

# Biophysics Graduate Student Mentoring Guidelines

## I. Introduction

Although mentoring students is key at all educational levels, the mentor-mentee relationship should be strong during graduate school as the faculty guides the student through their research toward a M.S. thesis or Ph.D. dissertation. This requires guidance and training of the student and should also include advice toward the next steps in the student's career. This document outlines the guidelines for mentoring from the department and faculty. It then concludes with the responsibilities and expectations for the student in this relationship.

## II. Mentoring from the Program

The program administration, Program Director(s) and Graduate Program Coordinator, serves as potential mentors for all students. The mentoring from more senior students can be formal or informal. Listed below is a standard plan for mentoring of graduate students following the track of incoming students without an advisor.

### A. First Year

1. Program director(s) (PD) and Graduate Program Coordinator serve as Academic Advisor/Mentor: During their first year, graduate students do three lab rotations to gain experience in potential research mentor/advisor labs. The PD will advise and mentor students during this period providing help with the first semester class registration, guidance on research during the lab rotation, guidance on choosing an advisor, and other mentoring/advising. The Graduate Program Coordinator will also support by advising students with details of how to register, necessary documents, etc.
2. Advisor Selection: An official advisor can be decided after the first or second rotation or after the final and third rotation. This should be done before the end of the second semester in the program. The PD will mentor students and provide advice in choosing an advisor. In the rare situation that a student does not identify an advisor after three rotations, the student may request permission to do a fourth rotation over the summer. The financial support during this time will depend on the individual but might involve direct support from the lab in which the rotation is done or the student will have to secure a summer TA with the program's help.
3. Individual Student Mentors: The Biophysics Graduate Student Association will work with incoming students to pair each incoming student with a student mentor. This mentor will be matched based on general research interest. Regular meetings between the mentor and new student will be scheduled twice a semester. When possible, students from underrepresented minorities (URM) or groups will be encouraged to have a paired student mentor in this category to provide a URM perspective to their time as a graduate student in the department. However, all mentors will be selected based on the incoming students' needs. The mentor-mentee assignment and responsibilities will be made based on a mutually agreed upon process discussed among the students.
4. Faculty advisory committee: Students will have a two-member advisory committee starting the first semester. This serves as a resource for students to get to know faculty members, seek advice, and expand their range of expertise. The student will meet with

the mentoring advisory committee once a semester and provide an academic and research progress report. If the student needs more mentoring, they can reach out to the advisory committee to setup a meeting.

#### B. Subsequent Years as a Graduate Student

1. Research Mentor(s): The advisor(s) will serve as the main source of mentoring and details are provided in Section III. Any co-advisor that is not part of UMD, will follow the expectations of mentorship as outlined in Section III.
2. Program: The program will continue to be an avenue of support for students during their time as a graduate student. Although the faculty research mentor(s) will be the main source of support, the PD will serve as the first point of contact if issues arise that cannot be resolved by the faculty mentor. Students are also encouraged to seek advice from departmental sources to supplement advice from their advisor(s). The department will also notify students of opportunities for travel support, departmental awards, teaching opportunities, job opportunities, fellowships, as they become available and encourage students to apply.
3. Faculty advisory committee: A two-member committee will continue for subsequent years until the Ph.D. candidacy exam. The student should meet with this committee twice a year and provide semester progress reports for the fall and spring semesters. As the student is preparing to defend their Ph.D. proposal, the committee that will review this proposal will become the new advisory committee. Then the student should meet with their committee once a year but still provide progress reports twice a year to the committee.

#### C. After Thesis/Dissertation Defense

The program will ask students who have completed the requirements for their degree to fill out an exit survey. This will provide the program information regarding the next steps in their career but also provide feedback on aspects of the BIPH graduate program and mentoring that will help us improve the development and mentoring of future students.

### III. Faculty Mentor Guidelines

#### A. Communication

1. Regular Meetings: Mentors are expected to have regular meetings with graduate students. The form of these meetings varies between labs (one-on-one, small groups or larger group meetings). These meetings will discuss research progress and challenges, teaching duties (if applicable), and professional development (see Section D). Depending on the situation and location, these meetings are encouraged to be in person but can also occur on-line. While the frequency of meetings will vary, faculty are expected to meet with each student at least once a month. During these meetings expectations will be clearly described for the progress of the student's research toward the Ph.D.
2. Additional Communication: The mentor should allow for other methods of contact beyond live communication. This might involve traditional email communication, chat, or messaging platforms (WeChat, Slack, etc.). A mentor should notify the student of the preferred method of contact and the expected time to respond. While times to respond can vary depending on the request and/or faculty schedule, it is expected that a faculty will respond within 2 days.

3. Treating Students with Respect: Faculty mentors should be respectful of mentees and communicate with them in a professional manner. Mentors should remember that students are still learning, and it is their duty to help the students learn. Critical feedback on research is essential to the development of the graduate student and research project, but criticism should be given in a courteous and constructive manner. Students will report inappropriate (uncourteous or unconstructive) behavior to the PD and potential disciplinary actions will be taken.

#### B. Fostering Excellence in Research, Ethical Behavior, and Independence

1. Research and Independence: A mentor's duty is to train a graduate student in what is needed to be an independent research scientist. A mentor will promote and provide positive feedback for new and important findings from a student during regular meetings with the student. When possible, the mentor will encourage a student to develop their own ideas applied to their funded project(s) as well as developing their own research projects. Therefore, by the end of their time as a student, they will demonstrate the ability to form independent research.
2. Ethics in Research: The faculty mentor must also pay careful attention to ethical behavior and train the student in the appropriate behavior. If there are signs of plagiarism or fabrication in writing and/or data collection, the student will be warned that further actions will have severe consequences (loss of funding and/or being expelled from UMD).

#### C. Expectations and Growth

1. Expectations in Research Progress: The faculty mentor should provide input during regular meetings with the student on the expectations of what should be done in a given time frame. If research goals are not met, the mentor should work with the student to help the student reach the stated goals. If the student is making unreasonable progress based on a plan developed by the mentor, this could lead to grounds of loss of funding and poor progress toward the degree. In extreme cases, the mentor will notify the PD to help resolve the issue and the PD will work with the student to determine options in the program to complete the degree or plans to leave the program.
2. Research Growth of Student: The expectations provided by the mentor should help the graduate student grow in their ability to perform independent research. Although initially the expectations will be strongly mentor driven, the goal will be to transition to a point where the graduate student develops their own expectations associated with their research projects in consultation with the mentor.

#### D. Professional and Career Development

1. Discussion of Career Paths with Student: The faculty mentor should discuss the student's desired career paths and provide input on how to best reach the student's goals and give advice on career paths, as requested by the student.
2. Formal Development Plans: The faculty mentor will encourage the development of formal individual development plans (IDPs). The graduate school has individual [IDP templates](#) for students, and *Science Careers* offers another format available as [myIDP](#). *Science Careers* also provides a [form](#) focused on research skills and professional development that mentors can use to assess and guide students.

#### E. Know the Policies and Resources for Students

The mentor should also be aware of the various policies and resources available to students to guide them through their time as a student at UMD. Some important links are provided below.

- Various program [requirements](#).
- Program [policy and procedures](#).
- Advancement to Candidacy [requirements](#).
- Graduate School [Deadlines](#)
- Graduate School [Policies](#)
- Graduate School [Academic Counseling](#)
- Graduate School Grad Student Circles ([Mental and other resources](#))
- UMD [Counseling Center](#)
- Title IX [Non-discrimination Policy](#)

#### F. Understand Challenges Related to Diversity, Accessibility and Work-life Balance

1. Diversity: As mentors, faculty should be aware of the challenges that students from underrepresented groups face. These challenges can influence performance in academic and job/research activities. Faculty are encouraged to look at resources available from the [Office of Diversity & Inclusion](#). As mentioned above, the department will encourage URM students to be paired with more senior URM mentors so that students can discuss their unique issues with others that may have faced similar challenges. As a URM student becomes more experienced, they will be encouraged (but not required) to help other URM students in the program.
2. Accessibility: If a student requires accommodations, the program and mentor will work with the student to accommodate any restrictions or modifications due to a disability.
3. Work-life Balance: A positive work-life balance is essential during graduate school and the mentor should respect the mentee's time outside of work. The mentor should encourage students to be meaningfully involved in activities outside of the research lab. For students dealing with specific needs that require immediate or sustained schedule interruptions (dependent care, personal health, military service, childbirth, etc.), the mentor will provide a flexible schedule (when possible) to accommodate their needs.

#### IV. Student Responsibilities

##### A. Communication

1. Mentor: Communication with your mentor will be key to the success of your training at UMD. The methods of communication vary between groups, but you should come to your regular meetings prepared to discuss and show progress in your research and specific areas previously requested by the mentor. Outside of regular meetings, you should use the methods of communication requested by the mentor (email, Slack, WeChat, etc.).
2. Research/Collaborative Group: For most students, you will be part of a larger research group and/or a collaborative effort to accomplish a set of research goals. You will need

to learn how to effectively communicate your research to others in the mentor's group and others outside the group. You should treat everyone with respect and work as a team.

3. Program: You are encouraged to communicate with the program (Coordinator and PD) for questions and/or concerns with regards to the program. Most policy information queries are best made to the Coordinator. If there are issues with a policy or the research environment, you are encouraged to discuss this with the PD. Nearly all forms needed for the program should be done electronically and signed by all parties in this manner.

#### B. Relationship with Mentor

1. Respectful: You should be respectful of your mentor's time and communicate with your mentor in a professional manner. If you have a scheduled meeting with your advisor, arrive on time and be prepared for your meetings. If you cannot make the scheduled time, notify the mentor in a timely manner.
2. Responding to Feedback: Critical feedback of research is essential to the development of the graduate student and research project. The student should recognize that mentors have more knowledge and experience and are helping the student develop. Students should be open to feedback on their research and provide counter arguments if they feel the mentor is incorrect. This should be done in a respectful manner.
3. Take the initiative: If you feel that you need to discuss a topic with your mentor outside the regular meeting time, you should take the initiative to ask for help and/or schedule a meeting.
4. Issues with Mentor: If you are having issues with your mentor that cannot be resolved, please contact the PD to discuss your concerns. If your mentor is the PD, then feel free to contact co-PD or the director of IPST.

#### C. Professional and Career Development

1. Discussion of Career Path with Mentor: You should routinely discuss plans for your career after graduation with your mentor. This might also relate to research projects that you get involved in to gain experience necessary in a given future job sector.
2. Formal Development Plans: You should develop your own formal individual development plan (IDP). The graduate school individual [IDP templates](#) for students and Science Careers offers another format available as [myIDP](#). The goal is to get you to formally think about what you need to enter your desired job after graduation and identify areas where your mentor may be able to assist you.
3. Mentor Network: You should develop your own mentoring network consisting of other students, researchers, and faculty. This will help you develop in research but also future career goals.

#### D. Know School Related Policies

The student should also be aware of the various policies and resources available to guide you as a student at UMD. Some important links are provided below.

- Various program [requirements](#).
- Program [policy and procedures](#).

- Advancement to Candidacy [requirements](#).
- Graduate School [Deadlines](#)
- Graduate School [Policies](#)
- Graduate Research Assistant [Policies](#) (appointment, renewal, time away from duty, etc.)
- International Student & Scholar Services provides info on [policies and forms](#).
- Graduate School [Academic Counseling](#)
- Graduate School Grad Student Circles ([Mental and other resources](#))
- UMD [Counseling Center](#)
- Title IX [Non-discrimination Policy](#)