Graduate Student Handbook 2023–2024

Plant and Microbial Biology Graduate Program
University of Minnesota • Twin Cities

https://cbs.umn.edu/academics/departments/pmb/graduate-education

Plant and Microbial Biology Graduate Program
GRADUATE STUDENT HANDBOOK

This handbook is meant to provide students with a primary resource of the requirements, expectations, and opportunities of the PMB Graduate Program. Use it as a reference as you progress through the program. To stay informed of expectations and opportunities, you also should read all emails you receive from the Director of Graduate Studies, the Graduate Program Coordinator, and the Graduate School.

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The information in this handbook and other University catalogs, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.
Revised August 2023 by Sara Eliason and Candice Hirsch.

Plant and Microbial Biology Graduate Program

The Plant and Microbial Biology (PMB) Graduate Program strives to provide outstanding interdisciplinary education for careers in academia, industry, government, and public service. The program is also committed to supporting diversity, both in scientific pursuits and the community of people conducting that science.

The graduate program seeks to recruit and train students from a wide variety of backgrounds and to provide those students with:
- interdisciplinary educational, research, and professional development experiences;
- opportunities to work on a broad range of cutting-edge research topics in plant and microbial biology;
- opportunities to conduct independent research, develop as innovative educators, and engage in community outreach;
- opportunities to participate in the national and international plant and microbial biology research community through seminars, colloquia, and conferences.

The PMB program expects students to develop the conceptual understanding, analytical skills, and technical knowledge that allow those students to make important contributions to our understanding of biology and that lay the foundation for professional success.

UMN Graduate Labor Union

Note that this handbook is based on the PMB Graduate Program's standard requirements, procedures, policies, and compensation plan (stipend, tuition, health insurance). PMB recognizes that the details of how the program operates and funding packages for PMB graduate students may change based on the pending UMN Graduate Labor Union contract and will abide by any negotiated adjustments.

https://gradunionization.umn.edu/

Suggestions for success

- **You are here to learn.** Take advantage of the many opportunities that the program and University provide for your intellectual, professional, and personal development.
- **Graduate school ≠ college.** You are in charge of your education. You are a member of a community of faculty, students, technical staff.
- **Ask questions.** It is okay to not know things!!! There are many unwritten rules in academia.
- **Plan ahead.** It is your responsibility to know the deadlines for key steps in your degree program and give yourself enough time to complete things well in advance of those dates. It is also your responsibility (in consultation with your advisor) to plan out the timeline for your thesis research.
- **Seek to connect.** Use your office and/or lab space to facilitate departmental interactions. Science is not a solitary pursuit; students who exclusively work from home seldom succeed. Participate in lab groups, discussion groups, seminars, and events built for networking with the broader PMB community and colleagues across UMN.
- **Build strong relationships.** This includes with your thesis advisor, but also relationships with other professors, post-docs, and with your fellow graduate students. There are many social events (e.g., program sponsored coffee hours and Phytograds activities) that are great opportunities to build connections with other students, staff, and faculty.
- **Meet regularly with your advisor.** Meet also with the members of your advisory committee. Lab meetings and meetings with your advisor are generally mandatory. If you are going to miss them, ask is you can miss and give advance warning.
- **RESEARCH is the most important thing.** Classes help you to be successful with your research.
- **Become a professional society member.** Attending annual meetings and giving talks or posters based on your research will help you develop a professional network.
- **Keep up with the literature.** This can be accomplished through readings, journal clubs, and seminars. Science changes rapidly, and you need to be at the forefront of knowledge.
- **Write proposals and get feedback.** Take advantage of fellowship and grant opportunities, both at the University of Minnesota as well as from national and international sources.
- **Aim to publish your work.** Make a plan with your thesis advisor regarding writing and publications and keep communication open. Publishing well before the end of your thesis is important for enhancing your success with fellowships and career advancement.
- **Embrace differences.** The program includes a diversity of disciplines as well as scholars from different backgrounds and experiences. You will be a stronger scientist by learning how to communicate your science effectively to diverse audiences.
- **Be professional.** Be punctual. Be respectful of your peers', faculty members', and staff time. Check your UMN email regularly. Keep your calendar up to date.
- **Respect professors' and staff members' time.** Professors and staff are here to work with and assist you, but remember they have other commitments. Whenever possible, give them enough lead time to help you with questions or issues.
- **Be mindful of your own wellbeing.** Take care of your mental and physical health, and strive for a healthy work-life balance. When you encounter difficulties, seek help. If you need accommodations, work with the Disability Resource Center to establish plans for the physical, mental, learning approaches support you need for coursework, field/lab work, program milestones. (See key resources on page 44 and the CBS Mental Health Guide on page 61.)

Key people and program resources

ACADEMIC PROCESS, RESOURCES, SUPPORT, FUNDING, ETC.

Dr. Candice Hirsch
Director of Graduate Studies (DGS)
cnhirsch@umn.edu | 612.301.9522

Sara Eliason
Graduate Program Coordinator (GPC)
140 Gortner Lab Building
seliason@umn.edu | 612.625.4222

> **NOTE:** The program DGS and GPC maintain an open-door policy for students to discuss issues that may arise with advisors, coworkers, peers, staff, research, courses, funding, degree progress, etc. Contact them or stop by their offices any time.

PHYTOGRADS – PMB GRADUATE STUDENT ORGANIZATION

Tony Zmuda
Ph.D. student and Phytograds president
zmuda015@umn.edu

CBS HUMAN RESOURCES OFFICE—IN SNYDER HALL

Graduate assistant appointments
cbshr@umn.edu

OFFICES, KEYS, AND MAIL
> Office / bench space is generally provided by your advisor. For students who have not yet identified an advisor, the program will identify office space.
> To obtain access to the building, office, and lab you should talk with your advisor or the GPC.
> Your mailbox location depends on the building in which your office is located, ask your advisor.

COMPUTERS AND PRINTING
> Computer and general IT help: contact help@umn.edu and check https://it.umn.edu/.
> You may be eligible for a graduate assistant computer subsidy. For details, check: https://cbs.umn.edu/info/internal-resources/faculty-staff/rlt/computer-purchasing.
> (If you use the subsidy, the computer is the property of the University and must remain at the University when you leave.)
> Computing resources are available through the Minnesota Supercomputing Institute. Access to MSI must be done through a Principal Investigator's group: http://msi.umn.edu/.
> Poster printing is available through the University Imaging Center: http://uic.umn.edu/.
> General printing: Check with your advisor and the building where your office is located.

CALENDARS AND NOTIFICATIONS
- The **general academic calendar with dates of registration, add/drop deadlines, finals, and holidays** for each semester: https://onestop.umn.edu/calendar/academic-calendar.
- The **graduate student planning** timeline and information: https://onestop.umn.edu/academics/grad-and-professional.

Academic process: Doctor of Philosophy

The expectation of the program is that it will take <u>five years of full-time work</u> to earn a Ph.D. A general timeline of how students spend each of the five years in the program:

- **First year:** Explore interests, develop knowledge, take courses, conduct preliminary research, and identify potential research projects that will form the basis of the dissertation.
- **Second year:** Complete courses, write research proposal, gain expertise in the research area, complete written preliminary exam, get started with dissertation research.
- **Third year:** Complete oral exam (by beginning of your fifth semester), devote an increased amount of time to collecting data, analyzing data, interpreting results, and writing dissertation.
- **Fourth year:** Devote time to dissertation research and writing (and submitting) manuscripts, start thinking seriously about career paths following graduate school.
- **Fifth year:** Complete dissertation, make concrete plans for career path following graduation, graduate.

All students must fulfill certain educational requirements:
- core courses
- supporting courses
- thesis credits
- research experience
- professional development
- teaching experience

The sections in this handbook elaborate on these expectations, describe program and university requirements and deadlines, and provide information on resources to help you complete your degree. Most students are financially supported by a combination of fellowships, research assistantships, conservatory assistantships, and teaching assistantships. These, too, are discussed in this handbook.

CREDIT AND COURSE REQUIREMENTS

Students come into the program with diverse interests, backgrounds, and career goals. As such, you are able to tailor your course plan with the help of your major advisor and advisory committee. However, as a student earning a graduate degree in PMB, you are encouraged to advance your knowledge and gain competency in the broad spectrum of disciplines covered in the program. Course work is one way to gain this competency.

Credit requirements
- 54 credit hours total required
  - \> 30 course credits
    - − 9 credits of required courses
    - − 21 credits of supporting courses, minimum
  - \> 24 thesis credits
- Grades of S, C, or higher are required on all coursework.
- At least 2/3 of graded course credits must be from courses graded A-F.
- Two 4000-level courses are allowed. (For permission to take more than two 4000-level courses, confer with your advisor, committee, and the DGS.)

DEGREE PLAN

You will work with your advisor and committee members to develop a plan for the course work and thesis credits you will take. Once you have decided which courses you will take, you must submit the online graduate student degree planner ("GPAS planner"). Access the planner through the "Academics" tab on MyU.

> *PROCESS.*   **By January 31 of your fourth semester (spring of second year):**
> 1. **complete, sign, and submit the PMB program planning form to the GPC.**
> 2. **submit your online GPAS planner, before you submit your written preliminary exam.**

Your GPAS planner is an official document and can be viewed as a contract of courses that you have committed to take in order to obtain your degree. At the time of submission, a copy of the plan will also be sent to the GPC and the DGS.

The PMB program recognizes that course availability and student needs change, so your course plan may change accordingly. When this happens, you do not need to submit a new GPAS planner, but you should get approval from your advisor and advisory committee before deviating from your original course plan.

*Please note: Do **not** submit the paper-based degree plan form to GSSP. PMB no longer uses this form.*

COURSES

Core required courses (9 credits)

PMB 8081. Succeeding in Graduate School: Skills, Ethics, and Beyond (3 credits)
Take this course in fall semester of your first year.

PMB 8900, section 001. PMB Colloquium (1 credit)
You must register for PMB 8900 section 001, the PMB seminar series, once, typically during your first semester. In all subsequent semesters, you should regularly attend the PMB Colloquium. The opportunity to hear and meet invited speakers is an important component of the graduate student experience.

PMB 8900, section 002. Itasca Orientation. (1 credit)
Incoming students register for this course in the fall semester of your first year and attend the Itasca Orientation in August, prior to the fall semester. The orientation is designed to foster interactions among students and faculty, introduce students to current research in the program, and provide guidance for a successful first year and graduate career.

PMB 8900, section 003. PMB Graduate Student Seminar. (1 credit)
Take this course in fall semester of your first year. The goal of this seminar is to foster interaction among PMB students and highlight the breadth of research in plant and microbial biology. Fifth semester students participate (but do not register) and give a seminar on their thesis proposal.

PMB 8901. Preparation of Research Proposals. (2 credits)
Take this course in the fall of your second year. The course prepares students for the preliminary written exam by providing instruction and feedback for writing an original research proposal. In this course, you will draft a research proposal, which you can then use as the basis for your preliminary written exam during spring of your second year.

PMB 8994. Directed Research. (1 credit)
Take this course in fall semester of your first year. You register for 1 or 2 credits. See page 7 for details on the research experience(s) that will fulfill the requirements of this course.

Supporting courses (21 credits)

You must take at least 21 credits of supporting courses. A broad spectrum of courses may be used to fulfill these 21 credits, including all 5000- or 8000-level courses offered with the AGRO, BIOC, BIOL, EEB, FNRM, GCD, GRAD, HORT, PLPA, PMB, and STAT prefixes. Courses with the BBE, CSCI, and LAAS prefix and some 4000-level may also be relevant. Related courses taught in other disciplines, such as a History of Science course, either HSCI 5211 or HSCI 5244, are available to interested students. A partial list of supporting courses is available on the PMB Graduate Program website, and other courses are acceptable to take with the approval of the advisor and DGS.

NOTE: **Transfer courses** are allowed only if the courses were not applied toward completion of another degree. Credits taken as a master's student and applied toward completion of a master's degree may not be applied towards a PMB doctoral degree.

Thesis credits (24 credits)

PMB 8888. Thesis Credits: Doctoral. (24 credits). Register for thesis credits in any semester, including your first semester.

RESEARCH EXPERIENCE

Research experiences provide opportunities for you to identify a thesis project, an advisor, and committee members, as well as to develop research skills and gain exposure to a variety of research topics and techniques that will help you in advancing your research and academic goals.

Sometime during your pre-candidacy in the PMB Ph.D. program, typically in your first or second semester, you must complete a research rotation or another substantive activity at the University of Minnesota that provides connections beyond your home lab. Both rotations and other activities for making connections outside of your advisor's lab must be approved by the DGS.

The process:
- Register for one or two credits of PMB 8994 Directed Research under the A-F grading option. [The DGS is listed as the official instructor, but you will work with the lab(s) that fit your interests.]
    - For each credit of directed research it is expected that you will have ~45 hours of time devoted to the directed research throughout the course of the semester.
    - If you opt for rotations, you will likely register for two credits of PMB 8994.
    - If you opt for other activities, you will likely register for one credit of PMB 8994.
- Work with your (prospective) advisor(s) or the DGS to set a plan for your research experience.
- By the fifth day of the semester, submit the PMB 8994 Directed Research plan form to the GPC.
- Grading: At the end of the semester, you will write a two-paragraph summary of each rotation or experience and how the activities completed during the semester link to your larger thesis goals. Submit this summary to the DGS by the last day of regular classes. The DGS will use that document and a one paragraph summary from the faculty member(s) who are your mentor(s) for the semester in order to determine your grade. Evaluation of your work is based on attendance, communication, preparation, research capacity, completion of/progress on projects. You will receive the faculty feedback on your rotation before the beginning of the following semester.

Rotations

If you opt for rotations, plan to spend time in two labs (one may be in your home lab). Along with your rotation mentors, you will define the nature and scope of the rotation activity at the outset. Rotation activities can be quite variable; some rotations focus on reading the scientific literature or learning techniques, while others aim to accomplish particular experiments or analyses. Regardless of the nature of the rotation, you are expected to engage in regularly scheduled activities, to discuss progress and problems with your mentors, and to evaluate results of the rotation.

If you choose to do rotations in order to find an advisor, be certain to ask the potential advisor if they are interested in having you as a student before you begin and how the rotation will contribute to their decision as to whether to serve as your advisor.

> **NOTE:** Rotations are allowed and encouraged for students who have already identified their home lab as an opportunity to build skills and build your scientific mentoring network.

Other activities
If you opt for another substantive opportunity outside of your home lab, plan the activity and get approval from the DGS before commencing. This option is particularly geared for you if you enter the PMB program having already identified your advisor, or identify an advisor soon after joining the program, and decide that formal rotation is not a valuable use of your or faculty members' time. Because the per-week time commitment is likely less than that involved with a rotation, the expectation may be that this other activity spans your entire first year. Ideas for other research skill activities include, but are not limited to: actively participate in one or more faculty members' lab/group meetings; participate in a formal journal club or discussion group; attend a regular seminar series in another program; take existing data (yours from previous work or the lab's) and conduct the analysis and synthesis. These activities are to be completed with a group at the University of Minnesota.

PROFESSIONAL DEVELOPMENT

Professional development is central to graduate success. You develop professionally through courses, research, and interaction with others at the University. However, it also is valuable to engage in activities that are specifically aimed at professional development, and the PMB program requires that you do so. There are several ways to fulfill this requirement: courses (e.g., GRAD 8101 Preparing Future Faculty, CFAN 8101 Professional Skills for Scientists, BIOL 8100 Improvisation for Scientists, BIOL 5701 Science Communication), workshops (e.g., career development, research group management, teaching skills, writing skills, leadership development), or internships in industry. See page 41 for ideas on options.

Reporting: Professional development is an official milestone that the GPC will record on your student record and that must be met before you will be eligible for the final exam. Report all professional development activities on your annual review form (see page 17).

TEACHING EXPERIENCE

As a doctoral student in the PMB graduate program, you are required to serve as a teaching assistant for at least one semester. This is a 50% effort, or 20 hours per week, appointment. If you have equivalent prior teaching experience, you may petition the DGS to modify or waive the teaching experience requirement. You are allowed to TA for more than one semester depending on funding availability and professional goals. Priority for TA positions is given to those students who have served as a TA for fewer than two semesters.

All new teaching assistants must complete TA training before being eligible to serve as a TA:
> General TA training with the College of Biological Sciences or new TA orientation through the Center for Educational Innovation (https://cei.umn.edu/); and
> Teaching with writing through the College of Biological Sciences or the Center for Writing (writing.umn.edu).

English language requirement for international student teaching assistants
All international students at the University of Minnesota must meet the University's English language proficiency for teaching assistants requirement before serving as teaching assistants. See https://cei.umn.edu/programs/setta/proficiency-rating-ta-eligibility.

Proficiency is assessed in one of three ways:
1. English proficiency exam speaking sub-score (TOEFL iBT or IELTS);
2. Spoken English Test for Teaching Assistants (SETTA) at the UMN; or
3. Final exam taken after coursework in the UMN international TA program. For details, see: https://cei.umn.edu/spoken-english-test-teaching-assistants-setta.

All PMB international students who do not meet the University's English language proficiency for teaching assistants requirement through their TOEFL iBT or IELTS score must take the SETTA after their first semester but before they request a teaching assistantship.

RESEARCH PRESENTATIONS

All students in the PMB graduate program will give at least two oral research presentations to the PMB community, in addition to the dissertation defense seminar at the end of your program. The aim is to gain presentation practice and to share your research with the PMB community.
1. As a third-year student, you are required to present a talk of at least 20–25 minutes during the PMB 8900 sec 003 PMB Graduate Student Seminar course.
2. As a fourth- or fifth-year student, you are required to present a talk of at least 20–25 minutes at the PMB spring retreat or PMB Colloquium.

ETHICS/RESPONSIBLE CONDUCT OF RESEARCH TRAINING

All UMN graduate students must complete ethics/responsible conduct of research training. This is also required by funding agencies. PMB 8081 meets the NSF and USDA-NIFA RCR and UMN ethics training requirements.

REGISTRATION

- Register for classes using the registration shopping cart in MyU, under the Registration tab. You can check course offerings through the Schedule Builder on the One Stop website, https://schedulebuilder.umn.edu/.
- Registration dates: check https://onestop.umn.edu/academics/registration-times.
  - For spring semester, registration typically starts in mid-November. For summer and fall semester, registration typically starts in mid-April.
  - View your specific registration time on the Registration tab in MyU: Academics.
- Registration runs up to midnight on the last night prior to the first day of class.
- The terms "credits," "hours," and "units" are used interchangeably.
- If you fail to register by the published registration deadline, you will be deactivated as a student. (See https://onestop.umn.edu/calendar/academic-calendar.)
  - To be reactivated in the program, you must apply for readmission, using the "Express Readmission" form online at https://www.grad.umn.edu/admissions/readmission.
- If you register after the published registration deadline, you will incur a late fee. You, not the program, will be responsible for paying this late fee.
- Registration for summer is not allowed, unless approved and paid for by your advisor.

Minimum registration

- Students on an assistantship or fellowship must register full time each fall and spring semester. Full time means:
  - > Prior to reaching advanced status: 6 credits to 14 credits
    - You should register for 14 credits each semester until you have completed all required course and thesis (PMB 8888) credits. If you register for more than 14 credits there will be additional tuition charges that you will be responsible for paying.

  - > After reaching advanced status: 1 credit
    - This is also called "full-time equivalent (FTE)" or "one-credit" status.
    - You reach advanced status after completing all course and thesis credits and passing both your written and oral preliminary exams.
    - Register each semester for 1 credit of PMB 8444 FTE: Doctoral or PMB 8333 FTE: Master's.
    - Once you reach advanced status, you must register for 1 credit of PMB 8444 FTE: Doctoral or PMB 8333 FTE: Master's or you must register and pay for a minimum of 6 credits, to qualify as a full-time student. No other 1-credit courses may be substituted for PMB 8444 or PMB 8333.

- Continuous registration
  - All students must register for at least one credit every fall and spring semester until all requirements for the degree are fulfilled.
  - If you do not register in any fall or spring semester, you will be considered inactive.
  - Register by add/drop date or the following day you will be dropped for non-enrollment.
  - To register again in that semester, you may request express readmission.
  - To resume your degree program, you would be required to apply for readmission to the university and program.

- Residency: You must take at least 12 course credits at the University of Minnesota to fulfill the residency requirement for the doctoral degree. For a master's degree, you must take at least 60% of your course credits at the U of MN.

- Students with F-1 visas: Registration guidelines are on the International Student Services web site at https://isss.umn.edu/fstudents/maintain-your-legal-status/full-course-study.

- Students with J-1 visas: Registration guidelines are on the International Student Services web site at https://isss.umn.edu/jstudents/maintain-legal-status/full-course-study.

- Students with financial aid:
  - Most financial aid awards required that you enroll in a minimum number of credits. See https://onestop.umn.edu/finances/financial-aid/eligibility-financial-aid.

Maximum registration
- You may register for a maximum of:
  - Prior to reaching advanced status: 14 credits (max.)
  - After reaching advanced status: 1 credit

- The PMB graduate program recommends that you do not register for more than the standard full-time course load of 14 credits in fall and spring semesters.
  - Tuition support from the program, college, university, or outside funding sources, most often will cover a maximum of 14 credits per semester.
  - If you register for more than 14 credits, you are responsible for paying the additional tuition charge.
  - Some advisors or sponsors may cover more than 14 credits, but you should check with your advisor or sponsor before registering for more hours than 14 credits.
  - The absolute maximum number of credits you may take in any one semester is 18.

- S/N grading option: You may register for a maximum of 30% of your course credits as S/N.

- 4000-level courses: You may register for a maximum of two 4000-level courses.

Other registration considerations
- A-F or S-N grade basis
  - There are two distinct grading systems: A-F and S-N (satisfactory or not satisfactory). The two may not be combined for a particular student in a particular course.
  - When both grading systems are available, you must declare a choice of system as part of the initial registration for the course. *The choice may not be changed after the end of the second week of classes. To request an exception to this deadline, submit the Graduate Registration Exception Request, under "Appeals and Petitions" on the One Stop forms page: https://onestop.umn.edu/forms.*

- Auditing
    - You may audit classes, but you receive no credit and they do not count toward your required classes or the 6-credit minimum to be considered full time. In general, there is little advantage to auditing a course. Check with your advisor, the DGS, and the GPC before auditing a course.
    - To maintain your visa or assistantship status, you must be registered for 6 credits in addition to any audited courses.
    - You will be billed for audited courses.
    - If you audit a class, and your total course load exceeds 14 credits, you will be billed for all credits over 14.

- GRAD 999
    - See the CBS guidance/policy on GRAD 999 registration under the "Policies, forms and resources" on https://cbs.umn.edu/graduate-students/policies-forms-and-resources
    - Zero-credit, no-fee placeholder course that allows you to maintain active status as a graduate student. It will NOT maintain full time status for anything else, such as a paid appointment (RA or TA) or deferred student loans.
    - You will not retain health insurance when you are registered for GRAD 999**.**
    - International students may register for GRAD 999 but first must consult with ISSS.
    - You may register for GRAD 999 once you have completed *all* degree requirements and have attained advanced status but need to maintain active status to graduate.
    - In certain circumstances, e.g., when you are conducting research away from the university, but do not have assistantship or fellowship support and need to avoid paying tuition, you may be allowed to register for GRAD 999 before attaining advanced status.
    - You may register for GRAD 999 in your final semester, when you plan to graduate.
    - With GRAD 999 registration, you will lose access to certain university resources (gym, etc.), because you are not paying student fees.
    - Do not register for GRAD 999 if you must be registered to hold a graduate assistantship, defer loans, or receive financial aid.
    - You may register for GRAD 999 twice (two semesters) without requesting college permission. After this, the PMB program will place a registration hold on your record.
    - Additional semesters of GRAD 999 registration requests require approval from your advisor, the DGS, and the CBS Associate Dean for Graduate Students and Postdocs.
    - The form to request GRAD 999 registration is available on the CBS website, under the "Policies, forms and resources" section on https://cbs.umn.edu/graduate-students/policies-forms-and-resources.

- Leave of absence (LOA)
    - Under extenuating circumstances, you may petition for up to a two-year LOA. You are not required to register during a LOA. After two years, you must register again or you will be considered withdrawn from the program and must apply for readmission.
    - Find the CBS LOA guidelines and request form at https://cbs.umn.edu/leave-of-absence.
    - See the UMN LOA policy at https://policy.umn.edu/education/gradstudentleave.
    - The College of Biological Sciences will consider extending health care benefits to graduate students who are already approved for a leave of absence due to debilitating physical or mental health conditions. See https://cbs.umn.edu/leave-of-absence for details.

ADVISOR AND ADVISORY COMMITTEE

Advisor
- Identify your thesis research advisor no later than the end of your second semester.
- Notify the GPC of your advisor, once determined. The GPC will list your advisor on your official student record.
- Co-advisor: If you have a co-advisor, notify the GPC of this as well.
  - May represent your major or minor/outside field on the preliminary oral and final exam committees.
  - May not vote on your preliminary written exam.
  - May serve as chair for the preliminary oral exam.
- If you have not identified an advisor by the time you enroll, the DGS or ADGS will serve as a temporary advisor. You are expected to approach PMB faculty members to identify a thesis research advisor. Inquire about research opportunities and discuss potential thesis projects.
- If you are having difficulty finding an advisor, meet with the DGS to seek assistance. It is important that you look for this assistance early in your first year. If you have not identified an advisor, or multiple faculty willing to serve as your advisor, by the end of the first semester, you should meet with the DGS.
- If you switch advisors during your program, first consult with the DGS. You then must notify the GPC by email of this change to update your official student record.

Advisory committee
You will work with your advisor to form an advisory committee. Your committee will help you develop your research, choose courses, provide instructive feedback, evaluate your performance, and ensure progress towards your degree.
- You must have at least four committee members (your advisor plus three others).
- If you have a co-advisor, you are required to have at least five committee members for your written preliminary exam.
- Three committee members, of whom one is your advisor, must represent PMB.
- One committee member must represent a supporting program.
- The member representing a supporting field could be a member of the PMB graduate program faculty, so long as this person also holds an appointment in another graduate program (e.g., APS, EEB, GCD).
- Committee members from outside the university are allowed. (See page 13 for details.)
- The composition of your committee can be changed, but you should not make changes before discussing this with your advisor.

Committee activities:
- Regular advisory committee meetings
  - You are expected to meet regularly with your advisory committee—you should want to; they can provide valuable guidance.
  - Your committee is a resource for not just questions about your research, but also about career goals, expanding your network, interpersonal issues, etc. This can happen during your full committee meetings as well as in one-on-one meetings with your committee members.

- Preliminary written examination committee
  - In your fourth semester, your committee will review your research proposal, which serves as your preliminary written examination.
  - You may discuss the proposal with your advisor (and co-advisor if you have one), but they cannot directly edit the document that you will submit.
  - One committee member (not your advisor) will serve as chair (the administrator) of this exam. You may ask one member to serve as chair or your committee members may decide among themselves who will serve as chair.
  - Your advisor may serve only as a non-voting member.
  - If you have a co-advisor, they may serve only as a non-voting member and may not serve as chair for your written preliminary exam.
  - If you have a co-advisor, you must have five committee members for your preliminary written exam (your advisor (non-voting), co-advisor (non-voting), plus three others).
  - Your advisor (and co-advisor) reads and comments on the exam and assists the committee and you, if revisions are required.
  - You do not need to formally declare this committee with the graduate school; however, you must report the committee membership to the PMB GPC.

- Preliminary oral examination committee
  - Before the end of your fifth semester, you should hold your oral preliminary examination.
  - One committee member (not your advisor) will serve as chair (the administrator) of this exam. You may ask one member to serve as chair or your committee members may decide among themselves who will serve as chair.
  - All of your committee members, including your advisor (and co-advisor, if you have one), vote on the preliminary oral exam.
  - Co-advisor may chair.
  - You must formally declare this committee with the graduate school. Do this online at https://onestop.umn.edu/academics/grad-and-professional/examination-committees.

- Final exam committee
  - One committee member (not your advisor) will serve as chair (the administrator) of the exam. You may ask one member to serve as chair or your committee members may decide among themselves who will serve as chair.
  - At least three committee members must serve as thesis reviewers: two from your major field and one who represents a supporting program.
  - Your advisor (and co-advisor, if you have one) must serve as a thesis reviewer.
  - All of your committee members, including your advisor (and co-advisor, if you have one), vote on the final oral exam.
  - Co-advisor may chair.
  - You must formally declare this committee with the graduate school, before you schedule your final exam. Do this online at https://onestop.umn.edu/academics/grad-and-professional/examination-committees.

External committee member

Committee members from outside the University of Minnesota may participate on your advisory and examination committees. The outside member(s) must bring scientific expertise to your committee that cannot be found among the faculty at the University of Minnesota. To request an external committee member:

- Your advisor must send to the DGS a letter of request for an external committee member that specifies the scientific expertise of the individual beyond that found among faculty at the University of Minnesota and the proposed committee member's curriculum vitae.
- The DGS will review the request and recommend to approve or deny the appointment.
- If approved by PMB, the DGS sends a memo to the CBS Associate Dean for Graduate Studies, requesting approval of the appointment.
- Once the CBS Associate Dean approves the appointment, CBS Human Resources sets up the committee member in UMN systems, so they are able to review and approve thesis documents and vote on exams.
- Check the process as outlined on https://cbs.umn.edu/gradadvisorycommittees.

Remote participation in graduate examinations

Committee members may participate in your meetings and exams remotely, if absolutely necessary. Required conditions and best practices for this circumstance are outlined online at https://policy.umn.edu/education/doctoralperformance-appa.

Communicating with your advisor and committee

You should meet regularly with your advisor, at least once per month, but most students meet weekly or biweekly with their advisor.

Make meetings with your advisor productive by being prepared with notes on what you have been working on since your last meeting; specific points you would like to discuss; questions you have about research, coursework, etc.; successes and struggles from the week. Note that some weeks, you will have exciting results to show your advisor and will be eager to discuss next steps. It is also vital to know that you will not always have a promising new result to present at every meeting, and that is ok. In those weeks, it is still important to meet with your advisor and discuss what you worked on during the previous week, as they are able to help you work through road blocks you encountered and give feedback and input on other things you can try or help you pivot your focus. There also will be times when you encounter mental health struggles (big or small), something happens in your personal life that pulled your focus, etc. It is important to meet with your advisor in these weeks, too, and share what is happening to the extent that you feel comfortable doing so. This will allow your advisor to support you during challenges that will inevitably occur during your time as a graduate student.

Many advisors have an advising statement that outlines their preference for the meeting schedule, communication style, and expectations. Note that if you would like to meet more frequently than your advisor suggests, you should communicate this to your advisor and work out a plan that suits needs and schedules. Reflect on your work style, your personality, your strengths and areas for growth, and your goals. It is important to then communicate this to your advisor, so that you can work together throughout your program to create an environment that sets you up for success.

In addition, you are encouraged to meet with your committee members at other times throughout each year, in addition to the one required annual committee meeting (see next page), for additional research and career development questions or anything else that comes up and would benefit from their input.

> **NOTE:** Application materials are confidential documents and only to be used to evaluate an applicant at the time of the admissions process. Any information shared in these materials should not be assumed to be known information between the student and the advisor (co-advisor if you have one) or the advisory committee. If you decide it is relevant and want to re-share this information with your advisor, co-advisor, and/or committee members that is your choice.

ADVISORY COMMITTEE MEETINGS AND ANNUAL REVIEW

Your advisory committee supports you and evaluates progress toward your degree. Progress is evaluated against PMB program expectations: coursework, assistantships, thesis research, productivity, timeliness in fulfilling requirements, and professional development.

> ***DEADLINES*: You are expected to meet with your advisory committee and submit your annual review form that can be found in your google drive folder each year.**
> > First-year students: in spring semester by March 31.
> > Second-year students: in fall semester by December 31.
> > All other students: in spring semester by March 31.
> > Sixth year and beyond students: in fall semester by December 31 and in spring semester by March 31.

> *NOTE: You are required to meet with and document one advisory committee meeting per year. However, you are encouraged to meet with your advisory committee and advisory committee members more frequently, ideally at least twice per year. Students in the program over five years are required to meet with their committee every subsequent semester to ensure adequate progress towards degree completion as specified above.*

Committee meeting structure
Committee meetings last about 60 minutes. The first ~55 minutes of this meeting will be with your entire committee, including your advisor, to cover topics outlined below. The last ~5 minutes are reserved for you to meet with your committee, without your advisor, to bring up any matters that you would like to discuss with your committee. We acknowledge that 5 minutes may not be enough time to fully discuss and/or resolve a matter. The intent is for you to have time with your committee to initiate a longer discussion if needed. You are responsible for establishing the agenda for these meetings and ensuring that they stay on schedule to cover all desired topics.

You get the greatest benefit from committee meetings by having ample time for discussion. Lengthy presentations are seldom helpful. You should plan to cover:
- scientific questions, research challenges, and interpretation of results;
- past, current, and planned coursework;
- rotations and professional development;
- progress made on your goals since the last meeting and your goals before the next meeting; and
- your future career goals and the path you are/should be on to attain those.

Arranging advisory committee meetings
You are responsible for scheduling committee meetings. Given complex schedules, this can be challenging. Schedule meetings several weeks in advance. If you are unable to convene your full committee, a majority of the committee may suffice. Consult individually with committee members who are unable to attend.
> Identify a meeting time that works for the majority of the committee. (Use Google calendars, Doodle, When2Meet, WhenIsGood, or other tools.)
> Reserve a room. (Check with the GPC to find a room.)

> Email committee members as soon as possible with the date, time, and location of the meeting, and send a Google calendar event to the committee.
> Inform the GPC of your committee meeting date.
> Request access to your annual review form from the GPC.
> Update your annual review form, discuss with your advisor, and send it to your full committee one week prior to the meeting.
> Send a reminder to your committee members one day prior to the meeting.
> Prepare an agenda (no more than one page).
> Relax! Remember that the role of the committee is to help you with your research and career development. Make the most of your meeting by asking questions.

Annual review form

The PMB graduate student annual review form documents your progress through the PMB degree program. You will submit it to your committee one week before your committee meeting, and the committee will complete their portion of the form within one week of the committee meeting. **Timely submission of this form is required to maintain good standing in the PMB graduate program**. (See the deadlines above on page 18.)

Directions
> Inform GPC of your committee meeting date.
> Request access to your annual review form from the GPC.
> Complete your review form, add your digital or typed signature, and email the link to this form to your committee members and the GPC **at least one week prior** to your committee meeting.
> Upload a current CV/resume to your Google folder.
> After your committee meeting, your committee chair will complete the committee chair portion of the annual review form in consultation with your committee.
> The DGS will review and sign the annual review form. The DGS will notify you, in writing, if you are not making satisfactory progress in your degree program and will outline actions required and the timeline allowed to address deficiencies in a Scholarly Work Agreement (see page 34). Failure to address deficiencies may result in blocking registration or termination from the program
> Timely submission of your annual review form saves the GPC and DGS from spending their time trying to determine the status of your advisory committee meeting. Meetings that are not reported are the same as not having had a meeting, and having these meetings is necessary for maintaining good standing in the program. (See the deadlines above on page 18.)

Individual Development Plan

In addition to your annual review form, it is strongly recommended that you complete an individual development plan (IDP) at the beginning of your tenure in PMB and regularly revisit it as you progress through your degree program. The IDP serves as a planning and a communications tool to help in identifying research and career goals, and communicating your goals to mentors, advisors, and future employers. You will start an IDP during your first semester, in the PMB 8081 course. Completing your IDP is something that you will then do in consultation with your advisor. It also is beneficial to you to share your IDP with your committee for additional feedback and ideas.

IDP resources: https://grad.umn.edu/academic-career-support/individual-development-plan.

PRELIMINARY WRITTEN EXAMINATION

- Your preliminary written examination takes the form of a formal dissertation research proposal. The scope of the proposal should be consistent with the scope of a PhD thesis. However, the proposal content does not necessarily have to reflect your thesis research.
- You are expected to conduct independent research that makes a significant contribution to a particular field of study.
- Your research should be designed to produce publications in refereed journals.

WRITTEN EXAM DEADLINES
You are expected to complete your preliminary written examination process by the end of your fourth semester.

> Submit preliminary exam to your committee chair and GPC by February 15.
> Receive exam result and written comments by March 7.

If revisions are needed:
> Submit revisions to your committee chair and GPC by April 7.
> Receive the final result by April 30.

Process overview
> Write your initial proposal document during the fall semester of your second year in the PMB 8901 course.
> Send your proposal to at least one UMN faculty member (this may be someone on your committee, but maybe not) in the first week of December, at the end of the PMB 8901 course.
> Get feedback from that faculty member by the end of the semester, before winter break.
> Finalize your proposal based on this feedback and working with your advisor.
> Submit your proposal to your committee chair and the GPC by February 15.
> Your committee chair distributes the proposal to the other committee members.
> Each committee member reviews the proposal and communicates their evaluation and written comments to the committee chair within two weeks.
> The chair collates the individual evaluations into a written summary and communicates the outcome of the exam to you and the GPC within one week (or no later than March 7).
> If revisions are needed, submit your revised proposal to your committee chair within one month (or no later than April 7).
> Your committee chair distributes the revisions to the other committee members.
> Each committee member reviews the revisions and communicates their final evaluation to the committee chair within two weeks.
> The chair communicates the final outcome to you and the GPC by April 30.
> The GPC reports the result to Graduate Student Services and Progress by April 30.
> To request an exception to this timeline, send an email to the DGS and GPC, outlining your alternative timeline.

- If your committee needs an extension on your preliminary written examination, they should ask the DGS for the extension. To ensure timely completion of the written examination, extensions should not be longer than one week, although longer extensions may be granted if the exam is occurring during the summer.

    If you will miss this deadline, you are required to provide a written explanation and a new timeline to the DGS. Failure to provide this explanation, failure to provide an adequate explanation, or failure to complete your preliminary written exam by the end of your fifth semester will mean you are not in good standing. (See page 34 for details.)

Proposal preparation

During fall semester of your second year, you are required to register for PMB 8901 Preparation of Research Proposals. This two-credit course focuses on the preparation of a dissertation research proposal. You will learn the process of developing ideas, writing effective proposals, and facilitate peer evaluation. By the end of the semester, you will have a research proposal that can serve as the basis of your preliminary written examination.

The proposal should:
- set forth hypotheses, state questions, aims, or goals of the proposed research;
- state the significance of the problem or the need for the research;
- provide a critical review of the relevant literature underlying your hypotheses, questions, and analyses;
- provide a detailed experimental design to test hypotheses; and
- describe analyses and the interpretation of the possible results of the analyses.

> Most preliminary written examination proposals are organized like a federal research grant proposal.
> The proposal is limited to 15 pages of double-spaced, 12-point type, excluding figures, tables, and references.
> You are expected to meet regularly with your advisor (and co-advisor, if you have one) to discuss your proposal while you are working on it. You also should consult with your advisory committee members, other faculty mentors, and fellow students. However, the writing and ideas in the proposal must be yours. You may not use material from research grant proposals written by your advisor or anyone else. The proposed research must be of sufficient depth and breadth for a Ph.D. dissertation, but does not need to be your actual research plan. You, your advisor, and your committee will settle on the ultimate direction of your dissertation research after the written exam.

Evaluation and results

Preliminary written examinations are evaluated as acceptable, acceptable in principle but needing revision, or unacceptable.

1. Acceptable: If the majority of voting committee members find the proposal acceptable, you pass the written examination.

2. Acceptable in principle, revision required: If the majority of voting committee members find the proposal acceptable in principle but deficient in some respect(s), then revision and reevaluation of your proposal is required. Your examining committee chair will provide you with written comments from your committee members and guidelines for revising your proposal. You should

plan to meet with your committee, including your advisor, to discuss this outcome and expectations for revision. At the discretion of the committee, you may exceed the 15-page limit in the revised proposal. You must submit your revised proposal within one month from the date when you receive the original evaluation. For an extension of this timeline, the committee chair must request it, and the DGS must approve it. If the majority of committee members find the revised proposal acceptable, then you pass the examination. If the majority finds the revised proposal unacceptable, then you fail the exam. If you fail the exam you do not continue in the Ph.D. program although at the discretion of your advisor and committee you may pursue a MS degree.

3. Unacceptable: If the majority of voting committee members find the proposal unacceptable—that is, it contains fundamental flaws that cannot be remedied by revision—then you will not be allowed to continue in the Ph.D. program. However, if you, your advisor, your committee, and the DGS agree, you may pursue an M.S. degree. An M.S. degree may be a valuable indicator of your accomplishments as a PMB student. It may provide a strong foundation for the next steps in your professional career, perhaps even pursuing a Ph.D. in a different field or a different program that provides a better fit for your interests.

- You may appeal your committee's decision. An appeal must explain why the proposal is deserving of a ranking that differs from that reached by the committee. Appeals must be in writing and submitted to the DGS within 7 calendar days of you getting the exam results.

REVIEW CRITERIA
The preliminary written exam is written as a research proposal and is limited to 15 pages, not including references and abstract. The criteria for passing the exam are NOT whether the proposal is competitive if submitted to a funding agency such as NSF. The criteria are instead:

- Scholarship:
    - Did the student formulate an interesting question that can be answered within the scope of a thesis?
    - Has the student demonstrated sufficient knowledge of the literature, placed the research question into a larger context, and articulated the significance of the proposed work?
    - Does the proposal demonstrate creativity and originality?
    - Is the introduction and background section clearly written?
    - Does the proposal have clearly formulated, testable hypotheses?

- Approaches & outcomes:
    - Does the student have a clear idea about how to approach the research question (including specific techniques and analyses)?
    - Is the student aware of potential problems?
    - Is it clear what the proposed research will accomplish?
    - Does the proposal articulate how the research will achieve broader impacts?

- Overall assessment:
    - Does the proposal have the potential to become competitive for external funding with moderate revision or completion of some of the proposed work?

PRELIMINARY ORAL EXAMINATION

The preliminary oral examination is designed to evaluate competency in areas of specialization, as well as broader themes that are part of plant and microbial sciences. The oral exam is typically composed of a short presentation (10 to 15 minutes), followed by committee members asking you questions. However, your committee may decide upon a different format, as long as that format is consistent with graduate school policies (https://policy.umn.edu/education/doctoralperformance). Per this policy, the entire exam (including you presentation, committee questions, committee deliberation, etc.) cannot exceed three hours. You should schedule your preliminary oral examination soon after passing the preliminary written examination.

> *DEADLINE:* **You are expected to complete your preliminary oral examination before the end of your fifth semester.**
>
> *If you are going to miss this deadline, you are required to provide a written explanation and a new timeline to the DGS. Failure to provide this explanation, failure to provide an adequate explanation, or failure to complete your preliminary oral exam by the end of your fifth semester will mean you are not in good standing. (See page 342 for details.)*

Preliminary oral examination process
- Formalize your preliminary oral examination committee (See page 13 for guidelines).
- Wait for approval of your preliminary oral examination committee.
- Arrange your preliminary oral examination date, time, and location with your committee.
- Schedule your preliminary oral examination time with Graduate Student Services and Progress, online at https://onestop.umn.edu/academics/doctoral-oral-exam-scheduling.
- You will receive an email with a link to complete the preliminary oral exam form workflow after you have scheduled your preliminary oral exam.
- Once you complete the preliminary oral exam form, your committee chair will receive an email from wfgen-nr@umn.edu with a link to the form. The chair records the votes of each committee member listed on the form.
- UMN policy on procedure and voting: https://policy.umn.edu/education/doctoralperformance.

Evaluation and results
Preliminary oral examinations are evaluated as:

1. Pass without reservations

2. Pass with reservations
   > Within one week of the exam, the committee chair must send a letter to Graduate Student Services and Progress (gssp@umn.edu), the GPC, and you that clearly stipulates the reservations and steps required to remove them. The chair will also include your student ID in this letter.
   > Once you meet the required steps, the committee chair must email GSSP, the GPC, and you, indicating that you have fulfilled the requirements and the reservations should be removed.

> NOTE: If you receive a 'Pass with reservations' result, you are still eligible to go on to one-credit status in the semester following your oral exam.

3. Fail
   > Each committee member must indicate whether a retake is approved.
   > With the unanimous consent of the examining committee, one retake is permitted.
   > If a retake is not approved, you are no longer allowed to continue in the Ph.D. program. If you, your advisor, your committee, and the DGS agree, you may pursue an M.S. degree.

Students who do not pass (with or without reservations) the oral preliminary exam on the first attempt should carefully consider if pursuing a Ph.D. in the PMB program is the right path for them. It might be that they would be happier, and professionally more successful, by deciding to leave the program to pursue another career path or a Ph.D. in a different field.

For these students, it also can be valuable if committees and their advisor require the student to pass one or more milestones if they are going to continue towards the Ph.D. For example, the sheer immensity of a dissertation can be overwhelming for some students. Requiring that these students complete a chapter of their dissertation within the next 12 months might be a valuable requirement. Fulfilling such a requirement will assure progress towards degree completion and also give students the confidence to complete their Ph.D. Not fulfilling such a requirement might be an indication that the student would be better served pursuing different career goals or professional development in a different setting.

ADMISSION TO CANDIDACY

To be admitted to candidacy for the doctoral degree, you must have:
- completed all formal coursework and thesis credits on your degree plan;
- earned a 3.0 graduate GPA, with no grade lower than C in any course on your degree plan;
- passed preliminary written and oral examinations, including having reservations removed; and
- met the residence requirements (12 course credits taken in residence while enrolled as a degree-seeking student at UMN).

Terminology: doctoral candidacy = advanced doctoral status = FTE doctoral

Once you have attained doctoral candidacy, you may register for one credit of PMB 8444: FTE: doctoral each semester until you graduate.

> **NOTE:** *If you would like to attain doctoral candidacy by fall semester of your third year, you must complete the preliminary oral exam and have the result officially recorded on your student record by Graduate Student Services and Progress (GSSP) before the first day of your fall graduate assistant appointment, usually one week before the start of the semester.*

> **NOTE:** *The final exam will not be authorized for any doctoral student who has not been admitted to candidacy.*

DISSERTATION

The culminating product of your graduate research is a dissertation. A typical dissertation consists of a short introductory chapter followed by three chapters, each of which is written in the form of a manuscript. However, the form of your dissertation might vary and what is considered acceptable is something that is decided upon by your advisor and committee members.

Although it is expected that the dissertation will be research-based, it is not necessary that all chapters are focused on the same area of research. For example, students interested in careers in scientific outreach might have a chapter that presents a new outreach program and the assessment of that program's success. Likewise, a student interested in a career in teaching might provide a new pedagogical approach, along with an evaluation of its effectiveness. Students interested in including non-traditional chapters in their dissertation should be certain to form an advisory committee with the expertise needed to guide and evaluate that work and note that an evaluation/assessment component to these chapters is required.

You should work closely with your advisor to determine when chapters are ready for your committee to review. Some committee members prefer you provide all chapters to them at the same time, others prefer that you send each chapter as soon as it is complete. Dissertation chapters that also are manuscripts that you will submit for peer-reviewed publication should be provided to your committee members for review prior to submission to the publication. Be mindful of busy schedules and allow at least two weeks for reviews of your drafts.

You are expected to present a polished, grammatically correct, properly formatted draft of your dissertation to your advisory committee after you and your advisor have agreed on the content. Your advisor and committee members have the right to reject documents with grammatical or formatting errors or that fail to meet high standards of scientific style.

Program dissertation review
- You must have three faculty members review your dissertation. These three reviewers must also be members of your final exam committee.
- You must have a minimum of two major-field reviewers and one minor/outside reviewer.
- Your advisor must be one of the reviewers.
- If you have a co-advisor, they must also be a reviewer.
- You must allow at least 14 days for your reviewers to read through your full dissertation.
- Your reviewers must sign off on the reviewers' report form before you may hold your final exam. (This form is in the graduation packet you receive when you apply to graduate.)

University dissertation review
- Once your dissertation reviewers have deemed your dissertation acceptable and you pass your final oral examination, you must submit your dissertation or thesis via ProQuest (https://onestop.umn.edu/academics/grad-and-professional/thesis-or-dissertation-submission). If you have supplementary materials, you can submit them as supplementary files during the online submission to ProQuest.
- You must also submit the dissertation signature page (available at https://onestop.umn.edu/academics/grad-and-professional/thesis-or-dissertation-submission).

and the University digital conservancy deposit agreement that is in the graduation packet you receive in MyU when you apply to graduate.

- The Graduate Student Records office reviews each dissertation for adherence to UMN guidelines for quality and consistency. They will inform you of any revisions or formatting changes needed and must approve your manuscript before you will be cleared to graduate.

WRITING RESOURCES & SUPPORT
- Dissertation templates and formatting: https://onestop.umn.edu/academics/grad-and-professional/thesis-or-dissertation-submission
- UMN Center for Writing: http://writing.umn.edu/sws/quickhelp/graduate.html
- Dissertation writing retreats: http://writing.umn.edu/sws/dissretreat/index.html

FINAL ORAL EXAMINATION

The final oral examination involves a public seminar on your doctoral research immediately followed by a closed-session dissertation defense with your advisory committee. You must coordinate with your advisor and committee members to set the date and time for your final examination.

For your dissertation defense seminar, work with the GPC to advertise the date, time, and location of your defense seminar to PMB graduate program faculty members, students, post-docs, and colleagues. Contact the GPC at least two weeks prior to your defense seminar for flyer templates and announcement procedures.

The dissertation defense portion of the final oral examination involves a critical evaluation of your dissertation, and discussion of final revisions to the thesis, and general discussion of future plans. It is your responsibility to schedule both the seminar and the defense meeting. Before scheduling your final oral examination, be sure to follow the steps in the degree completion section on page 28.

Note: The final exam form should be signed only after both components of the final exam (public seminar and closed-session dissertation defense) have been completed.

Final examination eligibility
Before GSSP will authorize your final examination, you must meet the following requirements:
- Complete all coursework on your doctoral degree plan (30 credits).
- Complete 24 doctoral thesis credits (PMB 8888).
- Complete at least one professional development course or equivalent.
- Serve as a teaching assistant for at least one semester.
- Pass your preliminary written examination.
- Pass your preliminary oral examination. If you passed the preliminary oral examination with reservations, a letter notifying you and GSSP that your committee removed the reservations must be on file.
- Be in active student status at the time of the examination (registered for either PMB 8444 or GRAD 999).
- Have an approved doctoral final examination committee on record.
- Have filed the reviewers report form with GSSP.

Last minute changes to your final examination committee
Prior to the exam date: If you need to change the membership of your final examination committee prior to your final exam, submit these changes before your exam date at https://onestop.umn.edu/academics/grad-and-professional/examination-committees.

Day of exam: Day-of-exam committee changes result when a member is unable to participate at the last minute. You must have at least four committee members for your final exam. If you have five committee members originally, you can move forward with the four who are in attendance. If you have four committee members originally, another faculty member in PMB must be recruited to serve on the committee. Typically, this is someone who is in attendance at the defense seminar. If you have committee changes the day of the final exam, your committee chair will note this on the final exam form. After the exam, you must formally submit the committee change, using the committee form online at https://onestop.umn.edu/academics/grad-and-professional/examination-committees.

DEGREE COMPLETION STEPS

FIRST
1. Notify the GPC of your plans to graduate at the beginning of the semester in which you plan to finish your degree. (You may graduate in any month, including during the summer, but you should inform the GPC early the semester to allow time to verify completion of all degree requirements.)
2. Assign the members of your final oral examination committee at least one semester prior to your expected exam date. Do this using the form online at https://onestop.umn.edu/academics/grad-and-professional/examination-committees.
    - Select at least three members of your committee to serve as your dissertation reviewers. Your advisor (and co-advisor, if you have one) must be a reviewer.
3. Set your final exam date, time, and location with your final exam committee.
4. Apply to graduate—no later than the first day of the month in which you will graduate. Online at https://onestop.umn.edu/academics/grad-and-professional/graduation-steps. (This application is available once your final exam committee is approved.)

THEN
1. Submit your dissertation to your reviewers at least two weeks before your defense date. (See page 25 for details.)
2. Submit your reviewers' report form at least one week before your final exam date. This form is linked in the online degree completion steps document: https://docs.google.com/document/d/1UZfAnLziojdYwybb-FK75veNNTrNeMlVPsojo9-LcfE/edit. (The form will route automatically to each of your committee members. All committee members must complete the form before the final exam form will be issued.)
3. Formally schedule your final exam with Graduate Student Services and Progress: https://onestop.umn.edu/academics/grad-and-professional/doctoral-oral-exam-scheduling. You will receive a confirmation email to your UMN email account when your final exam time is recorded. (See page 27 for details on the final oral exam.)
4. Plan your public seminar. (See page 28 for details.)
5. Send your defense seminar information (date, time, location, title, photo of yourself) to the GPC, who will advertise your defense seminar to the PMB community.
6. Initiate your online final exam report form once you receive the email with the final exam form link from GSSP. (This will come from "wfgen-nr.")
    - Final exam report form routes to your committee chair. Your committee chair records the committee members' votes on your final exam and routes the form back to GSSP. The form must be routed back to GSSP no later than the last business day of the month in which you plan to graduate.
7. Committee changes:
    - If you have committee changes prior to the final exam, you must submit the final exam committee form again (https://onestop.umn.edu/academics/grad-and-professional/examination-committees).
    - If you have committee changes the day of the exam, your committee chair will note this substitution on the final exam form. You then must resubmit the examination committee form, listing those who participated at your final exam.
8. Submit the Thesis/Dissertation Approval and Deposit Agreement form: https://eforms.umn.edu/xfp/form/360.

9. Submit your dissertation through ProQuest before the last business day of the month in which you plan to graduate.
    - If you submit your dissertation on, or after, the last business day of the month in which you plan to graduate, you might not graduate in that month. Graduate Student Records must review your dissertation and accept it as meeting university standards before they will clear you to graduate.
10. Submit a thesis/dissertation hold request, if you would like to withhold release of your dissertation, due to pending publications, patents, etc., related to your dissertation research. (See https://onestop.umn.edu/academics/grad-and-professional/thesis-or-dissertation-submission for information and the request form.)
11. Participate in an exit conversation with DGS/GPC. The GPC will reach out to you to schedule this meeting.

> For reference: https://onestop.umn.edu/academics/grad-and-professional/graduation-steps.

Your degree will be awarded on the last working day of the month in which you complete all requirements.

You will receive an automated email certifying your degree completion with a degree conferral date of your expected graduation month. You will also be notified that your record has been updated to reflect your degree clearance so you can order transcripts and it will show your completed degree.

Diplomas are mailed out four to six weeks after you are cleared for graduation. (See the diploma page, https://onestop.umn.edu/academics/transcripts-and-grades/diploma, for more details.)

> *NOTE:* *You must be registered in the semester when you will graduate. If you graduate early in the semester, you must be registered, even if that registration is just valid for a few weeks. You must register for PMB 8444 if you have funding during your final semester. You may register for GRAD 999 if you have no funding. (See page 12 regarding GRAD 999.)*

COMMENCEMENT

The College of Biological Sciences holds a commencement ceremony for graduate students each year in May. The ceremony is open to graduates who have completed or nearly completed their degree. Students with pending degrees also may participate if they meet their program's criteria for commencement attendance. If you are strongly interested in participating in the CFANS rather than the CBS commencement ceremony, please contact the DGS and GPC well in advance of the commencement to discuss that possibility.

- You must register to participate in the commencement ceremony. (Information will come from the GPC.)
- Your guests do not need tickets to attend, but when you register you will indicate the number of guests you expect will join you at the ceremony.
- International students: If you would like to invite family members to attend the commencement ceremony, please refer to https://isss.umn.edu/resources/inviting-family-members.
- The commencement event lasts about two hours, and involves a reception and brief ceremony.
- Regalia: You can rent or purchase commencement regalia the UMN Bookstore. (https://bookstores.umn.edu/graduation) in Coffman Union.
- You will not receive your diploma at the commencement ceremony. Diplomas are sent by mail after your degree is officially awarded.

> *NOTE:* *Attending the commencement ceremony does not imply that you have officially graduated. Commencement is a separate process from submitting the graduate school application for degree. Please inform the GPC if you will be attending the commencement ceremony.*

DIPLOMA

You will receive your official diploma in the mail four to six weeks after your degree has been conferred.

Name on diploma: Check the name that will be printed on your diploma.
- Look on MyU under the "My Info" section.
- You may add a "Degree name."
- If no "Degree name" is added, the default name for your diploma is your "Primary name."
- "Preferred name" is never used on the diploma.

Diploma address: Check the address to which your diploma will be mailed.
- You must add a "Diploma address" in MyU under the "My Info" section.
- If no "Diploma address" is added, the default address for mailing your diploma is your "Home address."
- "Mailing address" is never used.

Your major is never printed on the diploma, only the degree earned (M.A., M.S., Ph.D., etc.). If you need documentation showing your degree and major, log in to MyU and request an official transcript. More information on the diploma: https://onestop.umn.edu/academics/transcripts-and-grades/diploma.

Academic process: Master of Science

The PMB graduate program is primarily a doctoral program. However, options for a master of science (M.S.) with a thesis (Plan A) or without a thesis (Plan B) are available. Some students, after entering the program with the intent to pursue a Ph.D. realize that this is not the path they want to pursue. For these students, an M.S. degree can be a valuable indicator of their accomplishments while in the program and provide a strong foundation to pursuing other career goals or a Ph.D. in a different field or at a different institution. (To switch from the Ph.D. to M.S. degree option, see "Change of status," below.)

Students are seldom admitted to the PMB program if their intent is to pursue a master's degree. The program does allow this, although such students are expected to be supported on external fellowships or by their advisor for their entire time in the program. M.S. students are not eligible for program fellowships or summer support. M.S. students are eligible for teaching assistantships, although if TA opportunities are limited, M.S. students will have lower priority than Ph.D. students. At the discretion of the DGS, M.S. students may be eligible for partial professional development funding.

If you intend to pursue a master's degree from the outset, you must identify an advisor and research topic by the end of your first semester. M.S. students should plan to graduate within two to three years from the date you enroll.

Change of status
- With the approval of the advisor, advisory committee, and DGS, students enrolled in the doctoral track may switch to the master's track.
- To switch from the doctoral to master's track, you must submit a change of status form (https://grad.umn.edu/admissions/change-or-add-degree-objective) and notify the PMB GPC.
- If you switch from the doctoral to master's Plan A track, your PMB 8888 doctoral thesis credits must be converted to PMB 8777 master's thesis credits.

MASTER OF SCIENCE: PLAN A (WITH THESIS)

DEGREE PLAN
You will work with your advisor to develop a plan for the course work and thesis credits you will take. Follow the credit and course requirements, below. You must submit your degree plan for approval by the program, using the GPAS system. (See page 5 for details.)

> *DEADLINE:* **As a master's student, you must submit your degree plan by the end of your first semester.**

Credit requirements
- 30 credit hours total required. This includes 20 course credits and 10 thesis credits. The course credits must include the 6 credits of required courses and 14 credits of supporting courses
- Grades of S, C or higher are required on all coursework.
- At least 14 credits of the 20 required course credits must be graded A-F. Two 4000-level courses (8 credits maximum) are allowed. (For permission to take more than two 4000-level courses, confer with your advisor, committee, and the DGS.)

Required courses are the same as those required for Ph.D. students (although you may petition to not take PMB 8901, Preparation of Research Proposals). See page 5 for descriptions of the required courses and the expected timeline for taking them.

Supporting courses: You must take supporting courses that are relevant to your area of specialization. See the list of acceptable courses on the PMB Graduate Program website.

Thesis credits: PMB 8777. Thesis Credits: Master's. (10 credits) Register for thesis credits in any semester.

See pages 10–12 for registration guidelines.

ADVISOR, ADVISORY COMMITTEE, AND ADVISORY COMMITTEE MEETINGS
Follow the same guidelines for advisors and advisory committees as for the doctoral students (see page 13), except:
- You must have three advisory committee members (not four).
- You must hold an advisory committee meeting every semester.

RESEARCH PROPOSAL
- You are expected to conduct research that makes a contribution to a particular field of study.
- Your research should be designed to produce at least one publication in a refereed journal.
- Your advisor and advisory committee must approve your research proposal.
- You are expected to work closely with your advisor when preparing your research proposal. You also should consult with your advisory committee members and other students.
- For further guidance on the research proposal consult the section on proposal preparation above (the same guidelines and guidance provided to PhD students is also relevant to M.S. students).

DEADLINE: **You must complete your research proposal by the end of fall semester of your second year.**

If you are going to miss this deadline, you are required to provide a written explanation and a new timeline to the DGS. Failure to provide this explanation will mean you are not in good standing. (See page 34 for details.)

THESIS
Follow the same guidelines for the thesis as doctoral students do for the dissertation (see page 25).

FINAL EXAMINATION
Follow the same guidelines for the final examination as for doctoral students (see page 27).

MASTER OF SCIENCE: PLAN B (WITHOUT THESIS)

Requirements for the M.S. Plan B track are the same as for the M.S. Plan A track, except:

- You must take 30 course credits. No thesis credits are required.
- You must complete a project and write a paper/report.
- A Plan B project consists of at least a semester of independent work and should represent about 120 hours of effort in addition to your coursework, for work on a project performed in collaboration with a faculty advisor.
- Your plan B master's project could be a literature review, analysis of applied problems, computer modeling, lab or field research, etc.
- The project paper could be:
  - a research proposal that identifies a research problem, surveys literature on the topic, describes methods or experimental design, and discusses the significance of predicted or potential findings in relation to the problem.
  - a report written in a format similar to a M.S. Plan A thesis.
- You are not required to submit your Plan B project paper to the Graduate School.
- You are not required to give a public seminar at the time of the final examination, but you may, if you choose to.

Academic standards

You are expected to make steady progress toward a degree and commensurate academic accomplishments. The PMB graduate program's goal is for you to complete your degree within five years.

To remain in good standing with the PMB graduate program, you must:

- Maintain a minimum 3.0 GPA, with no grade lower than C in any course on your degree plan.
  - > If your GPA falls below 3.0:
    - You will be considered to be not in good standing.
    - You will not be allowed to graduate until your GPA improves.
  - > If you earn a D, F, or N (not satisfactory) in a course on your degree plan, you must retake the course and earn at least a C or S, arrange a grade change with the instructor, or remove the course from your degree plan. This final option does not remove the course from your record, and it would still count in your overall GPA, but it would not count toward your degree plan credit hours.
- Meet deadlines for identifying an advisor, submitting a degree plan, completing your preliminary written examination, and passing your preliminary oral examination, as detailed in the sections about these milestones, above.
- Follow the advisory committee meeting and annual evaluation schedule described on page 17.
- Fulfill the research, professional development, and teaching experience requirements.
- Make suitable progress towards degree completion: making and meeting goals for research progress and actively working on research in the lab/field. Evidence for degree progress is documented in the required annual evaluation.

If you are going to miss deadlines for key milestones, such as preliminary exams, you are required to provide a written explanation and a new timeline to the DGS. Failure to provide this explanation, failure to provide an adequate explanation, or failure to meet milestones within one semester will mean you are not in good standing. The DGS may grant you additional time, but only after reasonable notification and justification are reviewed as submitted by memorandum from you through your major advisor.

If you are not in good standing, you and your major advisor will be notified accordingly by the DGS/GPC.

If you are not in good standing for two consecutive semesters, you must meet with your advisor, the DGS, and the GPC to develop a plan (Scholarly Work Agreement) for returning to good standing. This plan must be signed by you and your advisor and then submitted to the DGS and GPC.

If you fail to meet the steps and milestones outlined in the Scholarly Work Agreement, you will be placed on academic probation. Being on academic probation will mean that:

- You will not be eligible for financial support from departmental funds (i.e., research and teaching assistantships, summer funding, travel funding, professional development funding).
- A registration hold will be placed on your account.
- Continued status of not in good standing can result in the termination of your degree program.

Duration and time limits

Doctoral students
- A doctoral degree generally requires five years of full-time work.
- You must complete all degree requirements, including submitting your dissertation, within eight years after initial enrollment in the graduate program.

NOTE: While the PMB program discourages you from taking longer than eight years to complete your degree, you may request an extension of these time limits. You must notify the program and complete and submit a petition form to GSSP (available at https://onestop.umn.edu/forms).

Master's students
- A master's degree generally requires at least two years of full-time work.
- You must complete all degree requirements, including submitting your thesis, within five years after initial enrollment in the graduate program.

NOTE: While the PMB program discourages you from taking longer than five years to complete your degree, you may request an extension of these time limits. You must notify the program and complete and submit a petition form to GSSP (available at https://onestop.umn.edu/forms).

Forms and signatures

The PMB GPC can assist with forms, as needed. The PMB DGS must sign most forms. Some forms also require approval and signature from the College of Biological Sciences Associate Dean for Graduate Education. Please contact the PMB GPC if you have questions.

Forms you file online
- Degree plan (GPAS planner) (Access via MyU)   - Petition to add/remove a minor (https://onestop.umn.edu/forms)   - Class time conflict approval (https://onestop.umn.edu/forms)   - Graduate registration exception request (https://onestop.umn.edu/forms)   - Reduced course load (for F-1 and J-1 visa holders)   - Preliminary oral exam committee (https://onestop.umn.edu/academics/grad-and-professional/examination-committees)   - Preliminary oral exam results/signature form   - Final oral exam committee ((https://onestop.umn.edu/academics/grad-and-professional/examination-committees)   - Preliminary and final oral exam scheduling (https://onestop.umn.edu/academics/grad-and-professional/doctoral-oral-exam-scheduling)   - Graduation packet request (https://onestop.umn.edu/forms)   - Reviewers report form (in graduation packet)   - Graduation application (in graduation packet)   - Deposit agreement (in graduation packet)   - Final oral exam results/signature form   - Change degree award date (https://onestop.umn.edu/forms)   - Curricular Practical Training, for F-1 visa holders (https://isss.umn.edu/fstudents/employment/cpt)   - Optional Practical Training, for F-1 visa holders (https://isss.umn.edu/fstudents/employment/opt)
Forms you file via paper/PDF
- Advanced doctoral status (https://onestop.umn.edu/forms)   - Advanced master's status (https://onestop.umn.edu/forms)   - Academic policy exception request (https://onestop.umn.edu/forms)   - Leave of Absence: request for and return from (https://z.umn.edu/cbsgradforms)   - GRAD 999: active status registration (https://z.umn.edu/cbsgradforms)   - Extension to the maximum time limit (https://onestop.umn.edu/forms)   - Readmission (https://www.grad.umn.edu/admissions/readmission)   - Change of status (switch from Ph.D. to M.S.) (https://grad.umn.edu/admissions/change-or-add-degree-objective)   - Degree enrollment/degree verification – "Letter of Certification Request" (https://onestop.umn.edu/forms)

Funding

GRADUATE ASSISTANTSHIPS AND FELLOWSHIPS

Graduate student support is most often provided by teaching assistantships (TA), research assistantships (RA), conservatory/curatorial assistantships (CA), and fellowships. The duration, duties, and details of each appointment vary, but most are 50% effort and require an average of 20 hours of work per week over the term of the appointment. As a student in the PMB Graduate Program, you are allowed to hold up to a 75% appointment (an average of 30 hours of work per week).

Assistantships and fellowships generally include a stipend, tuition benefit, and health insurance coverage. Assistantships are for work that directly supports the project that is paying the RA (e.g., a research grant) or the course, in the case of a TA. Your own coursework, time spent on professional development activities, and your thesis research are not included in the ~20 hours of a 50% assistantship. Between your assistantship and all other requirements to maintain good standing in the program (i.e., coursework at a 3.0 GPA, progress towards degree, etc.), it is estimated that you need to commit ~40 hours per week. If you hold a higher-percentage assistantship, the number of total hours committed each week will increase (e.g., a 75% appointment would require ~60 hours per week to complete commitments to the assistantship and to your research, coursework, professional development, etc.).

Teaching assistantships

Teaching assistantships involve assisting the primary instructors with course preparation, leading lab sessions, giving lectures, grading assignments and exams, holding office hours, and other tasks related to the course. Teaching assistant (TA) obligations usually begin before the first day of class, and TAs must be available for meetings with instructors before the start of the semester. TAs must be on campus throughout the entire semester of their teaching assignment.

TA assignments
- All PMB doctoral students must serve as a TA for one semester.
- Beyond this core requirement, the PMB graduate program typically honors all requests for TA positions from students in good standing with priority given to those that have had fewer than two TA appointments.
- Each semester, the GPC will put out a call to all PMB students for TA position requests.
- Students who need to fulfill the program's TA requirement may have higher priority for placement than other students.
- TA requests from students in their sixth year of study and beyond will receive lower priority than students who have not been in the program as long.

Research assistantships

Research assistantships (RA) are generally associated with grants and awards to a faculty member. You and your advisor (as well as the supporter of the RA if that person is not the advisor) should discuss the expectations, duties, and expected time commitment before the RA begins. These duties and expectations should be recorded in writing, so that they are clearly defined prior to the beginning of the RA.

Fellowships

Fellowships can offer support for your educational and living expenses. We encourage you to apply for competitive fellowships and grants throughout your graduate program—they not only provide money, but also are an indicator of achievement. For fellowships that do not offer full support, the Graduate School or PMB may be able to provide supplemental funding. Requests for supplemental support should be submitted by email to the DGC and GPS.

The UMN Graduate School maintains information about fellowships available to graduate students: https://grad.umn.edu/funding. You will receive notice about some (although not necessarily all) of these, as well as many opportunities that are not on this list.

Payroll   When you have a graduate assistantship or fellowship, you are generally considered a university employee, and your stipend is paid through payroll. Pay periods are two weeks long. You are paid biweekly, every other Wednesday. Authorize automatic deposit of your pay through the "My Finances" tab in MyU.

SUMMER FELLOWSHIPS

The PMB graduate program offers fellowships to support research or training activities for PMB graduate students during the summer semester. The expectation is that the program will provide all students who do not have other sources of summer funding with two summers of fellowship support and the student or advisor will cover the other three summers. These two summers can be used at any time during your degree program and are not required to be used in the first two summers. Talk with your advisor about summer support when you first choose an advisor; having a funding plan in place is less stressful for everyone.

> *NOTE:*   *It is possible that due to budget constraints, the program will not be able to provide summer funds to all students who request them every year or may require students to work as teaching assistants or research assistants in order to be paid. In such situations, the program will work with the advisor to develop a plan.*

Application process (for students who have not yet received two summer fellowships)
> The GPC will circulate a call for summer fellowship requests in early April.
> You must be in good standing in the program and have completed your most recent annual review form and submitted a current CV to the program by March 31.
> You will need to provide a list of other sources of summer funding and an outline of your summer research goals, a plan for achieving those goals, how your summer work will contribute to your degree progress, and your expected time to graduation.
> You and your advisor will co-sign the funding application after discussion of lab funding options – an application signed only by the student will be returned without review.
> The DGS and GPC will make final funding decisions in consultation with faculty advisors and the PMB Steering Committee.

Summer fellowships are paid as one-time scholarships in early June. For domestic students, there are no taxes withheld, but you remain responsible for any income tax liability. For international students, taxes may be withheld when your fellowship is paid out. See https://hr.umn.edu/HR-Community/Payroll-Administration/Taxable-Graduate-Fellowships.

NOTE: *Advisors are expected to provide summer support for students beyond the two years covered by the program or by student fellowships. However, on occasion advisors will not have money available. In these situations, the advisor is expected to contact the DGS to together develop a plan for summer funding for the student.*

Competitive summer fellowships: In some years the program may have extra funds to support competitive summer fellowships. These fellowships will be available only to students who have already been supported by the program for two summers. The program will notify students when these fellowships are available.

> The application process is the same as above, except that your advisor also must submit a letter that explains what other funds are available for supporting you, how you have been supported in the past, and the expectations for how you will be supported in the future. Your advisor should email this letter to the GPC.
> Awards are based on demonstrated excellence in research and financial need.
> Priority is given to applicants who have not previously received competitive summer fellowships and for students who have not yet entered their sixth year.
> **Students who are not in good standing are not eligible to receiving summer support from the program, even if they have not previously received summer support.**

CAREER DEVELOPMENT FUND

The PMB program provides you with a career development fund when you join the program. You may use this money for professional development opportunities, for travel to professional conferences, workshops, and courses, or for other activities related to presenting research, networking, and developing research and professional skills. This money may be used to pay for student membership dues in professional organizations. It may not be used for direct support of research projects, including travel to field sites or purchasing equipment, supplies, or computers/laptops or computer accessories. The amount of career development funds available to students varies, please see your offer letter for your starting fund amount. You can also ask the GPC at any time for your remaining balance.

To use your career development funding:
> Send an email to the GPC with a brief proposal and justification for your plans. Include details on the costs (travel, lodging, registration, etc.).
> The DGS and GPC will review your plans and check your career development fund balance.
> Register to participate and book your travel only after getting approval for your travel and verification of your funding balance from the program.
> Submit all expense reimbursement requests through the online expense reimbursement system (Chrome River).

NOTE: We encourage you to apply for outside travel grants, to supplement your career development fund. Further, you should plan to use any outside travel grants you receive before drawing on your career development fund.

TRAVEL GRANTS/FUNDING

- PMB travel funding
  - Your career development fund is available to cover your travel to professional meetings, workshops, courses, etc.
  - Occasionally the program will have additional funds available for additional travel grants. A call for applications will go out to all PMB students whenever such funds are available.
- Council of Graduate Students (COGS) travel grants
  - Individual travel grants for career development activities and professional conference participation.
  - Travel to research sites is not eligible.
  - See https://cogs.umn.edu/ for details and deadlines.

OTHER FUNDING OPPORTUNITIES

The Graduate School maintains a list of funding: https://grad.umn.edu/funding/current-students.

Some funding sources not listed on the Graduate School website include:
- Bell Museum graduate awards and fellowships: https://www.bellmuseum.umn.edu/grad-awards/
- Carol H. and Wayne A. Pletcher Fellowship: http://uawards.umn.edu/recipients-outstanding-achievement-award/carol-h-pletcher
- Cedar Creek summer fellowships: https://www.cedarcreek.umn.edu/
- Itasca Director's research fellowship: https://cbs.umn.edu/itasca/research/opportunities
- Philip C. Hamm Memorial Scholarship: http://hammscholarship.umn.edu/

NOTE: *When applying for external funding, it is best practice to check with the GPC before developing a budget and submitting your application/proposal.*

Professional development

PMB Program Seminar
- Tuesdays at 3:00 p.m., fall and spring semesters
- 105 Cargill Building
- You must register for the PMB Program Seminar course (PMB 8900 section 001) one time, typically in your first fall semester.
- You should attend regularly throughout your graduate career, even when you are not registered for the seminar course. Attending seminars is how you learn
- ***Note:*** *Attending the PMB Colloquium will not fulfill your professional development requirement.*

Colloquia/seminar series in other UMN departments
- Applied Plant Sciences: https://appliedplantsciences.umn.edu/events
- Conservation Sciences: https://www.conssci.umn.edu/
- Ecology, Evolution, and Behavior: https://cbs.umn.edu/academics/departments/eeb
- Biotechnology Institute: https://bti.umn.edu/bti-events/
- Genetics, Cell Biology and Development: https://cbs.umn.edu/academics/departments/gcd
- Horticultural Sciences: https://horticulture.umn.edu/events
- Plant Pathology: https://plpa.cfans.umn.edu/about/seminar-series
- History of Science, Technology, and Medicine: https://cse.umn.edu/hstm/hstm-events-0
- Agronomy and Plant Genetics

Workshops and short-courses
- Institute on the Environment Graduate Programs: http://environment.umn.edu/graduate-programs/
- Artemisia Leadership Initiative: https://cfans.umn.edu/academics/careers-internships/artemisia
- Science communication: https://scl.umn.edu/
- Improvisation for Scientists

Teaching training, resources, support and workshops
- Center for Educational Innovation: https://cei.umn.edu/
- Preparing Future Faculty: https://cei.umn.edu/programs/preparing-future-faculty-program

Academic and Career Development workshops through the Graduate School
- https://grad.umn.edu/academic-career-support/academic-career-development-workshops
- Academic, Career & Campus Update (ACCU) newsletter: https://grad.umn.edu/news-events/grad-school-e-publications.

Organizations
- Many different discipline-specific professional research societies encourage student membership, discuss with your advisor about likely best fit
- Society for the Advancement of Chicanos/Hispanics and Native Americans in Science, UMN Student Chapter
- Minorities in Agriculture, Natural Resources and Related Sciences: https://www.cfans.umn.edu/admissions/diversity-student-programs/manrrs

Summary: key steps and milestones

- Connect with your advisor.
- Develop your research plan.
- Develop your individual development plan.
- Construct your graduate advisory committee.
- Put together a degree plan itemizing all classes you will take.
- Develop a research proposal.
- Complete professional development requirement.
- Complete preliminary written and oral examinations.
- Complete proposed lab- and fieldwork to collect data.
- Statistically evaluate your data.
- Attend professional meetings to present your research.
- Submit manuscripts to journals for publication.
- Write your thesis/dissertation.
- Present research as part of the PMB retreat or Colloquium.
- Defend your thesis/dissertation to your graduate committee.

See also the degree completion steps on page 28 and the OneStop website:
https://onestop.umn.edu/academics/grad-and-professional/degree-completion-steps.

Student activities

PHYTOGRADS

A graduate student organization aimed to provide social events and comradery among PMB graduate students and to participate in governance of the PMB graduate program. All PMB graduate students are automatically part of Phytograds.

Social events
- Monthly coffee hour
- Happy hour
- Fall welcome
- Winter soup and sweater gathering
- Winter Itasca: weekend trip to Itasca State Park/Itasca Biological Station
- Intramural sports: fall – soccer, winter – broomball, spring – softball
- Spring greenhouse party
- Second Harvest Heartland volunteering

Outreach
- PMB colloquium committee
- Market Science events—https://cbs.umn.edu/market-science
- K-12 outreach— https://cbs.umn.edu/about/outreach-and-engagement-opps/k-12-outreach
- BioLine Blog—https://cbs.umn.edu/blogs/bioline
- Focus Scientist through Biology Teaching and Learning Department's Biology Saves the World program (https://cbs.umn.edu/academics/departments/btl/academics/nol-series/biology-saves-the-world)
- Field Guides undergraduate mentoring—https://cbs.umn.edu/blogs/bioblog/new-mentoring-program-undergrads
- Science fairs at local schools
- Social media presence (Twitter: https://twitter.com/phytograds)

PMB program governance
- Phytograds president is an ex-officio member of the PMB Steering Committee.
- PMB DGS and GPC meet in spring with each cohort to gather feedback and seek input.
- PMB DGS and GPC attend Phytograds meetings to gather feedback and suggestions.

PMB student cohort responsibilities
For several PMB Graduate Program events, student cohorts are charged with leading or helping plan and coordinate.
> 1st-year students: Colloquium coffee and reception clean-up during fall semester
> 2nd-year students: Phytograds social events (see above)
> 3rd-year students: PMB prospective student recruitment in late February or early March
> 4th-year students: PMB spring retreat in May

Key resources

- **Graduate School**
  - \> https://grad.umn.edu/
  - \> academic and career support, funding opportunities, orientation resources

- **Graduate Student Services and Progress** (GSSP)
  - \> https://onestop.umn.edu/academics/grad-and-professional
  - \> details about the all the steps you must take towards finishing your degree

- **International Student and Scholar Services**
  - \> https://isss.umn.edu/

- **One Stop**
  - \> https://onestop.umn.edu/
  - \> academic calendar, course schedules, registration details, records
  - \> St. Paul campus One Stop office: 130 Coffey Hall

- **Council of Graduate Students (COGS)**
  - \> https://cogs.umn.edu/
  - \> COGS Graduate Student Resource Guide

- **MyU**
  - \> https://myu.umn.edu/
  - \> for registration, access to classes, changing personal information (address, name, etc.), GPAS degree plan, etc.

- **U Card** (UMN ID card)
  https://ucard.tc.umn.edu/

- **Parking and transportation**
  - \> https://www.pts.umn.edu/

- **Walking on campus and campus security**
  - \> https://pts.umn.edu/walk/walking-campus

GRADUATE ASSISTANTSHIPS AND HEALTH INSURANCE

- **Graduate Assistant Health Plan**
  - \> https://shb.umn.edu/health-plans/gahp-home

- **Graduate Assistant Employment Office**
  https://hr.umn.edu/Jobs/Student-Job-Center/Graduate-Assistant-Employment/About-Graduate-Assistant-Employment

- **Graduate assistant employment and work rules**
  - > https://policy.umn.edu/hr/gradstudentemployment
  - > https://policy.umn.edu/hr/gradstudentemployment-appg
- **Tax information and support**
  - > https://tax.umn.edu/student-and-parents
  - > International student tax information: https://isss.umn.edu/students/support-services/taxes

COURSES AND REGISTRATION
- **Graduate catalog**
  - > https://catalogs.umn.edu/

- **Class search**
  - > https://onestop.umn.edu/registration/register-classes/search-classes
  - > https://cbs.umn.edu/academics/departments/pmb/graduate-education/students/resources

- **Registration**
  - > https://onestop.umn.edu/registration/register-classes/register-class

POLICIES
- **Student conduct code**
  - > regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf
  - > https://policy.umn.edu/education/studentconductcode-proc01

- **Graduate education policies**
  - > https://grad.umn.edu/about/policies-governance

- **Degree progress**
  - > https://policy.umn.edu/education/doctoralperformance
  - > https://policy.umn.edu/education/mastersperformance
  - > https://policy.umn.edu/education/gradcreditdegree

ADVISING
- **Graduate School advising resources**
  - > https://grad.umn.edu/faculty-advising-resources

- **The Dignity Project**
  - > https://sos.umn.edu/academic-civility-resources
  - > resources for advising and student success

- **Minnesota English Language Program**
  - > https://ccaps.umn.edu/minnesota-english-language-program

RESEARCH SUPPORT

- **Core research facilities**
  - > https://cbs.umn.edu/research/resources/home
  - > CBS Conservatory — https://cbs.umn.edu/conservatory
  - > Minnesota Supercomputing Institute — https://www.msi.umn.edu/
  - > University Imaging Centers — http://uic.umn.edu/
  - > UMN Genomics Center — http://genomics.umn.edu/
  - > U-Spatial — https://rc.umn.edu/uspatial
  - > Center for Mass Spectrometry and Proteomics — https://cbs.umn.edu/cmsp
  - > Statistical Consulting Center — https://cla.umn.edu/statistics/research-engagement/institute-research-statistics-and-its-applications/statistical-consulting-center

- **Growth chambers, greenhouses, autoclaves**
  - > Work with your advisor for access to these facilities available on the St. Paul Campus.

- **Safety**
  - > Lab and research safety — https://hsrm.umn.edu/health-safety-and-risk-management/training/hsrm-training
  - > Training — https://dehs.umn.edu/department-environmental-health-safety/lab-research-safety

- **IT support**
  - > help@umn.edu

- **Computers and Printing**
  - > Computer and general IT help: contact help@umn.edu and check https://it.umn.edu/.
  - > You may be eligible for a graduate assistant computer subsidy. For details, check: https://cbs.umn.edu/info/internal-resources/faculty-staff/rlt/computer-purchasing. (If you use the subsidy, the computer is the property of the University and must remain at the University when you leave.)
  - > Poster printing is available through the University Imaging Center: http://uic.umn.edu/.
  - > General printing: Check with your advisor and the building where your office is located.

- **Library**
  - > https://www.lib.umn.edu/
  - > subject librarian: Alexander Wieker, wiek0008@umn.edu
  - > open access publishing (e.g., Microbiology Society's "Publish and Read" program (https://www.microbiologyresearch.org/publish-and-read)

- **Writing Center**
  - > http://writing.umn.edu/
  - > writing support, consultations, writing groups & workshops, thesis/dissertation retreats

CAREER AND PROFESSIONAL DEVELOPMENT

- **Career Services**
  - > http://www.career.umn.edu/
  - > CV writing, job postings, career/job search, graduate student workshops

- **Preparing Future Faculty program**
  - > https://cei.umn.edu/preparing-future-faculty-program
  - > teaching skill development and exploring the faculty role at college or university level

- **Center for Educational Innovation**
  - > https://cei.umn.edu/
  - > teaching skill development
  - > new teaching assistant orientation
  - > SETTA (Spoken English Test for Teaching Assistants) and other international student teaching support

HEALTH AND WELLBEING

- **Boynton Health Services**
  - > https://boynton.umn.edu/
  - > on campus health care

- **Student Counseling Services**
  - > https://counseling.umn.edu/
  - > career counseling, stress management, crisis intervention, support groups, etc.
  - > St. Paul Office: Lauren Scholder

- **Disability Resource Center**
  - > https://disability.umn.edu/accommodations/testing

- **Office of Equal Opportunity and Affirmative Action**
  - > https://eoaa.umn.edu/

- **Office for Conflict Resolution**
  - > https://ocr.umn.edu/

- **Student Conflict Resolution Center**
  - > http://www.sos.umn.edu/
  - > formal and informal conflict resolution services

- **Aurora Center**
  - > http://aurora.umn.edu/
  - > free and confidential consultation for victims/survivors/concerned people of sexual assault, relationship violence, stalking, and sexual harassment

- **Recreation and Wellness**
  - > http://recwell.umn.edu
  - > on campus gyms, recreation, and fitness

- **Earl E. Bakken Center for Spirituality & Healing**
  - > https://www.csh.umn.edu/
  - > Health and wellbeing courses and workshops

- **UMN Student Parent Help Center**
  - > http://sphc.umn.edu/
  - > Childcare and lactation resources, family housing

- **Nutritious U Food Pantry**
  - > https://boynton.umn.edu/food-pantry

- **Employee Assistance Program**
  - > https://hr.umn.edu/Benefits/Employee-Assistance-Program-EAP
  - > consultation and referral services to address personal or work concerns

- **Housing**
  - > https://housing.umn.edu/other/grad-students
  - > on-campus and off-campus housing information

- **University Student Legal Service**
  - > https://sls.umn.edu/
  - > Free legal guidance to students paying the student services fee

DIVERSITY, EQUITY, AND INCLUSION

See page 53 and https://cbs.umn.edu/pmb/graduate-program/diversity-equity-and-inclusion.

Student rights and responsibilities

STUDENT CONDUCT

The University of Minnesota policy is that minimum standards of conduct are necessary to safeguard the rights, opportunities, and welfare of students, faculty, staff, and guests of the University community and to assure protection of the interests of the University as it seeks to carry out its mission. The University is concerned with matters that may impinge upon academic achievement and integrity and with maintaining an educational climate. Other matters of concern include preserving and protecting the rights, health, property and safety of members of the University community. Specific disciplinary offenses actionable by the University include scholastic dishonesty, falsification, disorderly conduct on the campus, theft and property damage, disruptive noise and demonstration, etc.

Relevant policies
- The University of Minnesota Board of Regents Student Code of Conduct: https://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf.
- Student Conduct Code: https://policy.umn.edu/education/studentconductcode-proc01.
- Office for Community Standards: https://communitystandards.umn.edu/.

SEXUAL HARASSMENT

Sexual harassment is against the law. It is prohibited by Title VII of the 1964 Civil Rights Act and the Minnesota Human Rights Act. Sexual harassment is broadly defined to include behavior that is not considered overtly sexual. Although not specifically prohibited, consenting sexual relationships between faculty member and student, or supervisor and employee, are actively discouraged.

NOTE: All new employees, including graduate assistants, are required to complete the online training "Preventing and Responding to Sexual Misconduct for Employees," available through Training Hub https://it.umn.edu/technology/training-hub).

Sexual harassment subverts the mission of the University of Minnesota, and threatens the careers of students, faculty, and staff.

Relevant policy
- The University has a strongly enforced policy on sexual harassment and encourages reporting of violations: https://policy.umn.edu/hr/sexharassassault.

Reporting
> The Equal Opportunity and Affirmative Action (EOAA) office handles instances of alleged sexual harassment (https://eoaa.umn.edu/). Report occurrences of sexual violence or threats immediately by calling 911 or University Police (612.624.3550).

> Faculty, staff (including postdoctoral researchers and fellows), and graduate student assistants are considered **mandatory reporters** under Title IX law and University policy (https://policy.umn.edu/hr/sexharassassault and https://policy.umn.edu/operations/misconductreporting-faq02) and therefore are obligated to report harassment or discrimination to the University's EOAA office.

While the DGS and GPC can be first points of contact and help students who are facing harassment, resources are also available for students or faculty who feel they need to report an incident or inappropriate experience to someone outside of the program.

- Student Counseling Services: https://counseling.umn.edu. Counselors are not mandatory reporters under University Policy and can be a fully confidential first point of contact for sexual harassment concerns.
- Aurora Center: http://aurora.umn.edu. Aurora Center employees and volunteers are not mandatory reporters under University Policy and can be a fully confidential first point of contact for sexual harassment concerns.
- Ureport: https://compliance.umn.edu/report
  > Ureport is a service independent of the University. It can be used to anonymously report "any situation or University conduct you believe violates an applicable law, regulation, government contract or grant requirement, or University policy."
- Student Conflict Resolution Center: http://www.sos.umn.edu.

  NOTE: *Graduate students who are found to be engaged in unethical behavior or to be perpetrators of sexual harassment may be removed from the program without a degree.*

DISABILITY RESOURCE CENTER
The University views disability as an important aspect of diversity and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations for courses, graduate program requirements, and lab and field research.

- If you have, or think you have, a disability in any area such as mental health, attention, learning, chronic health, sensory, or physical, contact the DRC office (https://disability.umn.edu/student-access) to arrange a confidential discussion regarding equitable access and reasonable accommodations.
- Students with short-term disabilities, such as a broken arm, can often work with instructors and research advisors to minimize classroom and research barriers. In circumstances where additional assistance is needed, students should contact the DRC as noted above.
- If you are registered with the DRC and have a disability accommodation letter, please contact your instructor, advisor, and the PMB Graduate Program to review how the accommodations will be applied in courses, graduate program requirements, and lab and field research.
- If you are registered with the DRC and have questions or concerns about your accommodations, please contact your access consultant/disability specialist.
- Additional information can be found at *https://disability.umn.edu/* or by emailing *drc@umn.edu.*

EQUAL OPPORTUNITY

The University of Minnesota shall provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.

Direct concerns or complaints about discrimination to the Equal Opportunity and Affirmative Action office (https://eoaa.umn.edu/) and Bias Response and Referral Network (https://bias-response.umn.edu/).

Relevant policies
- https://eoaa.umn.edu/policies

EMPLOYMENT

See the graduate student employment policy for details about compensation, tuition benefits, performance evaluation, leaves of absence, parental leave, safety, conflict resolution, etc.:
https://policy.umn.edu/hr/gradstudentemployment

APPLICATION MATERIALS

Application materials are confidential documents and only to be used to evaluate an applicant at the time of the admissions process. Any information shared in these materials should not be assumed to be known information between the student and the advisor (co-advisor if you have one) or the advisory committee. If the student decides it is relevant and they want to re-share this information with the advisor, co-advisor, and/or committee members that is their choice.

GRIEVANCES

Whenever possible, grievances and disputes should be resolved between the affected parties and through respectful conduct. If direct resolution is not possible, the DGS and the department head can get involved. When an academic or employment problem cannot be resolved through these channels, there are several outside groups that may be able to help:

- Graduate Assistant Employment Office
    - https://hr.umn.edu/
- Student Conflict Resolution Center:
    - http://www.sos.umn.edu/
    - Ombudsman, http://sos.umn.edu/ombuds
- Office for Conflict Resolution
    - http://ocr.umn.edu/

Relevant policies
- Addressing student academic complaints: https://policy.umn.edu/education/studentcomplaints.

- Conflict resolution process for student academic complaints:
  https://policy.umn.edu/education/studentcomplaints-proc01.

Simply put, students have the right to:
- an academic environment that is free from intimidation, humiliation, and harassment; and
- assistance when dealing with difficult situations, without concern for retaliation or punishment.

PMB Program Commitment to Diversity, Equity, and Inclusion

The PMB Graduate Program strongly supports and values a diverse, equitable, and inclusive learning community that fosters the academic and personal growth of students, faculty, and staff of all backgrounds.

As a program, we are specifically committed to:
- Eliminating barriers associated with systemic racism and bias, particularly in the recruitment and success of a diverse scholarly community.
- Elevating the voices of diverse scholars, particularly those from B.I.P.O.C. communities.
- Providing opportunities to learn from people with a broad range of backgrounds and experiences.
- Valuing the time and effort involved in community-engaged research.

We recognize that commitment to diversity, equity, and inclusion requires both education and action. Through the many resources listed below, the University of Minnesota provides a wide range of opportunities to help PMB grad program students, faculty, and staff to achieve this commitment.

INFORMATION AND RESOURCES

UMN Office for Equity and Diversity (OED) — https://diversity.umn.edu/
Graduate School Diversity Office — https://grad.umn.edu/diversity
CBS Equity, Diversity and Inclusion (EDI) — https://cbs.umn.edu/about/equity-diversity
CFANS Office of Diversity and Inclusion — https://cfans.umn.edu/about/diversity-inclusion

Funding
- PMB Graduate Program application fee waiver
- Diversity of Views and Experiences (DOVE) Fellowship
  - https://grad.umn.edu/funding/program-requests-nominations/nominations/diversity-of-views-experience-fellowship-dove
- Interdisciplinary Center for the study of Global Change (ICGC) Fellowship
  - https://icgc.umn.edu/funding/icgc-fellowships/icgc-scholar-fellowships

Diversity, Equity, and Inclusion training, education, practice
- Equity and Diversity Certificate (https://diversity.umn.edu/certificate). Helps participants develop tools necessary for advancing equity and diversity in all aspects of their personal and professional lives. It's free of charge and open to students, faculty, staff, and alumni on all campuses of the University of Minnesota.
- Cross-Cultural Discussion Groups (https://isss.umn.edu/programs/cross-cultural-discussion-groups) — a unique opportunity to meet other University students from a variety of colleges, majors, and nationalities in a fun and relaxed atmosphere.
- Diversity Community of Practice — http://dcop.umn.edu/
- The Dignity Project — https://sos.umn.edu/academic-civility-resources

Mental health
- Student mental health resources — http://www.mentalhealth.umn.edu/
- Boynton Mental Health — https://boynton.umn.edu/clinics/mental-health
- Surviving and Thriving in Higher Education video series — https://www.youtube.com/channel/UC4jExrOEqgZmJM6EmziU6NA
- Student and Academic Success Services — https://sass.umn.edu/
- Earl E. Bakken Center for Spirituality and Healing events — https://www.csh.umn.edu/community-engagement
- The Science of Well-Being – Coursera course from Yale — https://www.coursera.org/learn/the-science-of-well-being
- Advising resources — https://grad.umn.edu/faculty-staff-toolkit/faculty-advising-resources
- BIPOC Mental Health Collective — https://counseling.umn.edu/bipoc-mental-health-collective

Racial and cultural diversity
- Community of Scholars Program (COSP) — https://grad.umn.edu/diversity/community-of-scholars-program. The Graduate School's COSP provides Native Americans and graduate students of color with unique academic and professional growth opportunities.
- Graduate School Diversity Office Summer Institute — https://grad.umn.edu/diversity/summer-institute
- Black Graduate and Professional Students Association (BGAPSA) — https://mynbgsa.org/
- Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) – UMN Chapter — https://twin-cities-umn.presence.io/organizations
- Black Student Union — https://twin-cities-umn.presence.io/organization/black-student-union-243
- Circle of Indigenous Nations (COIN) — https://mcae.umn.edu/about-us/circle-indigenous-nations
- Asian-American Student Union at UMN — https://community.umn.edu/communities/aapi
- Association of Multicultural Scientists (AMS) — https://twin-cities-umn.presence.io/organization/ams-student-chapter-at-the-university-of-minnesota-3344-3345
- Multicultural Center for Academic Excellence — https://mcae.umn.edu/
- Council of International Graduate Students — https://sites.google.com/umn.edu/cigsumn
- English language resources — https://ccaps.umn.edu/esl-resources/students

Gender and sexuality
- Gender and Sexuality Center for Queer and Trans Life — https://gsc.umn.edu/
- MN Queer Science — https://queerscience.umn.edu/
- STEM — https://ostem.org/entity/
- All-gender restroom map — https://gsc.umn.edu/resources/all-gender-restroom-map

Women in science
- Women's Center — https://womenscenter.umn.edu/
- UMN Women's faculty cabinet — https://faculty.umn.edu/sponsored-organizations/wfc
- UMN Women and Girls of Color and Indigenous Women and Girls Initiative — http://womengirlsofcolor.umn.edu/
- Artemisia Leadership Initiative — https://cfans.umn.edu/academics/careers-internships/artemisia
- Graduate Women in Science — https://www.gwis.org/

First-generation students
- First-Gen Graduate Student — https://firstgen.umn.edu/grad

Student veterans
- University Veterans Services — https://onestop.umn.edu/veterans
- Career resources for veterans — http://www.career.umn.edu/veteran-students
- Student Veterans Association — https://gopherlink.umn.edu/organization/1474

Disability resources
- Disability Resource Center — https://disability.umn.edu/
- Interactive map to accessible entrances on campus — https://egis.umn.edu/twincities/index.html?config=config_accessibility.json

Family resources
- Student Parent Help Center — http://www.sphc.umn.edu/
- Lactation resources — http://www.sphc.umn.edu/lactation-resources
- Child Development Center (UMN daycare) — https://www.cehd.umn.edu/ChildDevelopmentCenter/
- Child Care Locator resources — https://humanresources.umn.edu/family-resources/child-care

Support resources
- Bias Response and Referral Network — https://bias-response.umn.edu/
- Nutritious U Food Pantry — https://boynton.umn.edu/food-pantry (For any UMN student. No proof of need is necessary.)

College of Biological Sciences Code of Conduct

The College of Biological Sciences (CBS) is committed to fostering the education of students and postdocs in a welcoming and supportive environment. All students, postdocs, fellows, staff and faculty are expected to treat each other in a respectful, professional manner. We are all responsible for holding our student, postdoc, staff and faculty community to professional and respectful standards, both on and off campus (e.g. at University field stations, or during travel for conferences, meetings or field work). In addition to following University policies, we ask all members of CBS to support and adhere to our community norms of respectful and responsible conduct.

Expected Conduct

CBS has established the following standards of conduct:
- Act ethically and with integrity
- Be fair and respectful to others
- Be welcoming and inclusive of all people
- Manage, supervise, instruct, and advise responsibly
- Protect, preserve, and responsibly use University resources and property
- Promote a culture of compliance with legal requirements
- Preserve academic freedom
- Ethically conduct research, teaching, and community engagement
- Avoid conflicts of interest
- Carefully manage public, private, and confidential information
- Promote physical and mental health and safety

Unacceptable Behavior

CBS will take disciplinary action for the following offenses:
- Sexual harassment, sexual assault, stalking, and relationship violence
- Discrimination
- Retaliation
- Illegal or unauthorized possession, use, or sharing of weapons, drugs, or alcohol
- Unethical research, including falsification of data or information
- Scholastic dishonesty
- Unauthorized use, including misuse, of facilities, equipment, or services
- Theft, property damage, or vandalism
- Violation of University rules
- Violation of local, state, or federal laws

Sanctions for Unacceptable Behavior

Sanctions will be commensurate with the nature and severity of the offense, whether violations have been persistent, and the impact of the offense on any other people involved. Sanctions may include one or more of the following:
- Warning
- Probation
- Confiscation of goods possessed, used, or shared illegally or in an unauthorized manner
- Restitution
- Reassignment of work activities
- Paid or unpaid leave of absence
- Termination of employment

Reporting Misconduct

Report suspected or alleged misconduct to any or all of the following:
- A supervisor or instructor
- Departmental or Collegiate Leadership
- Human Resources in the College of Biological Sciences (cbshr@umn.edu)
- the Equal Opportunity and Affirmative Action (EOAA) Title IX office (eoaa@umn.edu)
- anonymously via the U Report system (1.866.294. 8680, https://compliance.umn.edu/report)

If you report suspected or alleged misconduct, then the University of Minnesota has a policy that will protect you from retaliation. Note that all University employees are required to report sexual misconduct to the Title IX office.

Respectful and responsible conduct in the PMB Graduate Program

The PMB Graduate Program and the College of Biological Sciences is committed to fostering the education of students and postdocs in a welcoming and supportive environment. All students, postdocs, fellows, staff, and faculty are expected to treat each other in a respectful, professional manner. We are all responsible for holding our student, postdoc, staff, and faculty community to professional and respectful standards, both on and off campus (e.g., at University field stations, or during travel for conferences, meetings, or field work). In addition to following University policies, we ask all members of CBS to support and adhere to our community norms of respectful and responsible conduct.

1. **Harassment of any kind, including but not limited to verbal abuse and sexual harassment, will not be tolerated.**
   - The relaxed atmosphere in some labs and in some environments can sometimes lead to thoughtless statements. Choose your words carefully and be mindful of your audience—all of our University sponsored facilities and events are professional environments, and you are among colleagues.
   - We expect CBS community members to be civil when interacting with others in the lab, the field, and during social activities. Differences of opinions and points of view are normal and are encouraged in a scientific environment; however, we have a responsibility to treat each other with respect. Avoid personal attacks when engaging in exchanges of ideas.
   - Excessive drinking at CBS, departmental, or graduate program events can create an environment in which harassment is more likely to occur and is prohibited. Intoxicated behavior by students, postdocs, staff, or faculty will be reported to the dean, department head, and DGS, as appropriate. In extreme cases, intoxicated individuals may be escorted from the event by the host or by campus security, if necessary. These same behavioral expectations hold at field stations and on research or meeting travel away from campus.
   - Sexual harassment is defined according to the Board of Regents policy as "*unwelcome conduct of a sexual nature under either of the following conditions:*
     a) *When it is stated or implied that an individual must submit to, or participate in, conduct of a sexual nature in order to maintain their employment or educational standing or advance in their employment or education (quid pro quo sexual harassment).*
     b) *When the conduct: (1) is severe, persistent, or pervasive; and (2) unreasonably interferes with an individual's employment or educational performance or creates a work or educational environment that the individual finds, and a reasonable person would find, to be intimidating, hostile, or offensive (hostile environment sexual harassment)."*

   As a community, we believe that all CBS students, postdocs, staff and faculty should be provided a training environment and/or workplace that is free of unwelcome sexual innuendos or insinuations. Individuals in positions of relative power are expected to understand that those with less power may participate in, submit to, or fail to object to sexual conduct or other unprofessional conduct because they fear negative repercussions if they do not, and not because they are comfortable with the conduct. CBS community members are also expected to understand that individuals may perceive comments or touches in different ways. What one might consider light banter or an innocent touch may make another uncomfortable, or even be experienced as threatening or intimidating.

2. **What to do if you experience or witness inappropriate behavior**
   - If you have been subjected to sexual harassment or harassment based on your gender, race, religion, sexual orientation, gender expression, disability, national origin or other protected identity, we encourage you to report it to the University's EOAA office, which will work with you to determine whether to address the concern through informal problem-solving or a formal investigation.
   - If you have been subjected to other forms of harassment, bullying, abuse of power, or other inappropriate behavior, we encourage you to report your concerns to your supervisor, Department or College Leadership, Human Resources, Office of Community Standards, or other appropriate reporting resource.
   - The Aurora Center is a confidential resource that specializes in issues like sexual assault and relationship violence, but also sexual harassment. They may be able to provide support in situations where you are not yet ready to go to the University's EOAA office with a complaint. College, departmental, and program leadership can also be first points of contact; however they are required to report any sexual misconduct they learn of to the University's EOAA office.
   - Faculty, staff, postdoctoral researchers and fellows, and graduate assistants must report sexual harassment and other sexual misconduct that they learn about in the course of performing their job duties to the University's EOAA office. Except, non-supervisory and non-Human Resources employees do not need to report sexual harassment directed at employees, although they are encouraged to do so. Upon receiving a report, the University's EOAA office staff will determine whether the issue needs to be investigated.
   - Under University policy, protections from retaliation are in place. While it is natural to be reluctant to report such incidents for fear of reprisal or creating problems for someone, reporting any incident of harassment is important to prevent further escalation and to hold our community accountable.
   - If you become aware of harassment or if it is reported to you, it is appropriate to respect the privacy of the individuals involved to the greatest extent possible (keeping communication about it to the University's EOAA office and those who "need to know"). This is a common courtesy and will help protect the person who made the complaint from retaliation. Understand that sharing the identities of or information about complainants or witnesses beyond a "need to know" circle can, in some circumstances, constitute retaliation under University policy.
   - All reported incidents will be taken seriously, and referred to the appropriate entity.
   - At College, departmental, or graduate program events both on and off campus, harassment of any form by students, postdocs, staff or faculty will not be tolerated and could result in removal from the event by the host or campus security if necessary. The incident will be reported to the College, department and/or program leadership, and, in cases that involve sexual harassment, to the University's EOAA office. Individuals subjecting others to harassment in any College, department, or program-related activity (including the laboratory, classroom, or off-campus UMN-related trips) may be terminated from graduate student or graduate faculty status in the program, and/or subjected to disciplinary action at the College level.

3. **How to maintain an inclusive, harassment-free environment**
   Resources are available to help students, postdocs, staff, and faculty better understand the definitions of harassment and to obtain training:
   - University policy on sexual harassment: https://policy.umn.edu/hr/sexharassassault
   - EOAA Workshop and Training Schedule: http://eoaa.umn.edu/resources
   - Equity and Diversity Certificate Program: http://diversity.umn.edu/certificate

4. **Reporting incidents**

   While the DGS (for graduate students), CBS Associate Dean for Graduate Studies (for graduate students and postdocs), CBS Associate Dean for Faculty (for faculty), and CBS HR (for staff) can serve as a reporting resource and a first point of contact, resources are also available for students, postdocs, staff, or faculty who feel they need to report an incident or inappropriate experience to someone outside of the department, College, or graduate program.

   - Anonymous reporting service, Ureport: https://compliance.umn.edu/report administered by a service independent of UMN, can be used to anonymously report "any situation or University conduct you believe violates an applicable law, regulation, government contract or grant requirement, or University policy."
   - Student Conflict Resolution Center: http://www.sos.umn.edu/
   - Office of Conflict Resolution: http://ocr.umn.edu/
   - EOAA Reporting Resources: http://eoaa.umn.edu/
   - The Aurora Center (a confidential support resource): http://aurora.umn.edu/

We appreciate the commitment of our faculty, postdocs, staff, and students to creating a safe, inclusive, and constructive environment. Our collective experience in class, in the laboratory and field, and at scientific/social events is important, and a comfortable climate is a big part of our program's and College's success. We also have an obligation under University policy to provide the best possible experiences and opportunities for our students, postdocs, staff, and faculty, while CBS community members each individually have a responsibility to bring constructive, collaborative behavior to our College. By working together as a respectful community, we can ensure that everyone finds the experience valuable, enriching, and positive.

Best advising practices for graduate student success

Best practice	Student's & advisor's responsibility	Advisor's responsibility	Student's responsibility
Establish milestones for academic and research progress	• Within 60 days: Discuss and agree on milestones to track student progress. • By 2nd year for Ph.D. students or 2nd semester for M.S. students: Establish advisory and exam committee(s) and develop a course work plan. • Annually: Document and review student progress.	• Communicate expectations with respect to independence and how student is to function in the fairly unstructured graduate school environment. • Clarify availability of continued funding (e.g., assistantships or fellowships).	• Clearly understand your own motivations for going to graduate school. • Seek alternative or supplemental funding, as needed. • Consult the Director of Graduate Studies or Graduate Program Coordinator to ensure that program requirements are met on time.
Maintain open lines of communication and provide timely feedback	• Discuss an optimum meeting frequency and meet regularly. • Establish written expectations and schedules; update as necessary as the degree program progresses or with changing circumstances.	• Comment on student's work (reports, draft posters, seminar presentations, manuscripts, etc.) within 30 days. • Be mindful of student's time, remember they have numerous commitments. Give them enough lead time to complete work. • Communicate developments that may impact time to degree (e.g., planned absences, sabbaticals, termination of funding). • Understand cultural differences that might affect communication.	• Submit progress reports, draft posters or seminar presentations, manuscripts, thesis drafts, and other work in a timely manner. • Be mindful of advisor's and staff time. They are here to work with you, but remember they have other commitments. Give them enough lead time to help you with questions or issues. • Inform advisor of changes in schedule, including any paid or unpaid leave. • Seek help from advisor or from other sources to resolve difficulties.
Understand the terms and conditions of graduate assistant employment	• Ensure that offer letters and terms of employment are understood. • Comply with business practices of the department/program.	• Understand graduate student rights. • Provide a safe work environment free from intimidation, humiliation, or harassment.	• Complete any required training (e.g., safety, responsible conduct of research, ethics, teaching assistant) in a timely manner.
Develop research ideas and career goals	• Agree on the scope and sequence of thesis research (thesis proposal) and engage at all stages. • Clarify expectations for multiple tasks (e.g., teaching, work/life balance). • Develop student career goals; revisit and revise periodically.	• Give constructive feedback on student's research ideas. • Mentor students as they apply for jobs and advise on effects to their degree plan.	• Keep a journal of research ideas and activities. • Seek professional development opportunities.
Connect with the larger campus and professional community	• Recognize and respect cultural differences. • Seek opportunities for leadership and professional development skills such as: public speaking, research ethics, working across differences, collaboration, conflict resolution, and data management.	• Help student network with colleagues at other institutions. • Support student participation in scientific conferences, campus seminars and events, and on committees in UMN, CBS, and PMB. • Celebrate and announce your students' successes.	• Attend campus seminars and events. • Serve on committees in UMN, CBS, and PMB. • Participate in graduate student orientation and recruitment activities. • Participate in scientific conferences (find external travel funding, as needed).

UMN CBS GRADUATE PROGRAMS MENTAL HEALTH AND WELLBEING RESOURCES GUIDE

Need help finding resources? Need to help someone else? Start with:

1. UMN RED FOLDER or
2. CONTACT YOUR Graduate Program Coordinator or other Mental Health Advocate

Non-urgent mental health resources

Are you concerned about a student, friend, classmate, roommate, significant other who is dealing with stress, depression, anxiety, substance misuse, or other issues?

> Mental Health Advocates in CBS—Contact CBS MHAs for guidance on how to handle a situation.

> Graduate Program Coordinators (GPCs)—Work with your program's GPC to connect to resources and talk through options.

> UMN mental health services and resources

> Red Folder—Check this guide to recognizing distress and addressing it, including UMN resources.

> UMN Care Program Referral—Notify the Care Program about a student about whom you are concerned and who needs a welfare check. The Care Program provides coordinated care, support, and resources to students.

Urgent mental health care

Are you or do you have a student, friend, classmate, roommate, significant other who is in immediate need of assistance?

> UM Campus Police: 9-1-1 (for urgent, dangerous crises)

> Crisis Hot Line (on or off campus): 612-301-4673 or text "UMN" to 61222 (for mental health crises that are not immediately dangerous)

> National suicide and crisis line: 9-8-8 (call or text) or 988lifeline.org

> Minneapolis crisis hotline COPE: 612-596-1223

> St Paul crisis hotline: 651-266-7900

> Urgent/crisis counseling at Boynton Health's Urgent Mental Health Care Clinic (4th floor of Boynton at 410 Church St. SE, during clinic hours

> EmPATH mental health emergency center at M Health Fairview Southdale Hospital

> UMN mental health crisis services

Mental health counseling at UMN

> Boynton Mental Health: Phone and walk-in assessment. Scheduled medical evaluations and management, chemical health assessment and counseling, and individual, couples, and group therapy.

> Telehealth counseling and psychiatric treatment for students who are located within Minnesota

> Schedule appointments by calling the clinic at 612-624-1444.

> Students who are currently in care can contact their providers via the MyBoynton Portal.

> 10-sessions-per-year limit for individual therapy

> Student Counseling Services: Private and confidential counseling for personal issues, academic difficulties, and career uncertainty. Walk in counseling is available.

> In-person and telehealth appointments available on both the Minneapolis and St. Paul campuses.

> Complete an intake form to get started.

> 25 sessions total per degree and 15 maximum per academic year (July-June) for individual therapy

> Wait times ebb and flow throughout the year; longest is ten business days.

> Let's Talk: Informal, virtual drop-in consultations for UMN students throughout the academic year. No appointment necessary. Counselors can listen to specific problems, provide support, help explore solutions, and give information about other resources.

Mental health services in the community

- Hennepin County mental health support
- Ramsey County mental health support
- Minnesota Warmline: Peer-to-peer approach to mental health recovery, support and wellness. Calls are answered by our team of professionally trained Certified Peer Specialists, who have first-hand experience living with a mental health condition.
- WalkIn Counseling Center: Free, anonymous counseling with professional counselors who volunteer their time. No appointment needed.

Interactive well-being resources

Care Program

> Meet with a Care Manager to get support and resources as you navigate the University and pursue academic and personal goals. Care Managers operate in a non-clinical capacity and do not provide formal counseling or therapy to students

BIPOC Mental Health Collective

> Open to UMN students (undergraduate and graduate), staff, and faculty. A space for Black, Indigenous, Latinx, Middle Eastern and North African (MENA), Desi, Asian, and/or People of Color voices, experiences, and stories.

Groups and workshops

> Boynton Mental Health—group therapy
> Student Counseling Services—educational workshops, affinity groups, counseling groups

Let's Talk

> Free virtual drop-in service that offers informal, confidential consultations for U of M students throughout the academic year. No appointment necessary. (Not a substitute for formal counseling and does not constitute mental health treatment, but counselors can listen to specific problems, provide support, explore solutions and share resources.)

Student Academic Success Services

> Academic coaching. Individual appointments are available. Go to sass.appointments.umn.edu to get started. Coaching appointments are 30 minutes long, offered in-person and on Zoom.
> Graduate student workshop series: https://sass.umn.edu/self-help
> More info on coaching: https://sass.umn.edu/academic-skills-coaching

De-stress

> Free, one-on-one confidential stress check-ins with trained student helpers who know first-hand the stresses of college and grad school. We'll talk through great ways to manage the stresses of student life. Email destress@umn.edu

Sky Happiness Club at UMN

> A student organization committed to building a violence-free and stress-free campus. The club hosts yoga and meditation sessions, stress busters, SKY happiness retreats, service events, social events, and many more fun events throughout the year.

Earl E. Bakken Center for Spirituality and Healing

> Wellbeing series, mindfulness programs, free webinars

Nutrition Appointments (Boynton Health Services telehealth)

> Meet with a registered dietitian nutritionist for help setting goals to maintain a healthy diet. Consultations offer information, advice and support to help manage health concerns through nutrition.

Group fitness classes from RecWell

> yoga, cycling, cardio, strength training, dance, etc.

Disability Resource Center (DRC)

> Help with academic, physical, technological access and accommodations. Contact: drc@umn.edu or 612-626-1333.

PAWS (Pet Away Worry & Stress)

> Sessions feature registered therapy animal teams—including dogs, bunnies, cats, chickens, and other therapy animals.
> Free and open to the University of Minnesota community.

Self-directed well-being resources

Self-Help Resources
> Student Counseling Services has collected a list of resources for anonymous screenings, academic success, mindfulness, and support.

YOU at UMN
> A digital platform to connect students to online tools and campus resources designed to support your health and wellbeing goals.

Learn to Live
> Online therapy program that is available and free for students and staff (code "UMN").

> Five online programs based on the proven principles of Cognitive Behavioral Therapy. Programs are confidential and cover the following topics: social anxiety; depression; insomnia; substance use; and stress, anxiety, and worry. These online programs are available regardless of your location.

RecWell
> Visit the recreation facilities on campus, or take advantage of virtual resources.

Wellbeing Guide
> Explore the wellbeing guide developed by the Earl E. Bakken Center for Spirituality and Healing. Topics include healthier sleep, exploring purpose, mindfulness, and more!

Effective U
> Skills for academic and personal wellbeing.

Office for Student Affairs resources for students
> Resources for academic and personal needs.

Food insecurity
> Nutritious U Food Pantry: Open the last week of every month during the semester (Tuesday, Wednesday, Thursday), from 12-6 pm on the 2nd floor of Memorial Union (Room 210).

> Hunger Solutions: Find food shelves and other resources to get assistance meeting food needs.

Student Parent Help Center
> Support network, childcare resources and grants, lactation resources and more.

Student emergency funds
> Assistance for student with an acute financial emergency. Awards range from $50-$1,000.

Safety on campus