision Clinic: 509-335-0360
Counseling and Psychological Services: 509-335-4511
Student Health Insurance: 509-335-3575 or email student.insurance@wsu.edu

Office of the Dean of Students (509-335-5757) https://deanofstudents.wsu.edu/
The WSU Office of the Dean of Students connects students with the services, opportunities, and resources to foster their success at WSU and after graduation. By working with university and community partners, we advise students about services, resources, and options that support their success and provide guidance and assistance during times of challenge, crisis, complexity or emergency. Located at:

WSU Compliance and Civil Rights (509-335-8288) https://ccr.wsu.edu/
WSU's compliance program promotes a culture of knowledge of, and compliance with, regulatory and legal requirements. Through the work of the Chief Compliance Officer, Compliance & Civil Rights, the WSU Compliance Committee, and partners throughout the WSU system, the compliance program provides education, advice, and pragmatic solution building for complex compliance issues. Our team is committed to holistically promoting and supporting WSU's strategic goals and values through thoughtful, equitable, and ethical conduct.

Office of the University Ombudsman (509-335-1195), https://ombudsman.wsu.edu/
The primary purpose of the office is to protect the interests, rights, and privileges of students, staff, and faculty at all levels of university operations and programs. The Ombuds office is designated by the university to function as an impartial and neutral resource to assist all members of the university community. The Ombuds office provides information relating to university policies and procedures and facilitates the resolution of problems and grievances through informal investigation and mediation. The office does not replace or supersede other university grievances, complaint or appeal procedures.

Office of Veterans Affairs (509-335-1234), WSU Military Affiliated Students
For all veterans related questions. Email: veterans@wsu.edu or visit the office in Holland Library, Room 120BA (Pullman campus).

Women's Resource Center (509-335-6849), https://women.wsu.edu/womenstars-center/
Our mission is to engage with the multi-dimensional experiences of women, to challenge patterns of injustice for people of all genders, and to provide a welcoming and inclusive space. We elevate all marginalized voices while prioritizing prerogatives to learn, organize, and support one another as peers and mentors. We foster a community dynamic both within and beyond the Women*s Center that is collaborative, creative, and inclusive. Email: womens.center@wsu.edu. Located at: Wilson-Short Hall, Room 8, Ground Floor

Gender Identity/Expression and Sexual Orientation Resource Center (509-335-8841) https://thecenter.wsu.edu/

The Gender Identity/Expression and Sexual Orientation Resource Center serves and supports LGBTQ+ students, faculty, staff, and alumnx throughout the Washington State University system by providing resources, fostering community building, and relevant initiatives. Additionally, we promote academic and personal growth, learning, and development for students. Location: Compton Union Building, Room 401. Email: matthew.jeffries@wsu.edu

Access Center (509-335-3417)

The WSU Access Center serves the WSU community as part of the Division of Student Affairs. We provide accommodations and services to incoming and current WSU students registered with the campuses of Pullman, Global, Everett, Puyallup and Bremerton. The Access Center supports social justice for students with disabilities and chronic medical conditions by: Removing barriers to the living and learning environment through the interactive accommodation process, collaborating with campus partners to identify and remove systemic barriers, attitudinal barriers and social exclusions in the learning and living environment at WSU, advocating for accessible and equitable learning and living environments for all students, enhancing equity and inclusion through Universal Design and Universal Design for Learning principles, collaborating with the Community, Equity and Social Justice pillar of Student Affairs to bring issues of disability to the campus community through system-wide awareness programming. Email: access.center@wsu.edu, Phone: (509) 335 – 3417, Located at: 217 Washington Building

Office of International Programs (509-335-4508), https://ip.wsu.edu/future-students/graduate-students/

Assists international students and visiting faculty with immigration, naturalization, international taxes, non-academic, and social adjustments. Email: ip.globalservices@wsu.edu, Located at: Bryan Hall 108

Intensive American Language Center (509-335-6675), https://ip.wsu.edu/learn-english/

Learn English from highly qualified, experienced instructors and enjoy U.S. culture in a safe, student-friendly environment. Email: ialc@wsu.edu, Located in Kruegel Hall

The Office of Multicultural Student Services (509-335-7852), https://mss.wsu.edu/home/

The Office of Multicultural Student Services (MSS) seeks to facilitate the best undergraduate experience for multicultural, first generation, and other underrepresented students through the provision of culturally relevant services to enhance their learning and development and foster their successful transition, adjustment, persistence, achievement, and graduation. Email: mss@wsu.edu

- African American Student Center: 509-335-2626
- Asian/Pacific American Student Center: 509-335-1986
- Chicana/o Latina/o Student Center: 509-335-2617
- Native American Student Center: 509-335-5849

SAFETY

Washington State University is committed to maintaining a safe environment for its faculty, staff, and students. Safety is a priority in which the university invests significant time and resources. We have emergency plans and procedures that are reviewed regularly and that can be implemented quickly in a crisis or emergency. Our focus over the past few years on expanding communication resources and practices has enhanced our ability to effectively maintain our campus safety.

Safety is not the exclusive responsibility of any one individual, department or office. Every member of the campus community should recognize that it is a shared responsibility and that each of us has a personal role in campus safety. Leaders at all levels including Vice-Provosts, deans, directors, chairpersons, and department heads must take an active role in working with faculty, staff and students to foster an environment of safety awareness by providing necessary training and by setting an example for others to follow. Individual faculty, staff, and students should know the appropriate actions to take when an emergency arises. Their understanding of University safety and security procedures will help emergency personnel fulfill their responsibilities when emergencies do arise.

We ask that all faculty, staff, and students to visit the University emergency management web site at http://oem.wsu.edu/ to become familiar with the student and classroom emergency information provided. Everyone should also become familiar with the WSU ALERT site, http://alert.wsu.edu/ , where information about emergencies and other issues affecting WSU can be found. This site also provides information on the communication resources WSU will use to provide warning and notification during emergencies. For example, you can opt to have alerts sent via email and/or text message to your cell phone.

WSU is fully committed to keeping the community informed of public safety issues and emergency procedures as well as providing protection, education, and other services that enhance your safety and well-being. Please stay informed of the services and information available and remain vigilant and aware of your circumstances at all times so that we can work together to ensure a safe working and learning environment.

For additional information about campus safety, visit the Office of Emergency Management web site at http://oem.wsu.edu/.

LIVING IN PULLMAN

List of Helpful Businesses and Services

City of Pullman (events, water/sewer) 190 SE Crestview St http://www.pullman-wa.gov/	Pullman Regional Hospital 835 S.E. Bishop Blvd. (509) 332-2541 http://www.pullmanregional.org/
Brelsford WSU Visitors Center 150 E. Spring Street (509) 335-4636 http://visitor.wsu.edu/	WSU Student Recreation Center[3] (509) 335-8732 http://urec.wsu.edu/
Department of Licensing (driver's license, license plates, tabs, car registration, etc.) 980 S. Grand Ave. (509) 334-2510 http://www.dol.wa.gov	Avista Utilities (electricity, gas) (800) 227-9187 http://www.avistautilities.com
Washington Secretary of State Voter Registration Phone: (360) 902-4180 https://www.sos.wa.gov/elections/register.aspx	Pullman Disposal (waste disposal) (509) 334-1914 http://www.pullmandisposal.com/
Neill Public Library (books, DVDs, ebooks, audiobooks, etc.) 210 N. Grand Ave. 509-334-3595 https://www.pullman-wa.gov/government/departments/neill_public_library	

Housing

It is important to start looking for housing early because houses and apartments rent very quickly in Pullman. Many units become available for lease in March for the upcoming school year. Since you need to establish and maintain residency in Washington within a year of arrival, **you cannot live in Moscow, Idaho**. Also, while it is sometimes cheaper to live in Colfax, WA, note that there is no public transportation between Colfax and Pullman.

University accommodations are available, including single and married student apartments. A graduate student resident hall containing single rooms is located near the center of campus. Information on University housing can be found at http://housing.wsu.edu/.

Many students live in off-campus housing within walking distance of the University. A good source of information about off-campus housing is http://offcampusliving.wsu.edu/ .

[3] Graduate Students are not allowed to use the Chinook. If you want to use the Chinook, you will need to purchase a membership.

Transportation & Parking

Many students at WSU own cars, but it is not absolutely necessary. There are many apartments within walking distance of campus. Also, your student fees allow you to ride Pullman Transit for free after showing your WSU Cougar Card (go to http://www.pullmantransit.com/ for route and schedule information). If you would like to purchase a parking pass, use the following link: https://parking.wsu.edu/. The price of each parking pass can be found here: https://s3.wp.wsu.edu/uploads/sites/216/2021/06/Prorate-Schedule-FY22.pdf

Travel to and from Pullman

The Pullman-Moscow Airport (PUW) is nearby but has limited flight selection. If you have a car (or a friend willing to drive you), it may be easier to fly in and out of Spokane International Airport (GEG), which is about 80 miles north of Pullman. There is also the Lewiston Regional Airport (LWS) about 30 miles south. Wheatland Express offers limited shuttle service from Pullman to the Spokane Airport http://www.wheatlandexpress.com/ .

Child Care

If you have children, the WSU Children Center (509) 335-8847 or http://childrenscenter.wsu.edu/, provides day and evening care. Information about Pullman Public Schools can be found at http://www.psd267.org or call (509) 332-3581.

GRADUATE PROGRAM IN MOLECULAR PLANT SCIENCES
PH.D. GRADUATE PROGRAM COURSE REQUIREMENTS

Graduate School course requirements for a Doctoral Degree:

Graduate students must maintain a 3.0 cumulative GPA at all times and must hold a 3.0 cumulative GPA and 3.0 GPA among courses listed on the Program of Study in order to graduate. The program may not include any courses graded Pass/Fail, courses not approved for graduate credit, or courses that are audited. The student must complete any graded course listed on the Program of Study with a grade of C or higher; the student must repeat any course listed on program in which they earn a grade of C- or below. Courses on the program in which the student earns a B or below may not be removed from the program.

The core of the Doctor of Philosophy (Ph.D.) requirements are a minimum 15 hours of core graded coursework required on the Program of Study, none may be from non-graduate level courses. In all cases, students must comply with the minimum standards of their doctoral programs. Seminar courses numbered 500 or above that are graded on a scale of A-F may be used as part of the student's core program. Courses graded S/F may not be applied towards the graded core. Additionally, only those courses graded on a scale of A-F taken in pursuit of the master's degree and/or transfer courses at a level equivalent to 500-level courses and applicable to the doctoral core program should be listed. Any course included in the doctoral program in which a student earns a grade of C- or below must be repeated for a new grade of C or above before taking preliminary or final exams. In addition to the core requirement, the program shall show research and additional studies. This includes Independent Study (600) and Doctoral Research (800 – minimum of 20 hours), and any additional graded or S/F courses taken at WSU. Credit in this category, plus that in the core program, must total at least 72 hours. Additional credits may be required by some programs.

- 72 hours minimum total credits
- 15 hours minimum graded course work
- 20 hours minimum 800-level research credits
- Audited courses cannot be applied
- It is **strongly** recommended to take a statistics course. Multiple with varying focuses are available. Discuss with your advisor and/or committee to decide which one fits your topic of study best.
- Coursework options need to be discussed with the graduate student's committee and will depend on the student's interest/research areas. It is expected to include additional classes depending on the individual student's needs.

All MPS students are required to complete **two** research proposals. The first proposal is on their own research and will become the topic of their dissertation. The second proposal is to ensure a broad understanding of the field of plant research. Details on the content of these proposals can be found in the Appendix. Additionally, each student is required to present twice in MPS 515 on their own research. These seminar talks can occur once the student has a body of work to discuss. To schedule your seminar talks, please contact the MPS academic coordinator.

Molecular Plant Sciences graded course work requirements for a Doctoral Degree:

Required (Pass/Fail):

MPS 570	MPS Journal Club	2 (1 credit course taken twice)
MPS 515	MPS Seminar	2 (1 credit course taken twice)

Graded Course Work (15 credit minimum of 500-level coursework)

1. MPS 525 Plant Molecular Genetics 3
   (Offered Spring semesters)

2. Two Courses (minimum) from:

Biol 513	Plant Metabolism	3
Biol 519	Introduction to Population Genetics	3
Biol 533	Modern Methods in Phylogenetics	3
Biol 537	Plant Cell Biology	3
Crop_Sci 505	Advanced Classical and Molecular Breeding	3

3. Six credits (minimum) from:

Biochemistry/Biophysics/Chemistry

Chem 531	Advanced Physical Chemistry I	3
MBioS 465	Principles of Biophysical Chemistry	3
MBioS 578	Bioinformatics	3
Phys 566	Biological Physics	3

Plant Physiology/Development/Structure-function

Biol 504	Experimental Methods in Plant Physiology	4
Hort 516	Advanced Horticultural Crop Physiology	3

Plant biology/Environment

Biol 509	Plant Anatomy	4
Biol 517	Stress Physiology of Plants	3
Biol 540	Stable Isotope Theory and Methods	3
Biol 569	Ecosystem Biology and Global Change	3
Crop_Sci 411	Crop Environment Interactions	3
Pl P 513	Plant Nematology	4, 3-3
Hort 503	Advance Topics in Horticulture	1-4
Hort 518	Post-Harvest Biology and Technology	3, 2-3
Hort 550	Bioinformatics for Research	4
Pl P 511	Viruses and Virus Diseases of Plants	3
Pl P 514	Phytobacteriology	3

Genetics/Cell Biology

Biol 521	Quantitative Genetics	3
Crop_Sci 503	Advanced Cropping Systems	3
Crop_Sci 504	Plant Transmission Genetics	3
Crop_Sci 545	Statistical Genomics	3
E Mic 586	Special Projects in Electron Microscopy	2-3
MPS 574	Protein Biotechnology	3
Pl P 535	Molecular Genetics of Plant and Pathogen Interactions	3

Special Topics in Molecular Plant Sciences

MPS 587	Advanced Topics in Plant Biochemistry	1-3

If you would like to know when courses are offered, contact the MPS Academic Coordinator, Alec Brown at: 509-335-7619 or alec.brown@wsu.edu.

GRADUATE PROGRAM IN MOLECULAR PLANT SCIENCES
PH.D. GRADUATE PROGRAM PROPOSED TIMELINE

PhD Graduate Program requirements: a brief overview (https://gradschool.wsu.edu/academic-regulations/):

- A minimum of 15 semester hours of graded course work (at the 500-level) beyond the bachelor's degree.
- A minimum of 20 hours of 800-level credits are required.

Specific Molecular Plant Science Program Requirements:

- Present two MPS 515 seminar talks prior to final exam
- Complete a first and second proposal as outlined in the Appendix, prior to final exam

SUMMER BEFORE STARTING

- If you are not directly entering a laboratory, you will begin by rotating in at least three lab rotations lasting 5 to 8 weeks. These rotations are an opportunity for you to experience the research styles of different laboratories. The best way to choose the labs in which you would like to rotate is to contact the faculty member whose research is of interest to you. Contact faculty directly to set up rotation schedules, if applicable.

FIRST YEAR (FIRST SEMESTER)

- Recommended Courses

MPS 570	Advanced Topics in Molecular Plant Sciences	1
MPS 515	Seminar in Molecular Plant Sciences	1
MPS 800*	Doctoral Research/Dissertation	Variable
Two+ Graded Classes	As discussed with advisor** Must be graded A-F	Variable
Total credits		10

*Students should sign up for MPS 800 whether or not they have taken the preliminary exam.
**For your first term, you must take 2 or more graded classes (graded on an A-F scale)

- Seminars
  Attend weekly MPS 515 seminar. Attendance is expected throughout the course of your program of study, and you should enroll each semester unless there is a conflict with another required course. Under no circumstances should your advisor schedule lab meetings during the time of the MPS 515 seminar. MPS students are **required** to present two seminars while enrolled in the program. When a student presents at Seminar, their advisor and committee are required to attend. Students must ensure advisor and committee is aware and attends both seminar presentations.

- Research/Rotation
  Begin research in your chosen lab. If doing rotations, you must find a laboratory by the end of the second semester to make adequate progress towards your degree.

- Begin to establish Washington residency
  Obtain a Washington driver's license, voter registration card, vehicle registration, etc.

FIRST YEAR (SECOND SEMESTER)

- Recommended Courses

MPS 570	Advanced Topics in Molecular Plant Sciences	1
MPS 515	Seminar in Molecular Plant Sciences	1
MPS 525	Plant Molecular Genetics	3
MPS 800	Doctoral Research/Dissertation	Variable
Other courses	As discussed with advisor	Variable
Total credits		10-12

- Seminars
  Attend weekly MPS 515 seminar.
- Research/Rotation
  Continue research/lab rotations; begin considering ideas for dissertation research. Decide on lab to join.

- Choose an advisor
  This should be done after rotations. The faculty member must agree to be your major advisor and, in some cases, a student may have two advisors (co-chairs). Please notify the academic coordinator (Alec Brown – alec.brown@wsu.edu) of your decision as soon as possible.

- Create your doctoral committee
  The minimum size of the Ph.D. Committee is four members and at least three (including your major advisor) need to be faculty from the Molecular Plant Sciences Graduate Program. Please notify Alec Brown, the academic coordinator, of your committee members as soon as possible. Revisions may be necessary. If you need to make changes to your committee, contact the MPS Academic Coordinator.

- Annual Review
  Annual review packets will be distributed annually early March to be completed by the student and their faculty advisor(s). Each review must include an updated CV and be submitted to the Academic Coordinator by **April 15**.

FIRST YEAR (SUMMER)

- Recommended Courses
  It is not necessary to take summer courses unless you are in the NIH Protein Biotechnology Training Program, in which case you must register for 3 research credits every summer that you are in the program.

- Research
  Begin/continue research on dissertation topic and prepare for first research proposal (details in the Appendix).

  Suggested timeline:

June 1	Discuss preliminary ideas for proposal with your advisor
July 15	Give a rough draft to your committee and discuss
Sept 15	Give a close-to-final draft to your advisor and discuss

- Prepare a Program of Study

  The form can be found here: https://gradschool.wsu.edu/facultystaff-resources/18-2/
  Must be signed by your doctoral committee members after your first research proposal defense.
  Note: The Graduate School will not let you schedule your Preliminary Exam until they have approved your Program of Study. It takes about 4 months to get a Program of Study approved. If you have questions, contact the MPS Academic Coordinator.

SECOND YEAR (THIRD SEMESTER)

- Apply for Washington State Residency

  https://gradschool.wsu.edu/establishing-residency/

  http://residency.wsu.edu/residency-requirements/

  Do this as soon as you have proof that you have lived in Washington for 12 months or you will be charged out- of-state tuition.

- Recommended Courses

MPS 570	Advanced Topics in Molecular Plant Sciences	1
MPS 515	Seminar in Molecular Plant Sciences	1
MPS 800	Doctoral Research/Dissertation	Variable
Other courses	As discussed with your advisor	Variable
Total credits		10-12

- First research proposal (file with MPS)

  The proposal should be written and turned in by October 1st. See the Appendix for more information. A final copy **must** be submitted to the academic coordinator.

- Submit Program of Study to the MPS Academic Coordinator

  https://gradschool.wsu.edu/facultystaff-resources/18-2/

  Please note that the Graduate School must approve the form before you will be allowed to schedule your preliminary exam. Changes may be requested. If any of the information on you Program of Study changes, you must alert the MPS Academic Coordinator and submit a program change form.

- Seminars

  Attend weekly MPS 515 seminar.

- Research

  Continue research on dissertation topic.

SECOND YEAR (FOURTH SEMESTER)

- Recommended Courses

MPS 570	Advanced Topics in Molecular Plant Sciences	1
MPS 515	Seminar in Molecular Plant Sciences	1

MPS 800	Doctoral Research/Dissertation	Variable
Other courses	As discussed with your advisor	Variable
Total credits		10-12

- Seminars
  Attend weekly MPS 515 seminar.

- Research
  Continue research on dissertation topic and review with doctoral committee before end of semester.

SECOND YEAR (SUMMER)

- Research
  Continue research on dissertation topic and prepare for Preliminary Exam.

THIRD YEAR (FIFTH SEMESTER)

- Recommended Courses

MPS 515	Seminar in Molecular Plant Sciences	1
MPS 800	Doctoral Research/Dissertation	Variable
Other courses	As discussed with your advisor	Variable
Total credits		10-12

- Preliminary Exam (file with Graduate School and MPS)
  https://gradschool.wsu.edu/facultystaff-resources/18-2/
  This is a formal Ph.D. exam and must be scheduled through the MPS Academic Coordinator at least 10 working days prior to the exam date. Note that preliminary exams cannot be scheduled during the week of final exams. Or prior to a Program of Study getting approved. Note: When filling out the exam scheduling form, only choose the "Doctoral Preliminary Oral Exam." The preliminary exam must adhere to the following schedule that covers ~7 weeks (see timeline below). It is recommended that the exam occur during the fifth semester of the student's graduate career. In most cases, this would be during the fall semester of the student's third year in the program. The committee can, however, recommend a later date for the qualifying exam depending on the student's research progress.

  1.) The student submits three abstracts that describe potential topics for a **mock** proposal approximately 2 weeks prior to committee approval. This approval can be determined either during a meeting with the committee members or via electronic discussions, if necessary. These abstracts should be sufficiently different than the student's current research. The student may rank the abstracts based on preference. However, the committee is not bound to follow that ranking. If the advisory committee considers any abstracts to be too close to the student's or their lab's current research, the committee may request an additional abstract or abstracts.

  2.) The advisory committee then will assign the topic for the mock proposal selected from the approved abstract(s). The committee will notify the student of the assigned topic four weeks before the scheduled exam date. The **mock** proposal should be no more than 7 single spaced pages, excluding references, and will follow NSF grant formatting (NSF format guidelines). The mock proposal must be the student's original work. WSU's plagiarism policies apply to the mock proposal (Academic Integrity Policy). The mock proposal is due to the committee within 4 weeks following topic approval. The proposal is to be written independently of the advisor though anyone else inside or outside WSU can be consulted.

  3.) One week following the distribution of the **mock** proposal to the committee, students will present a 30- minute seminar to the examination committee outlining and summarizing the mock proposal. This presentation will be followed by an oral examination by the advisory committee with regard to the mock proposal and general knowledge relevant to the MPS program and the student's research.

The exam will be evaluated as per the guidelines provided by the Graduate School. Please refer to the policies and procedures PDF document found here: https://gradschool.wsu.edu/policies-procedures/

- Seminars
  Attend weekly MPS 515 seminar.
- Research
  Continue research on dissertation topic.

THIRD YEAR (SIXTH SEMESTER)

- Recommended Courses

MPS 515	Seminar in Molecular Plant Sciences	1
MPS 800	Doctoral Research/Dissertation	Variable
Other courses	As discussed with your advisor	Variable
Total credits		10-12

- Seminars
  Attend weekly MPS 515 seminar. Present first seminar talk, c ontact Alec Brown, the MPS academic coordinator, to schedule your first seminar. Alec.brown@wsu.edu

- Research
  Continue research and meet with doctoral committee before end of semester.

FOURTH AND SUBSEQUENT YEARS

- Recommended Courses

MPS 515	Seminar in Molecular Plant Sciences	1
MPS 800	Doctoral Research/Dissertation	Variable
Total credits		10-12

- Seminars
  Attend weekly MPS 515 seminar.

- Research
  Continue research and meet with doctoral committee before end of academic year.

FINAL YEAR/FINAL SEMESTER

- Recommended Courses

MPS 515	Seminar in Molecular Plant Sciences	1
MPS 800	Doctoral Research/Dissertation	Variable
Total credits		10-12

- Seminars
  Attend weekly MPS 515 seminar. Present second seminar talk on dissertation topic. Contact the academic coordinator to schedule your second seminar.

- Submit your dissertation to your committee for final revisions
  Submit your dissertation to your committee **two weeks prior to scheduling your final exam**. This is to ensure that your committee has enough time to read the entire document and provide constructive feedback.

- Apply for Graduation in MyWSU: http://gradschool.wsu.edu/CurrentStudents/index1.html
  Submit a graduation application the semester of your final exam/dissertation defense is scheduled. The MPS Academic Coordinator and the Graduate School will notify you of any final requirements.

- Schedule your final exam/dissertation defense with the Graduate School
  Submit the final examination scheduling form to the MPS Academic Coordinator at least 10 working days prior to the exam date. When scheduling the exam, make sure all committee members are available Be careful not to schedule your exam at a time when committee members may be traveling immediately following the defense.

- Complete your final exam/dissertation defense
- Submit final documents to the Graduate School within 5 business days of your exam date:
  - All students must submit the title page, abstract page, and signature page Instructions on how to upload these "cotton pages" can be found here: https://gradschool.wsu.edu/facultystaff-resources/18-2/
  - Hold Harmless Agreement Form (emailed to gradschool@wsu.edu)
    - No witness is necessary
  - Certificate of Completion for the Survey of Earned Doctorates (emailed to gradschool@wsu.edu)
    - Link to the survey can be found here: https://gradschool.wsu.edu/facultystaff-resources/18-2/
- Submit final revisions of your dissertation to ProQuest 5 business days after your exam date. Information on how to do this can be found here: http://dissertations.wsu.edu/
- Make sure to list a Diploma Mailing Address in MyWSU
- Continue to check your WSU email. Any updates regarding your degree completion will be communicated through your WSU email address.
- Submit a copy of your dissertation to your advisor and to the academic coordinator

- Commencement
  The Bookie begins accepting orders about two months before commencement for your cap and gown.
  https://commencement.wsu.edu/

- Update mailing address with Graduate School
  Diplomas will be mailed approximately eight weeks after commencement.

- Alert the MPS Academic Coordinator of your post-graduation plans. These are posted on the MPS website and increase your digital footprint. This is very helpful when on the job market.

GOOD STANDARDS AND MAKING PROGRESS TOWARD YOUR DEGREE

To be considered "in good standing" (i.e. making progress toward your degree), an MPS graduate student should fulfill the following conditions.

1. Maintain a GPA of 3.0 or above. Please note that the GPA of your formal coursework (not including supplementary English courses, PE courses, etc.) must also be 3.0 or above.
2. Be accepted into the laboratory of an MPS faculty member by the end of the second semester of your first year.
3. Form a graduate doctoral committee by the end of your first year.
4. Submit all required paperwork (Program of Study, exam scheduling forms, etc.) to the Graduate School in a timely manner.
5. Meet with your doctoral committee **at least** once a year. It is your responsibility to arrange extra meetings with your doctoral committee should problems arise.
6. Complete an annual review with your advisor every year at the end of spring semester.
7. Meet the expectations of the Center of Community Standards: https://www.handbook.wsu.edu/handbook-home/

Failure to remain in good standing may result in loss of financial support and termination from the program.

Requests for an exception to policy should be submitted, in writing, to the MPS director by the doctoral advisor. Documented approval from your committee members may be required. After the appropriate approvals have been acquired, the MPS director may write an exception to policy letter to the Vice Provost of Graduate Education.

Masters Degree option in Molecular Plant Sciences (Thesis)

This degree is **optional**. It is meant as an alternative for the graduate student to leave the program earlier in case the student and/or their advisory committee agree that accomplishing the MS degree is of greater benefit to the student then pursuing a Ph.D. degree. It requires approval from the MPS Director.

Graduate School Requirements - a minimum of 21 graded credits are required for the Masters degree (6 more than the PhD) (https://gradschool.wsu.edu/academic-regulations/); specifically, the Graduate School requires:

- 30 hours minimum of total credits (including thesis credits)
- 21 hours minimum of graded course work (15 hours of graded course work at the 500 level; 6 hours maximum of non-graduate (300-400) graded course work)
- 4 hours minimum of 700-level credit in major, 2 of which must be taken in the semester of the final exam and/or thesis completion. Timelines and deadlines for the thesis MS degree program can be found here: https://gradschool.wsu.edu/facultystaff-resources/18-2/

Molecular Plant Science Program Requirements

- Present one MPS 515 Seminar Talk prior to final exam
- Complete the first proposal, as outlined in the Appendix, prior to final exam

The Molecular Plant Sciences graded course work requirements for a Master's Degree are the same as listed for PhD requirements with the exception that the additional 6 graded credits of course work can either be gained from courses listed on previous pages or by 300-400 level course work (as per the guidelines from the Graduate School). The graduate student needs to discuss this with their advisory committee. Students must file a Plan and Degree Level Change form in addition to an updated program of study to the graduate school after approval to change to the MS degree program. The needed forms can be found here: https://gradschool.wsu.edu/facultystaff-resources/18-2/

General MS Thesis Guidelines - It is generally expected that a MS thesis consists of at least two chapters: 1) an introduction/literature review that puts the work in a broader context and summarizes the main results; and, 2) a second chapter that is considered a publishable piece of work based on the student's original research conducted at WSU. The thesis can contain an **optional** third chapter consisting of another publishable piece of research done at WSU.

SHORT ANSWERS TO FREQUENTLY ASKED QUESTION

What happens if…

…I haven't been trained to handle hazardous materials?

When you begin your first lab rotation, the lab coordinator or another member of the Safety Committee will provide Safety and Hazardous Materials Handling training. Additional specialized training will be required for students who use radioactive substances. We also recommend looking at WSU's Safety Policies and Procedures manual (SPPM) at http://public.wsu.edu/~forms/manuals.html and consulting the Environmental health & Safety website at http://ehs.wsu.edu/.

…I'm a TA in the School of Biological Sciences?

SBS does not assign courses until the week before school begins in August. You will be contacted by the SBS academic coordinator (**NOT** the MPS Academic Coordinator) with details about TA training, at which time you will be asked for your schedule and teaching preferences. The Graduate School Orientation also offers tips and sessions about TA'ing. Any international student pursuing a TA must take the International Teaching Assistant Evaluation Exam through the Intensive American Language Center and receive a score of 1. For more information visit https://ip.wsu.edu/learn-english/teaching-assistant-evaluations/

…I have graduate-level courses that I would like to transfer?

You can transfer graduate-level credits that are appropriate to your Program of Study if a grade of B or higher was earned. Your advisor and committee must approve the courses that you want to transfer. The number of courses you can transfer is limited to no more than half of the total graded course credits (7 for the MPS Program). Extension courses, special problems, research and thesis credits, workshops, and correspondence courses cannot be transferred. Transfer credit is formally requested by listing the courses on you Program of Study, but you can request preliminary determination from the Graduate School. It is not possible to transfer undergraduate (300 or 400 level) courses.

…I need approval from my advisor before I have an advisor?

The MPS Program Director will make decisions that are normally made by your advisor or doctoral committee if you have not yet settled in a lab (i.e. rotating during your first year).

…I can't find a laboratory?

To be considered "making adequate progress towards your degree," you must find a lab by the end of your second semester. Under exceptional circumstances the MPS Program Director may allow the summer or a third semester for rotations, provided that funds are available and that there is a reasonable chance of success.

…My GPA falls below a 3.0?

The Graduate School requires that you maintain a 3.0 cumulative GPA, and the MPS Program requires in addition that you maintain a 3.0 cumulative GPA in your core courses. If you cumulative GPA falls below 2.75 after one semester, you will be issued a letter from the Graduate School stating that your status is under review. In order to be reinstated, the MPS Program Director must write a letter to the Vice Provost of Graduate Education. If, after two semesters, your GPA is still between 2.75 and 2.99, the MPS Program Director can write another letter recommending reinstatement. However, a student who cannot maintain a 3.0 cumulative GPA by the end of his or her third semester will be dropped from the Graduate School. Students whose cumulative GPA is below 2.75 after two semesters are not eligible for reinstatement.

…I get a C in a class?

If you receive a C, you do not need to repeat the course (and cannot). Any course listed in your Program of Study in which you earn a grade of C- or below must be repeated and not on a satisfactory/fail basis. No course with a grade of B- or below may be removed from your program of study.

…I fail my first or second proposal?

In the event of a failed first attempt, a second and final attempt may be scheduled after a lapse of at least three months, but no longer than two academic semesters (excluding summer). The exception to the allowance of a second attempt may occur if a member of the Graduate Mentor Academy (appointed by the Graduate School) presided over the student's first exam and agrees that a re-examination is not an appropriate disposition of the case (see Chapter 1.E.2, Examination Failure). When scheduling a second exam, the scheduling form must be submitted to the Graduate School at least 15 business days in advance of the exam day. A member of the Graduate Mentor Academy will be appointed by the Graduate School and must be present at re-examination. The entire committee must be present and vote. A student who has failed two examinations will be dismissed from the Graduate School. Should there be procedural irregularities or extenuating circumstances during the first or second examination, the student has the right to appeal to the Graduate School in the event of examination failure. For more details, see the WSU Graduate School Policies and Procedures: https://gradschool.wsu.edu/policies-procedures/

…One of my committee members leaves?

You may add or change a committee member with the permission of your advisor. A Committee Change form must be submitted to the Graduate School: https://gradschool.wsu.edu/facultystaff-resources/18-2/

…I lose research funds?

Alternate funding will be pursued, including teaching assistantships. It is the program's intention to continue funding students as long as they are making adequate progress towards their degree. Contact the MPS academic coordinator immediately if funding is lost.

If you have a question/problem that is not addressed here, please see the Graduate School web site, http://www.gradschool.wsu.edu/, or contact the MPS academic coordinator, Alec Brown – alec.brown@wsu.edu or call 509-335-7619.

APPENDIX

MPS Guidelines for Proposals

1. Length:

   Both the first proposal and the second proposal should include a one-page project summary with an overview of the proposed experiments as well as statements of the Intellectual Merits and Broader Impacts of the proposed project. This is in addition to the body of the proposal. The body of the first proposal should be no more than 15 pages long (single-spaced with 1" margins), including figures and tables. The body of the second proposal should be no more than 7 pages long (single-spaced with 1" margins), including figures and tables. Times New Roman (11 pt.), or a similar font size, is recommended for both proposals. Do not make your font too small. References, in full citation format, are to be added to the end of the proposal and are in addition to the recommended length. Examples of how the first and second proposals should be structured, as well as some useful resources on proposal preparation are:

2. Format:

   Your proposal should be based on the National Science Foundation (NSF) format available online at http://www.nsf.gov/pubs/policydocs/pappguide/nsf10_1/gpg_2.jsp#IIB . Follow guidelines for the research description section of the proposal. All other documents (i.e. Facilities and Equipment, Budget, Biosketch, etc.) are not required.

3. Content:

   The subject of the first proposal should be the candidate's PhD research/dissertation, formulated in collaboration with the student's advisor. Guidelines for format and content should follow NSF guidelines, available at https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_2.jsp
   Follow the guidelines for proposal content given here:
   https://www.nsf.gov/pubs/policydocs/pappg20_1/nsf20_1.pdf Chapter 2, B. Format of the proposal

It is highly recommended that you contact fellow graduate students that successfully developed a first or second proposal. Talk with them about their experience, and get a copy of their proposal to get a feeling about structure, length, and other format aspects that are needed to generate a good proposal.

Example of One Page Project Summary (Both Proposals)

For your first proposal (Research Proposal), this section will be in addition to the 15-page limit.

For your second proposal (Qualifying Exam), this section is a part of the 7-page limit.

Overview:

Note- this one-page summary is a stand-alone that would be the reviewer's first exposure to the project. It should give a brief background on the subject manner, the outstanding questions and overarching hypothesis for the proposal. It should also include a description of each of the specific aims with the hypotheses being tested in each. Each aim should not be dependent on other aims.

Intellectual Merit:

Note- this section should clearly state the intellectual merit of the proposal and how the results will impact the relevant field of interest as well as plant biology, biology and scientific studies in general.

Broader Impacts:

Note- this section should discuss training opportunities as well as how this work will benefit society as a whole.

Stanford has some excellent advice on how to write a one-page summary (with more detail than above). The web link is below:

https://grantwriting.stanford.edu/project-summary/

Example of Research Proposal (**First Proposal**) Structure

Note- 15-page limit, excluding references and the one-page project summary described above.

This proposal MUST be written with your advisor's help.

PROJECT TITLE AND NAME/AFFILIATION OF RESEARCHER

PROJECT DESCRIPTION

Overview

Note- This should also be about one page and expand on the "Overview" in your one-page project summary.

Introduction

Note- This section should start with the 'big picture' and relevant background. It should focus into the specific problem being addressed and end with a reiteration of the specific aims and hypotheses being tested in the proposal. A few figures may be appropriate to include. Four pages is a reasonable target length for this section, though that may vary depending on the topic and your advisor's input.

Preliminary Results

Note- This section should include the most recent results related to the proposed project. These results can be published or unpublished and should be supported with figures and figure legends. Three to four pages is a reasonable target length for this section, though that may vary depending on the topic and your advisor's input.

Specific Aims

Note- This section reiterates the specific aims proposed and hypotheses being tested and should not be more than a half a page in length.

Research Approach

Aim 1 Rationale: Each Aim (and potential sub-aims) should be presented. For each aim, first state the overarching rationale and end with the hypothesis for the aim.

Aim 1: Give a title for each aim and/or sub-aim. Then describe the experimental approach. Use enough description, including appropriate controls, so that the reviewer understands that you know how to do the experiment.

Aim 1 Anticipated results, limitations and pitfalls. This is where you explain what you expect the results to be (they could go different ways) and how you will interpret the results as well as demonstrate whether that aim has succeeded or failed. It is important to recognize the limitations on interpretation of any given results. You should also state potential pitfalls in the experimental design or outcome and how you would address them. **Repeat the above approach for each of the proposed aims.**

Note- This section of the proposal can include figures if they illustrate the experimental design. You can refer to figures in the preliminary results as well. This section will likely be the longest in the proposal and can easily take up six pages. Be succinct but also clear. You may need to cut back on the background or preliminary results section in order to have enough space for this section.

Intellectual Merit of these Proposed Studies

Broader Impacts of the Proposed Work

Note- These two sections expand on what was written in the one-page summary.

Timeline

Note- Having a realistic time line for your proposed studies is essential. Do not propose a life-times worth of work. The time line should be no more than three to four years (most grants are funded for three with the option for a one-year no-cost extension). There are many different ways to format this, from verbal statements for each year to a table or other form of visual representation.

Example of Qualifying Exam Proposal (**Second Proposal**) Structure

Note- 7-page limit, including the one-page summary but excluding references.

This proposal MUST NOT be written with your advisor's help.

PROJECT TITLE AND NAME/AFFILIATION OF RESEARCHER

PROJECT SUMMARY

Note- This will be a modified version the one-page project summary that was submitted (along with the two other potential projects) to your committee to choose the topic of your Qualifying Exam. Modifications can be made based on input from your committee members (or others in the scientific community) but not your advisor. Do not change the topic that you have proposed and has been approved by your committee.

Introduction

Note- This section should start with the 'big picture' and relevant background. It should focus into the specific problem being addressed and end with a reiteration of the specific aims and hypotheses being tested in the proposal. You will likely not have space for figures. One and a half pages is a reasonable target length for this section.

Preliminary Results

Note- This section should include the most recent results related to the proposed project. Since this is a project on work unrelated to your lab or projects, these results can be recently published observations from other lab's work. You will likely not have space for figures. Approximately one page is a reasonable target length for this section.

Specific Aims

Note- This section reiterates the specific aims proposed and hypotheses being tested and should not be more than a half a page in length.

Research Approach

Aim 1 Rationale: Each Aim (and potential sub-aims) should be presented. For each aim, first state the overarching rationale and end with the hypothesis for the aim.

Aim 1: Give a title for each aim and/or sub-aim. Then describe the experimental approach. Use enough description, including appropriate controls, so that the reviewer understands that you know how to do the experiment.

Aim 1 Anticipated results, limitations and pitfalls. This is where you explain what you expect the results to be (they could go different ways) and how you will interpret the results as well as demonstrate whether that aim has succeeded or failed. It is important to recognize the limitations on interpretation of any given results. You should also state potential pitfalls in the experimental design or outcome and how you would address them. **Repeat the above approach for each of the proposed aims.**

Note- This section will likely be the longest in the proposal but will have to be shorter than a full proposal. Be succinct but also clear. You may need to cut back on the background or preliminary results section in order to have enough space for this section.

Intellectual Merit and Broader Impacts of these Proposed Studies

Note- Because of space limitations, you will include this in one paragraph.

Timeline

Note- Having a realistic time line for your proposed studies is essential. Do not propose a life-times worth of work. There are many different ways to format this, from verbal statements for each year to a table or other form of visual representation.

MPS Sample Annual Review Form

Name of Student:

Degree sought: PhD

Degree status:

Advisor(s):

Graduate advisory committee:

Number of Years as WSU Student:

Has there been a committee meeting in the last 12 months?

Please circle; Yes No

Date of most recent meeting:

Has program of study been approved by your committee and filed with the Graduate School?

Please circle: Yes No

If no, anticipated date to file:

Date of first proposal: Please circle: Actual Anticipated

Dissertation title:

Date of preliminary exam: Please circle: Actual Anticipated

Please circle a number for overall progress and give a written evaluation:

0 – Not applicable 2 – Fair 4 - Good

1 – Poor 3 – Average 5 – Excellent

1. Indicate a general progress on research and/or thesis problem. Include comments on the ability to work and think independently and make creative approaches to research problems. List any publications.

2. Comment on academic performance during the evaluation period. Include cumulative GPA, prelims, proposals, research reviews, as well as seminar presentations.

3. Overall performance as a graduate student. List strengths, weaknesses, and areas for improvement.

4. Comment on probable success to complete degree requirements in a timely manner.

5. Do you recommend continued enrollment for this student? YES NO

6. Student/faculty interested in TA position for Fall/Spring? NO (FALL and/or SPRING)

MPS Sample Annual Review Form (cont.)

Advisor Signature: _____ Date: _____

I have seen this evaluation and have had an opportunity to discuss it with my advisor.

Student Signature: _____ Date: _____

Please submit an updated copy of your CV with this form. If you completed a proposal over the past academic year, please include an electronic copy with your annual review as well.

Certification of Assistantship Duties (if applicable):
If the student served in an assistantship position during the past year, please have the student review and sign below, along with the student's faculty advisor or supervisor.

Student: The graduate assistantship position that you have held during this past year and the related tuition waivers were contingent upon factors as outlined in your offer letter. By signing below you certify you have met the following contingent factors for the preceding semester(s) during which you held an assistantship (circle all that apply: fall / spring / summer / year:_____).

- I remained enrolled full time (at least 10 credits as defined in Graduate School policy manual, chapter 9) during the period of the appointment
- I maintained a 3.0 cumulative GPA during the period of the appointment.
- I met the service requirement of an average of 20 hours per week for 0.5 FTE as scheduled by my department/supervisor (or based on hours required for partial FTE appointment).

_____ _____

Student sign/date Faculty Advisor/Supervisor Sign/Date

MPS Preliminary Examination Rubric

	Poor	Fair	Competent	Good	Excellent
Demonstrates mastery of general knowledge in the field of molecular plant sciences					
States a research problem in such a way that it clearly fits within the context of the literature in an area of study					
Demonstrates the potential value of the solution to the research problem in advancing knowledge within the area of study					
Provides a sound plan for applying research methods/tools to solving research problem and shows a good understanding of how to use methods/tools effectively					
Provides a sound plan for analyzing/interpreting research data					
Communicates research proposal clearly and professionally in both written and oral forms appropriate to the field					
Demonstrates capability for independent research in the area of study, the ability to develop and apply substantial expertise in that area and to make an original contribution to it					

Comments:

MPS Final Examination Rubric

	Poor	Fair	Competent	Good	Excellent
Demonstrates high level of expertise in a specific, defined area of molecular plant sciences and a mastery of knowledge in the general field of molecular plant sciences					
Reviews the literature in a way that demonstrates comprehensive knowledge of previous and current research in the field of study					
States a research problem in such a way that it clearly fits within the context of the literature in an area of study					
Demonstrates the potential value of the solution to the research problem in advancing knowledge within the area of study					
Applies sound research methods/tools to problems in an area of study and describes the methods/tools effectively					
Performs statistical analyses of research data and presents the results in a way that makes clear sense of the data					
Communicates research clearly and professionally in both written and oral forms appropriate to the field					
Has demonstrated capability for independent research in the area of study, applying substantial expertise in that area and making an original contribution to it					

Comments:

MPS Bylaws

The MPS Graduate Program bylaws can be found here: https://gradschool.wsu.edu/bylaws/

Doctoral Program in Molecular Plant Sciences Outcomes Assessment

Objectives and Outcomes

The objectives of the program are:

1. To enable students to develop as successful professionals in a collaborative, interdisciplinary environment as preparation for highly competitive positions in industry, government, and academia
2. To prepare students to be effective and innovative researchers in the field of molecular plant sciences
3. To enhance visibility of the doctoral program in molecular plant sciences nationally and internationally

The outcomes for each of the stated program objectives are:

1. To enable students to develop as successful professionals in a collaborative, interdisciplinary environment as preparation for highly competitive positions in industry, government, and academia, the program aims to provide a variety of experiences that help students to:
    a. Achieve mastery of knowledge in the general field of molecular plant sciences and the highest level of expertise in a specific, defined area of this field
    b. Develop the expertise to use molecular technology to solve novel and emerging problems related to plant and agricultural sciences
    c. Present research to local, regional, national, and international audiences through publications in professional journals and conference papers given in a range of venues and to a diverse type of audience
    d. Participate in professional organizations, becoming members, attending meetings, and taking leadership roles where appropriate
    e. Broaden their professional foundations through activities such as teaching, internships, fellowships, and grant applications

Doctoral Program in Molecular Plant Sciences Outcomes Assessment (cont.)

2. To prepare students to be effective and innovative researchers in the field of molecular plant sciences, the program aims to provide a variety of experiences that help students to:
    a. Become independent, self-motivated researchers with the ability to recognize problems in their field of expertise and formulate solutions to the problems
    b. Develop a comprehensive knowledge of previous and current research in their field of expertise and be able to demonstrate that knowledge capably in a review of the literature
    c. Generate viable questions within their field of expertise and pose problems or hypotheses related to those questions
    d. Apply sound research methods to problems in molecular plant sciences and describe the methods effectively
    e. Perform statistical analyses of research data and present the results in a way that makes clear sense of the data
    f. Discuss the solution to the research problem or the support or lack of support for the hypothesis in a way that effectively documents the contribution of the research to the area of study

3. To enhance visibility of the doctoral program in molecular plant sciences nationally and internationally, the program aims to:
    a. Attract and retain high-quality students
    b. Provide effective mentoring that encourages students to graduate in a timely manner
    c. Place graduates in positions in academia, industry, and government
    d. To attract, retain, and support nationally-recognized research-active faculty actively involved in the molecular plant sciences graduate program

Graduate School Policies and Student Bill of Rights

All students are expected to follow the Standards of Conduct for Students under WAC 504-26-401.

Academic Integrity

Violations of include but is not limited to cheating by use of unauthorized materials or sources, acquisition of tests when acquired without permission, fabrication, counterfeiting data, research results, etc., and engaging in any behavior for the purpose of gaining an unfair advantage. If you are accused of a violation your instructor will assemble the evidence and notify you of their finding either in person or by email/phone. Your instructor will make a determination if you did or did not violate the academic integrity policy based on the evidence and circumstances surrounding the issue. You have 21 days from the date of the decision to file an appeal. For more information on the academic integrity violation process, go to https://communitystandards.wsu.edu/policies-and-reporting/academic-integrity-policy/

Faculty-Student and Supervisor-Subordinate Relationship Policy

Faculty or anyone in a supervisory role is prohibited from having supervisory responsibility over a student or subordinate with whom he or she is currently having a romantic and/or sexual relationship. Supervisory responsibility includes any supervisory role perceived as a position of power or authority, and is not limited to instruction, research, academic advising, coaching, service on research and thesis committees, and assignment of grades, evaluation and recommendation in an institutional capacity for employment, scholarships, fellowships, or awards. For more info see http://public.wsu.edu/~forms/HTML/EPM/EP28_Faculty-Student_and_Supervisor-Subordinate_Relationships.htm

Grievance policy

The Graduate Student Rights and Responsibilities document describes procedures for channeling graduate student complaints, grievances, and concerns to faculty, staff and administrators for appropriate action. https://gradschool.wsu.edu/rights-and-responsibilities/ Please also refer to the Graduate Student Bill of Rights for additional information (contained below).

Graduate Student Bill of Rights

GRADUATE & PROFESSIONAL STUDENT ASSOCIATION

Bill of Rights

Section 1. Preamble

This document outlines your rights as a Graduate/Professional student at Washington State University and serves as the basis of the social contract between you and the University. No section of this document shall take precedence over University policy or applicable laws. Please refer to the Graduate Student Handbook, Student Code of Conduct or applicable Academic Regulations if in doubt regarding current policy. This document will serve as a guide and is meant to be fluid in response to changes in policy and time. Any change in this document will be ratified by the Graduate and Professional Student Association (GPSA) Senate and presented to the University Administration. The list below is meant to serve as a quick reference outlining important rights you maintain as graduate students and references for further information.

Section 2: Rights

2.1 Professional Development

Washington State University recognizes the important role that professional development plays in the educational experience of our graduate student population and their ability to be successful in their future goals. Graduate and Professional student rights regarding professional development include, but are not limited to:

i. Authorship and acknowledgment on scholarly publications commensurate with their contributions;
ii. Access to a variety of events that foster their professional development including, but not limited to, internships, conferences, workshops, and courses;
iii. Professional and academic guidance from their advisor(s) and department faculty;
iv. Collaborate with students, faculty, and staff for their professional and academic development.

2.2 Information

Washington State University recognizes that in order for its student population to make careful and informed decisions, there must be a clear and accessible line of communication and access to information. Graduate and Professional student rights regarding information include, but are not limited to:

i. Be informed of their rights and responsibilities;

ii. Be informed in advance of any changes to the University's student health insurance policy;
iii. Be involved, engaged, or informed about decision-making and processes on issues affecting the graduate and professional student population;
iv. Clear, written information on their degree program including university and departmental requirements;
v. Have then plan of academic progress reviewed and approved by their advisor(s) annually;
vi. Written communication prior to any changes made to department expectations on degree requirements, academic progress, and requirements for funding and opportunity to voice their concerns before a decision has been made.

2.3 Privacy/Data Protection

Washington State University commits to protecting your Information. At no point in a student's academic career should they be asked to provide their private information. Graduate and Professional student rights regarding confidentiality include, but are not limited to:

i. Not be asked to provide personal information without cause;
ii. The assurance of data security and in the event of a breach, be provided with adequate identity theft protections (as covered in RCW 42.56.590);
iii. Keep any confidential accommodations from the Access Center private (as covered by FERPA);
iv. Keep any medical or treatment records private regardless of location of care (as covered by HIPPA).

2.4 Academics

Washington State University is committed to providing a world class education and will provide an accessible and welcoming space in which Graduate and Professional students can pursue their research interests. Professors and advisors acknowledge that they hold a position of power and will not abuse that relationship. Graduate and Professional student rights regarding academics include, but are not limited to:

i. The ability to explore, interpret, and question knowledge and opinions;
ii. Be treated with respect in discussions between faculty, administration, and other students;
iii. The freedom to select and pursue research projects in accordance with their interests and/or thesis/dissertation work in productive collaboration with their· graduate committee and advisors.

Assistantships/Funding

Washington State University recognizes the vital contributions Graduate and Professional students make to the University. Graduate and Professional students serve as Research Assistants, Teaching Assistants, and members of our University staff providing critical services and ensuring WSU's ability to provide an outstanding educational experience to all of its students. In recognition of the role Graduate and Professional students hold, WSU commits to reviewing stipend levels to ensure students are being compensated on a fair and equitable basis. Graduate and Professional student rights regarding assistantships and funding include, but are not limited to:

i. Access to a graduate student health insurance plan that provides affordable and adequate physical, dental and mental healthcare coverage;
ii. Ensure their stipend is not reduced during the length of their contract;
iii. A clear outline of time and role expectations of their assistantship through a signed contract prior to the beginning of their funding period;
iv. Be informed in advance and in writing of any changes made to their assistantship contracts;
v. Be provided a schedule of stipend payments prior to signing a contract, and the right to immediate recourse if that schedule is violated;
vi. Be informed in advance and in writing regarding termination of their contract and be reasonably allowed to make other accommodations;
vii. Have stipend and assistantship rates displayed in a transparent manner on the Graduate School and Student Financial Services' website.

2.5 Discrimination

Washington State University is dedicated to providing a safe and accessible educational experience to all of its students. In all things, student well-being takes priority. With this in mind, WSU has instituted a robust student support network that handles instances of discrimination. Graduate and Professional students' rights regarding discrimination include, but are not limited to:

i. The ability to conduct research, learn, teach, and pa1ticipate in University programs and activities, and access to healthcare free of discrimination on the basis of race, religion, color, religion, national origin or ancestry, sex, gender identity, age, disability, veteran status and citizenship (WSU Executive Policy 15);
ii. Freedom to report any discrimination and/or adverse conduct to an entity outside of the student's immediate department, including, but not limited to, the Office of Compliance and Civil Rights, a University Ombudsmen, the WSU Police Department, and the Office of the Dean of Students without retaliation as defined by University policy and/or applicable law;
iii. Access to due process regarding unfair treatment or reports and allegations of assault; Development of a reasonable accommodation plan with the University Access Center (https://accesscenter.wsu.edu);
iv. An accessible Student Conduct process that prioritizes student development and fundamental fairness (Center for Community Standards).

Forms Index

All forms can be found at https://gradschool.wsu.edu/facultystaff-resources/18-2/

You may find all forms pertaining to Doctoral degree requirements at the link above. It is recommended to access all forms via the Graduate School website, as forms are updated frequently.

Deadlines and Procedures for Doctoral Degree

When to complete certain forms and do other administrative tasks, such as graduation, exam scheduling deadlines, and other important dates can be found on the graduate school website, in the deadlines form. Please refer to this prior to engaging in an administrative task. If you have any questions, please contact Alec Brown, the MPS Academic Coordinator. https://gradschool.wsu.edu/facultystaff-resources/18-2/

Note: It is **REQUIRED** that each form is downloaded and edited within an Adobe application. The auto-populate feature **WILL** glitch if edited within a web browser.

MPS.WSU.EDU

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Pullman, WA 99164-1030

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509-335-6424
509-335-7619

Email

molecular.plants@wsu.edu