



Biophysics Graduate Program

UNIVERSITY OF WISCONSIN-MADISON

2023 – 2024

PROGRAM HANDBOOK

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Program Overview

Biophysics is an interdisciplinary PhD program in the biosciences. It brings together students from diverse scientific backgrounds (biology to biochemistry, chemistry, physics, bioengineering, computational biology, neuroscience, cell biology, and so on) who are interested in research at the cross-section between these disciplines.

Our broad inter-departmental program consists of approximately 60 faculty trainers from departments belonging to five colleges: Letter & Science, Agriculture & Life Sciences, Engineering, and the Schools of Medicine and Pharmacology. This highly collaborative environment offers a spectrum of opportunities that include, for example, protein structure/function and engineering, nucleic acid and membrane biophysics, neuroscience, virology, and synthetic and system biology applied to bacterial and eukaryotic organisms. These research areas share the common goal of understanding biological systems in physical and mechanistic terms, using cutting-edge quantitative instrumental methods, and, frequently, the integration of computation and machine learning. Please find an overview of our research areas on our website.

UW-Madison is a center of excellence in structural biology, with major instrumentation facilities such as the National Magnetic Resonance Facility, the CryoEM Research Center, and the Midwest Center for Cryo-Electron Tomography. Trainers who participate in these centers offer outstanding research opportunities to students who want to become experts in the application and/or development of structural biology. In addition, many other accessible facilities and instrumentation in our trainers' laboratories provide advanced training in spectroscopy, microscopy and single-molecule imaging, high-throughput methods, and the integration of experimental and computational methods applied to the analysis and modeling of macromolecules and biological systems.

Biophysics is an inclusive and collaborative community whose goal is to prepare students of diverse backgrounds with rigorous interdisciplinary and quantitative training for a future in research and teaching in academia, industry, and alternative careers. The program is flexible in its formal course requirements, emphasizing excellence in research. For this reason, the coursework can be tailored to the specific research interests and the diverse backgrounds of each student. For more information, please visit the Biophysics Graduate Program website.

Learning Outcomes

- » Articulates challenges, frontiers, and limits with respect to theory, knowledge or practice within the field of study.
- » Formulates ideas, concepts, designs, and/or techniques beyond the current boundaries of knowledge within the field of study.
- » Creates research, scholarship or performance that makes a substantive contribution.
- » Demonstrates breadth within their learning experiences.
- » Communicates complex or ambiguous ideas in a clear and understandable manner.
- » Evaluates the implications of the discipline to broader social concerns.
- » Fosters ethical conduct and professional guidelines.

Biophysics Administrative Structure

The Biophysics Graduate Program consists of a Director, an Associate Director, and a Graduate Program Manager. It is an interdepartmental program administered by the Institute of Molecular Virology and governed by the Biophysics Steering Committee.

Program Leadership

Each graduate program has one faculty member designated to direct its educational vision and structure.

Director

- » Dr. Alessandro Senes, Professor, Department of Biochemistry

Associate Director

- » Dr. Silvia Cavagnero, Professor, Department of Chemistry

Graduate Program Manager

Each graduate program will have at least one staff person, a Graduate Program Manager, who serves as a point person for program policy and procedures. Graduate Program Managers are well-versed in most elements of graduate education that extend beyond academic instruction in your program and will likely be your first stop for questions related to anything in this handbook.

- » Michael Sullivan

Faculty Advisor

After a rotation period, each student will select a lab and faculty advisor. Your faculty advisor will be a key source of guidance for your research development.

Timeline to Degree

This timeline for progress toward the Ph.D. guides Biophysics faculty trainers and students through the process of obtaining a Ph.D. degree. It provides a snapshot of important degree requirements that must be completed each year before obtaining the Ph.D. degree. Specific details and instructions regarding each requirement are provided in the corresponding sections of the Biophysics Handbook. All forms can be found in the Biophysics Forms section of the Biophysics website.

Year One

Fall Semester

- » Biophysics Graduate Program Orientation Week - August 28th - 31st, 2023
- » Fall 2023 term begins on September 6th, 2023
- » Register for classes and work on required coursework
- » Attend Biophysics Colloquium - September 25th, 2023

Lab Rotation Schedule

- » Rotation 1: September 11th - October 6th (Choice due Friday, September 8th)
- » Rotation 2: October 9th - November 3rd (Choice due Monday, October 2nd)
- » Rotation 3: November 6th - December 1st (Choice due Monday, October 30th)

Lab Rotation Meetings

- » First Lab Rotation Meeting - September 1st
- » Second Lab Rotation Meeting - September 21st
- » Third Lab Rotation Meeting - October 19th
- » Thesis Lab Rotation Meeting - November 30th

Thesis Lab Selection

- » Choose a thesis advisor and lab
- » Thesis lab selection form due - December 6th, 2023
- » Start in Thesis Lab - December 9th, 2023

Spring Semester

- » Register for classes and continue work on required coursework

Thesis Committee

- » Establish a Thesis Committee by May 15th each year
- » Submit Thesis Committee Approval form to the Biophysics Office by May 15th
- » Hold an introductory meeting by August 31st

Year Two

Fall

- » Register for classes and continue work on required coursework
- » Attend the annual ethics refresher seminar

Spring

- » Register for classes and complete required coursework
- » Hold second committee meeting (at least four (4) weeks prior to prelim exam)
- » Complete oral preliminary exam by May 31st

Year Three

- » Register for 990 credits and seminar requirement
- » Attend the annual ethics refresher seminar
- » Schedule and complete a Progress Report Meeting by the end of August
- » Submit Progress Report Form to the Biophysics Office

Year Four & Five

- » Register for 990 credits and seminar requirement
- » Attend the annual ethics refresher seminar
- » Schedule and complete a Progress Report Meeting by the end of August
- » Submit Progress Report Form to the Biophysics Office

Final Year

- » Meet with Thesis Committee to determine your readiness to defend: This should be done within six-months of proposed defense
- » Write and defend thesis
- » Notify the Biophysics Office (at least 4 weeks prior to the defense):
 - Date
 - Time
 - Building/room location
 - Title of defense
 - Zoom link (if streaming)
 - Photo for flyer
- » Submit paperwork to the Graduate School
 - Follow instructions in email from the graduate school following the creation of your warrant
- » Celebrate your graduation!

Ph.D. Requirements

The primary requirement for achieving a Ph.D. in Biophysics is the completion of a noteworthy intellectual contribution to biophysical research. Ph.D. candidates are expected to do significant, original research during their degree tenure and to write a thesis based on this research. The thesis must represent a substantial effort from both the experimental and literary points of view. The purposes of all other program requirements listed below are to ensure students have strong, broad-based background knowledge of biophysics so they may perform effectively and proficiently in all applications of the science and to assess the level of student achievements with regard to program and professional standards.

Course Requirements

The Graduate School requires Ph.D. students to complete a minimum of 51 graduate-level credits to obtain a Ph.D. degree. These 51 credits are fulfilled via these requirements: core curriculum, advanced electives, ethics, seminar, 990 research credits, and specialty courses.

Core Curriculum

All students are required to take:

- » Chem 665 – Biophysical Chemistry (offered every Fall and Spring semester)
- » Chem 668 – Biophysical Spectroscopy (offered every Fall semester)
- » Chem 872 – Biophysics Seminar (Seminar course required during both Fall and Spring semester in years 1 and 2, and either Fall or Spring semester during year 3)

Advanced Course Requirements

The advanced elective provides an opportunity for our students to develop a foundation in topics related to their chosen research area.

Students must take at least 6 credits of advanced elective courses, all of which must be at least 2 credits. To satisfy this requirement, students can, for example, take two 3-credit courses, three 2-credit courses, or one 2-credit and one 4-credit course. The following list of courses has all been approved as elective courses by the Biophysics Curriculum and Steering Committee.

Structure

- » Biochem 601 – Protein & Enzyme Structure & Function
- » Biochem 625 – Mechanism of Action of Vitamins and Minerals
- » Chem 622 – Organic Analysis by Mass Spectrometry
- » Chem 675 – Introduction to Quantum Chemistry
- » Micro 668 – Microbiology at Atomic Resolution
- » Oncology 673 – Purification & Characterization of Proteins and Protein Complexes

Spectroscopy/Microscopy

- » BME 619 – Microscopy of Life
- » BME 751 – Biomedical Optics and Biophotonics
- » Chem 636 – Topics in Chemical Instrumentation: Introduction to NMR
- » Chem 860 – Spectroscopy of Individual Molecules and Particles
- » Biochem 729 – Biochemical Applications of NMR

Modeling and Theory

- » Chem 661 – Chemical Thermodynamics & Statistical Mechanics
- » Math 609 – Mathematical Methods for Systems Biology

Bioinformatics

- » Biochem 570 – Computational Modeling of Biological Systems
- » BMI 776 – Advanced Bioinformatics
- » Oncology 778 – Bioinformatics for Biologists

Molecular Biology

- » Biochem 612 – Prokaryotic Molecular Biology
- » Biochem 620 – Eukaryotic Molecular Biology

Neuroscience

- » Neuro 610 – Cell & Molecular Neuroscience

Advanced Elective Course Request Process

The program recognizes that it is important that advanced elective courses are tailored to each student's specific research topic. Students who are interested in different courses could petition to have them count as electives toward their Biophysics graduate degree. The course needs to be approved by the Biophysics Curriculum Committee.

To request a course approval, please use the Advanced Elective Approval Form. The committee has created a set of guidelines to determine whether or not a course meets the desired rigor to count as an advanced elective. Please read through these guidelines before submitting a course approval request.

Ethics Requirement

Biochem 729 Responsible Conduct of Research

All students are required to take an ethics course in their first year, typically Biochem 729 in the Fall or Spring semester.

Annual Ethics Refresher

In addition, students are required to take a two-hour ethics refresher seminar every year to until graduation. The refresher typically occurs in the early Fall semester and is led by a Biophysics Trainer on a topic of broad interest.

Seminar Requirement

1st and 2nd Year Students

- » The Biophysics seminar, Chem 872 with Alessandro Senes, is required each semester during the first two years in the program.

3rd Year Students

- » Students are required to take Chem 872 with Alessandro Senes for one semester (either Fall or Spring) and a different seminar course in the other semester.

4th Year and Up

- » Students in their fourth year and beyond are required to attend four (4) more seminar classes before their graduation. These are typically 900-level one-credit courses based on the presentation and discussion of journal articles or individual research.

Research Credits

These are the courses in which students will be conducting their independent research. First-semester students will register for Biochem 990 research credits in the department of the Biophysics Program Chair, Alessandro Senes. Once a thesis lab is selected, these credits will be conducted in the Thesis Advisor's home department.

Specialty Courses

Students can take and are encouraged to take, additional courses if they are important for their research work and professional development. Students should consult with their Thesis Advisor and thesis committee members about appropriate specialty courses to take pertaining to individual training goals.

Grades

The Graduate School requires an overall grade point average (GPA) of 3.0 (B average) or better in non-research courses. In addition, the Biophysics Program requires a cumulative GPA of 3.0 or better in the core, ethics, and specialty courses. Research and seminar course grades are not included in the Biophysics GPA.

Credits are not counted from courses in which a grade of BC or below is obtained for either of the Biophysics core courses. In the event of an unsatisfactory grade, the student must repeat the course and obtain a grade of B or better in order to graduate.

The Biophysics Graduate Program Manager will monitor course enrollment and completion. Any deficiencies will be discussed with the Biophysics Steering Committee and could lead to academic probation.

Course Registration

First-Year Rotating Students

Fall Semester

In early July, new students will receive an email from the Registrar's Office inviting them to enroll. At this time, students will register for both 990 research credits, Chem 872 with Dr. Alessandro Senes, and other courses; it is recommended that a student take one of the core courses—Chem 665 or 668—in the Fall and the other in the Spring semester. In addition, you are required to take Biochem 729 Responsible Conduct of Research in either the Fall or Spring; this will be determined by the Biophysics Program, and you will be notified by email before the semester starts as to when you are able to take this course.

The number of research credits is selected based on how many credits are needed to bring the total semester credits to a full-time load of 8-15 credits (typically, this is 3 or more 990 research credits). During the first semester, students register for research credits under the Biophysics Program Chair, Dr. Alessandro Senes.

Spring Semester

In the spring semester, you will again register for Chem 872 with Dr. Senes. In addition, you will register Biochem 729 (if still needed), the other core course (Chem 665 or 668), and 990 research credits with your Thesis Lab faculty in the department where they are located.

Continuing Students

Non-Dissertator Status

Students who have not passed the prelim exam, typically those in their first two years of the program.

- » Students must register for a full-time credit load in the fall and spring semesters (8-15 credits)
- » It is recommended that students apportion these credits between courses, seminars, and 990 research. Research credits (990) are registered under the department of the Thesis Advisor
- » You must be registered for at least 8 credits of graduate-level work
- » During the summer session, students must register for 2 credits (usually 990 research credits unless they are taking a summer course)

Dissertator Status

Students who have passed the prelim exam and completed all Biophysics core and advanced elective requirements (32 credits).

- » Students must register for 3 credits directly related to their dissertation research each fall, spring, and summer term until graduation
- » Typically, students register for two credits of advanced research (990) and one seminar credit (until the seminar requirement is satisfied) or three credits of advanced research (990) credits if not enrolled in a seminar
- » Audits and pass/fail enrollment do not satisfy Dissertator Status requirements

Lab Rotations

During the first semester, incoming students rotate in three laboratories for four to five weeks per rotation. Rotations allow students to gain a vast amount of knowledge about research in the Biophysics Program. This knowledge will allow them to better choose a thesis lab for completing their Ph.D. degree.

Purpose

- » An introduction to biophysics research and techniques
- » Exposure to the actual working environment of a laboratory
- » Hands-on research experience
- » Exposure to the variety of biophysics research being conducted on the UW-Madison campus
- » A chance to meet various students and faculty trainers

Selection

- » Review each faculty trainer's lab research (see the faculty directory on the Biophysics website)
- » Attend biophysics faculty trainer talks during Advising and Orientation Week, where each faculty trainer will discuss research being conducted in their lab
- » Identify faculty trainers of interest for possible fall lab rotations or future Thesis Committee members
- » Note questions to ask each faculty trainer
- » Arrange a time to meet with each faculty trainer of interest to discuss questions and obtain more information about their lab
- » Students are advised to meet with at least six faculty trainers before deciding on their lab rotations
- » Students can discuss tentative plans to rotate in a trainer's lab during a later rotation but should not commit to the next rotation until toward the end of the current rotation

Lab Rotation Concerns

If the student experiences lab rotation difficulties or is unable to determine an appropriate thesis lab at the end of their third rotation, a fourth rotation may be necessary. The student will need to identify a lab to rotate in, following the process that was done for the previous three rotations. In addition, they will work with the Biophysics office to ensure a match occurs.

Biological Safety at UW-Madison

Various safety trainings are required for students working in labs on campus. If a student is working with animals or radiation, UW-Madison requires that the student complete the necessary training. For each lab rotation, the student should check with each faculty trainer about which training sessions he/she will need to attend for that specific lab. Below are the various training courses offered by the UW Office of Biological Safety.

Biological Safety Training:

- » All training is administered through the UW Office of Biological Safety
- » For more information, see the Biological Safety Training website
- » Additional training is offered for lab animal certification, chemical safety training, hazardous materials, and radiation safety

Thesis Overview

Thesis Advisor

The Thesis Advisor will assist the graduate student throughout the duration of their PhD studies. Upon choosing a Thesis Advisor, the student should formulate goals and expectations when starting in a permanent lab home. The student and Thesis Advisor should work together to ensure that mutual goals and expectations are met.

Purpose

- » Monitor and guide the student's progress toward their PhD degree
- » Provide the student with advice about how and when to meet the degree requirements of the program
- » Help the student decide on appropriate coursework during their PhD studies
- » Act as the head of the student's Thesis Committee (except during the prelim)
- » Advise and help the student in establishing the members of their Thesis Committee

Concerns

If a problem between a student and the Thesis Advisor develops, the following steps should be taken:

- » The student and Thesis Advisor should discuss and attempt to resolve any differences, request changes within a specified time period, note concerns on the Progress Report form, follow up with a letter to the student, and send a copy of the letter to the Biophysics Office
- » If either party is not satisfied with the result, they may present the situation to a member of the Thesis Committee and notify the Biophysics Office
- » If the problem is not readily resolved, the student or Thesis Advisor may seek the guidance of the Biophysics Program Chair
- » If a solution suggests a laboratory change, the Thesis Advisor will be expected to fund the student for a one-month rotation
- » The Employee Assistance Office (EAO) at UW-Madison is available to faculty trainers and graduate students as a useful resource when dealing with student-Thesis Advisor concerns

Thesis Committee

Students should hold a meeting thesis committee at least once each academic year that they are enrolled in the Biophysics PhD program. Committee meetings that are held to address Certification, the Research Proposal, and the Preliminary Exam satisfy this requirement for the academic year during which they are held

Composition of the Committee

The Thesis Committee comprises at least four members: the Thesis Advisor and at least three other faculty members selected by the student in consultation with the Thesis Advisor. The committee will help guide the student throughout their independent research until completion of the PhD Degree. Three of the four committee members must be trainers in the Biophysics Program. At least one of the three members must be in a different department than your advisor. If appropriate, one committee member can be an external expert in a field closely related to the thesis project and can be a faculty member at a different University in the United States or abroad, upon approval by the Biophysics Office.

Formation of the Committee

It is recommended that students start thinking about forming their Thesis Committee soon after their project is defined. The deadline for communicating to the Biophysics Office the composition of the committee is May 31st of the student's first year in the Biophysics Program. Once a committee is formed, the student should schedule a first meeting with all committee members. Please be advised that many faculty members may not be available for some periods during the summer months. Therefore, it is critical to schedule the first meeting with the committee well in advance. The first introductory committee meeting should happen by the end of the summer term of the first year in the program.

Annual Meetings

Students are required to meet annually with their committee throughout their progression toward their PhD. Students should arrange to meet annually with their committee before August 31 (or before the beginning of the Fall semester). If a committee meeting date cannot be agreed upon with all committee members, a meeting should be arranged with at least three committee members, including the thesis advisor. The student should meet any missing committee members separately.

Written Annual Report

Before each committee meeting, students should prepare a progress report using page 1 of the Annual Committee Meeting Form. The report should briefly summarize the research progress and results, and challenges. The student's progress report needs to be sent to the committee one week before the meeting date.

Format and Goals of the Committee Meetings

The student should prepare a ~20-minute presentation (allowing ~30 minutes for discussion) describing what was accomplished during the past year and stating goals for the upcoming year. The first committee meeting is primarily an opportunity to introduce everyone and describe the goals of the PhD project. During the second year, the meeting is replaced by the preliminary exam. Going forward, the goal of the annual committee meeting is to assess the student's progress toward completing the thesis work and to provide an opportunity for feedback and advice. During the initial years, the committee should also advise on coursework that may be beneficial, considering the student's research project. In later years, it is critical that the student and the committee work on defining clear expectations for the milestones required for the completion of the thesis and the relative timeline. The committee meetings also provide an opportunity for discussing professional development and career goals.

After the meeting, the committee fills the committee section of the annual report (page 2 of the form), summarizing the progress and providing recommendations for directions. and whether the student is on track for timely completion of their PhD. Both pages of the form should be returned to the Biophysics Office promptly after the meeting with the committee.

Preliminary Exam

The preliminary (prelim) exam is administered by the student's thesis committee. It consists of a written research proposal and an oral defense.

Timeline

The prelim should be taken at the end of the Spring term, before the start of the summer term each year, in the student's second year in the program.

- » The student should establish a date and time (two hours) for their prelim with their committee at least four weeks in advance of the exam and no later than May 31st
- » The prelim should be completed by the end of the summer term (note: to ensure that the student can register as a dissertator in the Fall semester and thus benefit from the lower segregated fee rates, the prelim should be completed by August 31st)
- » Once the prelim has been scheduled, the student should notify the Biophysics Office of the exam date so a warrant can be obtained from the Graduate School

If extenuating circumstances prevent the student from meeting by the August 31st deadline, the student must request an extension from the Biophysics Office.

Written Proposal

The prelim consists of the preparation of a written research proposal on their thesis project, followed by an oral defense. The format of the research proposal is based on an NIH F31 predoctoral grant application. The student will distribute a copy of their written proposal to each committee member and the Biophysics Office one week before the exam date. The format of the written proposal is the following:

- » Title or Cover Page (please include your name, a title, and the names of your advisor and your committee members)
- » Summary/Abstract (1-2 paragraphs)
- » Specific Aims Page (limit 1 page, single-spaced)
- » Research Strategy (6 pages, single-spaced, including figures), with the following sections:
 - Background and Significance
 - Preliminary Data
 - Research Design and Methods
 - Timetable for completion of the project (be concise)
 - Bibliography (no page limit)

Oral Defense

At the exam, the student will give an approximately 20-minute uninterrupted presentation about their written research proposal, after which the floor will be open for questions from the committee. Once the questioning period has ended, the student will be asked to leave the room, allowing the committee to discuss the prelim defense and presentation. After the discussion, the committee will agree on an outcome: Pass, Conditional Pass, or Fail. The whole process should not last more than two (2) hours.

Prelim Chair

The Biophysics Office will designate a 'Prelim Chair' from among the committee members, someone other than the student's advisor, and will provide them with instructions and the forms before the exam.

The Prelim Chair will fill out the Committee Summary form with the committee's evaluation and outcome decision. Each committee member fills out a Committee Member Form with detailed feedback, returning it to the Prelim Chair. They will then communicate the outcome of the exam to the Biophysics Office and return the Committee Summary form, and the Committee Member forms to the Biophysics Office and the student; if the Prelim Chair does not include the student, the Biophysics Office will provide them with copies. The forms can be returned either electronically (preferred) or as hard copies.

Prelim Warrant

Once the Biophysics Office is notified that the student has passed the prelim, Biophysics will electronically request signatures from all committee members and the Director of Graduate Studies for Biophysics.

Outcomes

Pass

In case of a Pass, the Prelim Chair will notify the Biophysics Office that the student has passed their preliminary exam. The Biophysics Office will then request signatures from committee members who will sign the warrant electronically. Further, students will receive a copy of the Preliminary Exam Summary Form with feedback about their presentation.

If the student has completed all other program requirements, the student will be promoted to dissertator status once the graduate school has received a fully signed electronic warrant. In addition, a student may add a master's program plan and receive a master's degree as a further marker of progression in the program. Note, that this is optional and not required to move forward.

Conditional Pass

The Conditional Pass is given when a student performs well during the exam, but the committee identified a specific gap or issue that needs to be addressed before giving the student a Pass.

In these cases, the committee will provide written instructions on how to remedy the issue. For example, if the oral part of the exam was positive but the proposal was poorly written, the committee could ask for a revised version. If gaps are identified in the knowledge of the background literature or important technical aspects of the project, the committee could ask for a follow-up in written form on these topics. If the committee is concerned about research progress, they may ask for a written progress report after meeting certain research milestones. The timeline to remedy the conditional pass is at the discretion of the thesis committee, but it should be no longer than six months.

Once satisfied, the Prelim Chair or Thesis Advisor will notify the Biophysics Office so the warrant can be signed and processed.

Fail

In case of a Fail, the performance on all aspects of the exam indicates that the student is struggling to grasp the research they are proposing. With feedback from the Thesis Advisor and prelim committee, the student will be given one more opportunity to retake the exam with a timeline no longer than one year from the date of the first exam. The goal is to allow the student adequate time to receive mentoring and prepare for their second attempt at the preliminary exam.

Students who fail the preliminary exam a second time will not be permitted to continue in the Biophysics Graduate Program and will be asked to leave at the end of the term of the second attempt.

Dissertator Status

Dissertator is a unique fee status for students who have completed all requirements for a doctoral degree except for the dissertation. To be eligible for dissertator fee status, a student must:

- » Pass the preliminary examination(s)
- » Satisfy the doctoral minimum graduate residence credit requirement
- » Complete all minor requirements, if the major program requires a minor
- » Complete all program requirements except the dissertation
- » Clear all Incomplete grades or Progress grades in non-research courses (progress grades in 990 research may remain)
- » Earn at least a 3.0 cumulative graduate GPA
- » Return the signed and dated preliminary exam warrant to the Graduate School

Dissertator status is effective at the start of the semester following completion of all dissertator requirements for the doctoral degree except for the dissertation. In order to initiate the change to dissertator status, the prelim warrant must be sent to the Graduate School in a timely fashion. Students can check on dissertator status by contacting the graduate program coordinator. <https://grad.wisc.edu/acadpolicy/#dissertationstatus>

Master's Degree

Students are not admitted into the Biophysics Graduate Program for a terminal master's degree. However, a master's degree in Biophysics is available to currently enrolled Biophysics Ph.D. students upon completion of 32 credits, their Biophysics course requirements, and passing the preliminary exam.

The master's degree is not meant as a terminal degree, but rather a marker of progress towards their Ph.D. Awarding of a master's degree is optional and is not required to be a dissertator or for earning a Ph.D. in Biophysics. Students may obtain both the master's and prelim warrant from the Graduate Program Manager prior to taking the prelim exam.

Dissertators can add a master's if it is in the SAME major program without being "penalized" (i.e., removed from dissertator status), any time before they graduate with a Ph.D. The process for adding a master's program is here: <https://grad.wisc.edu/documents/change-program/>.

For students who choose to leave the Biophysics before earning a Ph.D., they may do so with a master's degree if they have completed 32 credits and their Biophysics course requirements: Please consult with the graduate program manager or director of the program for more information.

PhD Thesis Defense

The Thesis Defense is a presentation of the student's independent research topic including an overview of the experiments completed and a summary of the analyzed data and results. Most students are able to complete their PhD within five to six years after entering the Biophysics Program. The Thesis Defense must be completed within five years after achieving dissertator status. For more information on this policy, see the Graduate School Academic Policies and Procedures website.

Four Weeks Prior to Thesis Defense

- » Schedule the Thesis Defense with the Thesis Committee
- » Send an email notification with the scheduled date and time, location, Zoom link (if streaming your defense), thesis title, and listing of thesis committee members to the Biophysics Office
- » The Graduate Program Manager in the Biophysics office will request an electronic warrant from the Graduate School
- » Read through the Graduate School's page on "Completing Your Degree" grad.wisc.edu/currentstudents/degree/

If changes in the Thesis Committee are made after a warrant has been requested, then a new request must be made to the Graduate School for approval and the issuance of a new warrant.

Two Weeks Prior to the Thesis Defense

- » Submit a copy of the Thesis Defense to all members of the Thesis Committee, also reminding them of day, time and place for the defense

- » The Biophysics office will create a Thesis Defense flyer and distribute this announcement to the current Biophysics faculty trainer and graduate student email list
- » Notify your departmental payroll coordinator of the date you are expecting to defend and deposit your thesis

At the Thesis Defense

- » All four committee members must be present
- » Present your independent thesis research project
- » Defend and answer questions asked by the Thesis Committee

Following the Thesis Defense

- » Notify the Graduate Program Manager in Biophysics of the successful completion of your defense
- » The Graduate Program Manager will then request signatures from your committee, these will be collected electronically

Contact the Graduate School (608-262-2433) to schedule an appointment for the final review (*final review appointments are now optional*).

Submit the following materials:

- » To the Biophysics Office
- » Thesis Abstract
- » Alumni Information Form

To the Graduate School:

- » Signed Thesis defense warrant (Electronically)
- » Submit your thesis dissertation to the Graduate School (All corrections and revisions must be complete before submission)
- » Survey of Earned Doctorates (SED) certificate of completion
- » Graduate School Doctoral Exit Survey (DES) certificate of completion

For more information, see: grad.wisc.edu/currentstudents/doctorguide/

Financial/Health Insurance Support

All Biophysics students will receive a yearly stipend and UW Graduate Student health insurance benefits. The stipend rate is set each year in July for the upcoming year. For 2023-24, the stipend is \$33,000. Any student receiving a fellowship or training grant less than the current Biophysics stipend rate is required to be supplemented to reach the current Biophysics stipend rate.

It is recommended that all Biophysics students and faculty be aware of the Graduate Assistantship Policies and Procedures (GAPP) maintained by the UW-Madison Office of Human Resources: <https://hr.wisc.edu/policies/gapp/>. These policies describe the details of the graduate assistant (GA) appointment, the benefits that the appointment provides, and the procedure for reporting any grievances that may arise under these policies and procedures. Most Biophysics students, except those supported by fellowships, are appointed as GAs. All Biophysics faculty are expected to follow these policies and procedures in supervising Biophysics students.

First-Year Rotation Students

Stipend

- » All Biophysics students are awarded a yearly stipend. The Biophysics program will cover students' stipend during their rotations; after that, the responsibility for covering the stipend amount will fall to the home department of the professor's lab you join
- » For new students, the first paycheck will be electronically deposited in your bank account in mid-September
- » Students will receive a paycheck every other week from that point forward

Tuition

- » Tuition is remitted; thus, students should not receive a tuition bill
- » If a student receives a tuition bill, they should contact the Biophysics Office immediately (biophysics@bocklabs.wisc.edu)
- » If the Biophysics Office is not contacted about the bill, the student will be charged a \$100, non-refundable late fee (Biophysics is not responsible for any late fees)

Segregated Fees

- » Each semester, students with a Research Assistant (RA) title will need to pay segregated fees, a UW-Madison mandated fee
- » Segregated fees cover the cost of the University Health Services, bus passes, use of the Wisconsin Union, etc.
- » See the Bursar's Office for segregated fee information
- » Students can check their MyUW financial account to view segregated fee charges
- » Fees can be paid online through MyUW or at the Bursar's Office
- » If this fee is not paid by the deadline, students will be charged a \$100 non-refundable late fee (Biophysics is not responsible for any late fees)

Research Assistants

Stipend

- » The Thesis Advisor is fully responsible for the stipend

Tuition

- » Tuition is remitted
- » Segregated Fees
- » Research Assistants pay segregated fees at the beginning of each semester

Fellows/Trainees

Stipend

- » The majority of the stipend is paid by the fellowship/training grant
- » If a fellowship/training grant funding rate is below the current Biophysics stipend rate, the student's fellowship/training grant will be supplemented to bring the stipend up to the current Biophysics stipend rate
- » The Biophysics Program will supplement a fellowship/training grant stipend for first-year rotating students until they have joined a thesis lab
- » The Thesis Advisor will supplement a fellowship/training grant stipend once the student has joined a thesis lab

Tuition

- » Tuition is remitted
- » Segregated Fees:
- » Paid by the fellowship/training grant

Health Insurance

During orientation, incoming rotation students will be provided with benefits information and instructions on how to apply for benefits. Benefits packets must be completed and submitted within 30 days of the start of your appointment (the first day of orientation).

Graduate students including research assistants, fellows, and trainees are eligible for health insurance plans offered by UW-Madison.

- » Single and family health care coverage plans are available
- » Benefits premiums are automatically deducted from the student's monthly paychecks
- » Benefits forms must be completed and submitted online during orientation week to ensure insurance coverage begins on September 1st
- » There is an open enrollment period every October if you want to make changes to your healthcare coverage plans

Grievance Process

Overview

If a student feels unfairly treated or aggrieved by faculty, staff, or another student, the University offers several avenues to resolve the grievance. Students' concerns about unfair treatment are best handled directly with the person responsible for the objectionable action.

If the student is uncomfortable making direct contact with the individual(s) involved, they should contact the advisor or the person in charge of the unit where the action occurred (Biophysics Program Administration or Chair, Lab Department Administration or Chair, Lab Manager, etc).

Many departments and schools/colleges have established specific procedures for handling such situations; check their web pages for more information. If such procedures exist at the local level, these should be investigated first. For more information, see the Graduate School Academic Policies and Procedures: Grievances & Appeals at <http://grad.wisc.edu/acadpolicy/#grievancesandappeals>.

Procedure

Procedures for proper accounting of student grievances within the Biophysics Program:

- » The student is encouraged to speak first with the person toward whom the grievance is directed to see if a situation can be resolved at this level
- » Should satisfactory resolution not be achieved, the student may decide to contact the Biophysics Office and the Biophysics Program Chair to discuss the grievance.
 - If requested by the student, the program will be available to facilitate a resolution through informal channels and help mediate a solution between the involved parties
- » Students are also encouraged to talk with their faculty advisor or thesis committee members, if appropriate
- » University resources for sexual harassment, discrimination, disability accommodations and other related concerns can be found on the UW Office of Equity and Diversity website: www.oed.wisc.edu

Other campus resources include:

- » The Graduate School: grad.wisc.edu
- » McBurney Disability Resource Center: mcburney.wisc.edu
- » Employee Assistance Office: eao.wisc.edu
- » Ombuds Office: ombuds.wisc.edu
- » University Health Services: uhs.wisc.edu

If the issue is not resolved to the student's satisfaction, the student can submit the grievance to the Biophysics Office and Biophysics Program Chair in writing, within 60 days of the alleged unfair treatment.

On receipt of a written complaint, a faculty committee will be convened by the Biophysics Program to manage the grievance. The program faculty committee will obtain a written response from the person toward whom the complaint is directed. This response will be shared with the person filing the grievance.

The faculty committee will determine a decision regarding the grievance. The Biophysics Program will report on the action taken by the committee in writing to both the student and the party toward whom the complaint was directed.

At this point, if either party (the student or the person toward whom the grievance is directed) is unsatisfied with the decision of the faculty committee, the party may file a written appeal. Either party has 10 working days to file a written appeal to the School/College.

The Graduate School has procedures for students wishing to appeal a grievance decision made at the school/college level. These policies are described in the Graduate School's Academic Policies and Procedures: <https://grad.wisc.edu/acadpolicy/#grievancesandappeals>.

