

TRAINER HANDBOOK: UW- Madison Genetics Graduate Program

The purpose of this document is to provide key information for trainers of Genetics PhD students at UW-Madison, including expectations of our trainers, program requirements of their students, and best practices to ensure a successful mentor-mentee relationship. Additional details, instructions, forms can be found in the Genetics Graduate Student Handbook <https://genetics.wisc.edu/current-ph-d-students/>

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Table of Contents

TRAINER HANDBOOK: UW- Madison Genetics Graduate Program	1
Trainer Expectations at a Glance	1
Funding	2
Genetics Student Stipend Requirements.....	2
Accepting a student into the lab.....	2
Important things to cover when a student joins (or wants to join) your lab.....	3
Leaves of absence.....	3
Genetics Student Requirements.....	3
Student Requirements at a Glance.....	4
Program expectations for Students.....	5
Trainer Review	5
Qualities of a Good Mentor	5
Diversity and Inclusion Practices in Mentoring	6
Forms.....	6

Trainer Expectations at a Glance

1. To strive to provide excellent training to and supportive mentoring of Genetics PhD students.
2. To ensure that students are empowered to meet programmatic requirements, as outlined below.
3. To ensure that students have funding opportunities outside the years of training grant support.
4. To support students in their professional development goals, as outlined in their Individual Development Plan (IDP).

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5. To participate broadly in the UW-Genetics training program, by periodically: serving on committees at request, participating in recruiting (January- February, annually), attending the annual Genetics Program retreat (September or October, annually), attending the Wednesday afternoon Colloquium presentations, and serving on student thesis committees when possible.
6. If your student was on the Genetics T32 training grant, to credit the grant (T32 GM007133) on ALL publications that the student is an author on from their time as a graduate student at UW (even if they are no longer funded on the grant but were at one time) – in doing so, please make sure publication meets public access requirements.
7. Support timely graduation of the student. We aim for students to graduate in under 6 years in the program. This is an important metric in the training grant renewal; students who wish to stay beyond this time in the lab should consider defending and staying as a short-term postdoc.

Funding

The NIH-funded T32 training grant (TG) was renewed in 2019. We were renewed at 12 stipend slots per year (down from 16 slots in the past cycle). At this stage, we are awarding one year of T32 funding for incoming domestic students, with the option for students to apply for a second year of T32 funding if slots are available for returning students. Note “direct admit” students admitted directly to a lab (i.e. those who do not do rotations) are not eligible for T32 funding. International students are also not eligible for NIH Training grant funds.

PIs are responsible for ensuring student funding or access to funding or TAing opportunities for all years that a student is not on the training grant. Note that the required TA experience in Year 2 is not a funded TAship, but instead part of the required training curriculum; PIs are responsible for ensuring student funding during that time if students are not on the training grant. Students are NOT allowed to work in a lab without funding support, unless approved by the Graduate Program Committee. Note that Laboratory of Genetics does not generally have bridge funds for students and does not assume responsibility for student funding.

Travel funding of \$300 each year is available to students during the time they are on the training grant. Additional travel funding is available through the Stone Travel Award. Contact Lauren Foley for assistance, lauren.foley@wisc.edu.

Genetics Student Stipend Requirements

The Genetics student stipend for 2019-2020 is \$28,000. The program requires that all of our students are minimally paid this amount. If a student receives a fellowship, teaching assistantship, or other appointment that pays less, it is expected that the PI will supplement that to the stipend amount.

Accepting a student into the lab

Faculty interested in taking a student generally give a short research presentation the last week of August during student orientation. Students generally do three 4-week rotations and choose a thesis lab by mid-December of their first year (some students do a fourth rotation in January). Before a student can join a lab, the PI must outline a funding plan for the student that covers their second year in the program. Lab funding will be evaluated before the Graduate Program Committee approves the student joining the lab.

Important things to discuss when a student joins (or wants to join) your lab

1. Funding, including lab funding status and planned funding for the student
2. Expectations of work schedule, time commitment, etc.
3. Expectations of ethical and professional behavior
4. Expectations of communication, how you will give and receive feedback
5. Expectations of personal and professional boundaries
6. Student's immediate and long term goals (including goals for professional development)
7. Student's expectations of mentor
8. Student's strengths, weaknesses and needs

Leaves of absence

While the program has no official policy on leaves of absence, we want to support students in balancing work and home life. The Graduate Program is happy to assist students and PIs in navigating leave arrangements. For reference, NIH allows 60 days maternity leave for students on NRSA (including T32) funding (<https://nexus.od.nih.gov/all/2016/06/27/revise-nih-parental-leave-policy-for-nrsa-recipients/>). Leave of absence for childbirth, adoption, health reasons or other personal situations can be discussed with the Graduate Program Director and/or Coordinator.

Genetics Student Requirements

1. Coursework:
 - Genetics 701, Advanced Genetics, 3 credits, Year 1 Fall
 - Medical (MD) Genetics 708, Methods and Logics in Genetics Analysis ('Round Table'), 3 credits, Year 1 Spring
 - Genetics 702, Advanced Genetics, 3 credits, Year 1 Spring
 - MD Genetics 707, Genetic Analysis of Human Biology ('Round Table'), 3 credits, Year 2 Spring
 - Responsible Conduct in Research: preferably Biochem 729 (David Schwartz Section 8, Fall 2nd year) or Oncology 715, Appropriate Conduct in Science, 1 credit
 - Elective: Any graduate level (500 or above numbering) course offered in Genetics*
 - Specialized coursework at the discretion of the committee
2. Four seminars including the Genetics Summer Colloquium after Year 3 and Year 4. Seminars given as part of other courses or training requirements can be counted toward the Genetics four-seminar requirement. (FORM REQUIRED)
3. Rotations (3-4 four-week rotations during first year) (FORM REQUIRED)
4. Choose a thesis committee (5 members ultimately; 3 trainers; 2 Genetics faculty)
5. Certification meeting with committee by August of first year, students typically give a short presentation of their research plans and present an overview of past and planned coursework (FORM REQUIRED)
6. Yearly committee meeting** with review of Individualized Development Plan (FORM REQUIRED)
7. Teaching Assistant (TA) Training during June of first year
8. Diversity and inclusive teaching training, required of all UW TAs, before second year
9. One semester of teaching in Genetics 466, 467 or 468 during second year (note: this is an academic requirement and not a paid TAship)

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10. Oral Thesis Proposal Defense exam, which includes written proposal and oral defense of thesis proposal to committee. The Oral Thesis Proposal Defense must be completed by August 31 of second year (except in cases of extenuating circumstances which should be approved by the Grad Program). Students are awarded a Masters degree and dissertator status upon passing the Oral Thesis Proposal Defense.
11. Responsible Conduct in Research refresher workshop, one afternoon during the fourth year
12. Writing and successfully defending thesis including public seminar and exam with committee

* In some uncommon circumstances, students can petition to have a course offered outside Genetics count as the elective IF the course covers substantial genetics or genomics content. The student MUST get approval BEFORE taking the course by 1) providing the course syllabus and example reading material, 2) writing a clear justification for why the course covers the same genetics content as a course offered through Genetics. Approval is voted on by the Genetics Training Program steering committee and several cases have been declined – therefore, students should get approval before taking any course.

** Students cannot register for Summer semester unless the annual committee meeting has been scheduled, and they cannot register for Fall semester unless paperwork has been turned in.

Student Requirements at a Glance

Year 1 Fall	Spring	Summer
<ul style="list-style-type: none"> ◇ Genetics 701 - 3 credits ◇ Complete 3-4 rotations (4 weeks each) ◇ Join Lab 	<ul style="list-style-type: none"> ◇ Genetics 708 - 3 credits ◇ MD Genetics 702 - 3 credits ◇ Grant Writing Workshop ◇ Choose committee members 	<ul style="list-style-type: none"> ◇ Teaching Assistant Training- first full week of June ◇ Complete certification meeting (by August)
Year 2 Fall	Spring	Summer
<ul style="list-style-type: none"> ◇ TA for Genetics 466, 467, or 468 (either Fall or Spring) ◇ Biochem 729, Section 8: Responsible Conduct in Research 	<ul style="list-style-type: none"> ◇ TA for Genetics 466, 467, or 468 (either Fall or Spring) ◇ MD Genetics 707 - 3 credits ◇ Oncology 715 (if haven't taken Biochem 729) - 1 credit ◇ Hold annual committee meeting and complete paperwork 	<ul style="list-style-type: none"> ◇ Oral Thesis Proposal Defense exam – completed by August 31 of the second year. This counts for the annual committee meeting.
Year 3 Fall	Spring	Summer
	<ul style="list-style-type: none"> ◇ Hold annual committee meeting and complete paperwork 	<ul style="list-style-type: none"> ◇ Present Summer Colloquium
Year 4 Fall	Spring	Summer

	◊ Hold annual committee meeting and complete paperwork	◊ Present Summer Colloquium ◊ Responsible Conduct in Research refresher workshop
Year 5 Fall	Spring	Summer
◊ Hold final committee meeting 6 mo. prior to defense and complete paperwork	◊ Defend thesis (spring or summer)	◊ Defend thesis (spring or summer)

◊ Students must complete one elective course and any coursework required by committee by the end of their third year. Students should aim to be done with courses by the time they are a Dissertator. According to UW rules, students can only take courses for credit after becoming a dissertator if a) the course is related to the student’s research, b) the course is 3 credits or less, and c) the program provide a written documentation for why the course is needed.

Program expectations for Students

1. Regular attendance at the department’s Wednesday afternoon Colloquium, even when not participating in the Roundtable course
2. Attendance and participation at the annual retreat in the Fall
3. Participation in recruiting, department events, and committees, as requested
4. Being proactive about communicating questions, problems, concerns, struggles with the program coordinator
5. Responsible and ethical conduct within and beyond our community

Trainer Review

Genetics trainers will be reviewed by the Graduate Program Committee, initially 10 years after joining the program and every five years thereafter. Trainers will be asked to submit information about their current work, funding, and evidence of participation in the training program.

Qualities of a Good Mentor

This section summarizes feedback we received from our students. Students in our program are serious about their education and they have many thoughtful ideas about what they’d like in a mentor. Below is a summary of students’ feedback on qualities of a great mentor (* recurrent themes from the survey). A great mentor is:

- * Available, approachable, and supportive of what students need to be successful
- * Has regular meetings with students and communicates clearly with students
- * Provides regular feedback to students, including what areas they can improve on and concrete suggestions about how they can improve
- * Clearly communicates expectations
- * Listens to student ideas
- * Open to students’ creativity but also an able to shape and manage that creativity into feasible experiments with likely outcomes
- * Discusses career goals with students and allows them to participate in professional development outside the lab

- Involved – in the lab, program, department, research
- Discusses a timeline to graduation and provides feedback on progress toward graduation
- Supportive of committee meetings, programmatic requirements, and professional development
- Has knowledge about potential funding resources for students
- Encourages collaboration and can expose students to new contacts/collaborators
- Knowledge of how the program works
- Is honest about how they mentor and what expectations are

Student opinions on what makes a bad mentor (* recurring themes):

- * Not available or willing to meet regularly
- * Apathetic toward student's progress, project, or goals
- * Inconsistent mentoring – inconsistent with feedback or follow through
- * Not clear about expectations
- * Disorganized
- * Doesn't allow student to participate in outreach or professional development outside of lab
- Participates in favoritism
- Doesn't give credit for students' work
- Criticizes student's desired career path
- Prevents students from graduating despite publications and progress

Diversity and Inclusion Practices in Mentoring

The Genetics Graduate Program is committed to fostering diversity within our program. We recognize that students come from diverse backgrounds and enter the program with different experiences, strengths, and weaknesses. These experiences, which are sometimes culturally based, influence students' prior knowledge of subject matter, understanding of expectations, and motivational triggers. Accounting for this variation not only enhances students' learning but also helps in retaining students from diverse backgrounds. We ask trainers to read the attached Inclusive Teaching Guidelines and incorporate those practices into their teaching and mentorship; below is a summary of some best practices:

- Empower students to learn and express their knowledge. Provide an environment in which each student feels comfortable, valued, and supported to succeed
- Tell and show students that you value diversity and that you will not tolerate discrimination or bias. Set the tone and be consistent with your expectations for professional, inclusive behavior
- Encourage a "growth mindset" that all students can improve with work
- Be aware of campus resources that some students may benefit from (*e.g.* McBurney Disability Resource Center)
- Avoid making generalizations about student experiences or asking individuals to speak for a social identity group
- Be aware of your own potential biases to ensure fairness
- Talk to your students honestly about how they are doing and what they need to succeed

Forms

Required forms are completed through our [database system](#).

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- Certification Form - completed at certification meeting, ideally in Spring of first year but no later than August of first year. Requires committee to evaluate student's prior and future coursework, as well as to discuss potential doctoral minors.
- Seminar Form - completed each time a student presents a seminar.
- Annual Meeting Form – filled and distributed by the student before the committee meeting and completed at required annual meeting. Requires information about goals and progress. Students are required to update any presentations, conference attendance, presentations, and honors and awards at this time as well, which is critical for our training grant progress reports.
- Warrant Request Form - completed for Oral Thesis Proposal Defense and final Thesis Defense.