

The Department of Biology trains graduate students in integrative research, with a curriculum that exposes students to the major sub-disciplines of biology and a program that allows enough flexibility to develop interdisciplinary work. Our major strengths include developmental biology, global change biology, neuroscience, and species interactions. Our department has strong ties with the [Abess Center for Ecosystem Science & Policy](#), [Fairchild Tropical Botanic Garden](#), the [Miller School of Medicine](#), the [Department of Physics](#), and [Rosentiel School of Marine & Atmospheric Science](#). Application to our program **requires** students to be sponsored by [faculty within our department](#), unless they are pursuing a rotation fellowship (discussed later). Students can take advantage of collaborations with the programs above by co-sponsorship with these external faculty.

We currently have four graduate programs:

1. **Ph.D. in Biology.** Our PhD program centers on students developing a dissertation project that explores fundamental questions in biology. We encourage projects that are multidisciplinary in nature. The Ph.D. requires 60 graduate credits, a qualifying exam, a research proposal with an oral defense, and a dissertation with an oral defense.  
**M.S. in Biology.** Our M.S. program has two tracks requiring 30-36 of graduate credits:
2. **Masters with a thesis (Three years).** The Masters with thesis track follows the same general structure as the Ph.D. program, requiring an independent research project and coursework. Students are required to present a research proposal and a thesis with oral defense.
3. **Masters without thesis (Two years).** The Masters without thesis track is coursework-based and does not involve an independent research project.
4. **B.S./M.S. in Biology.** The joint B.S./M.S. program allows students to concurrently work on both B.S. and M.S. in Biology degrees through a five-year program. The degree requirements for the BS degree are unchanged (set Undergraduate Page link), the MS is a research-intensive degree to be completed during the Senior year and one additional year. Completion of the MS requires presentation of a research proposal and a dissertation with oral defense. For more information visit: [MS/BS Program](#).

The deadline for applications is December 1<sup>st</sup> of each year.

For the Ph.D., M.S. with thesis, and the B.S./M.S. programs, you are required to apply with a faculty advisor in mind. A brief guide on doing so can be found below.

## Finding a Faculty Advisor

### What is the role of faculty in admission to the program?

Admissions for a graduate degree in STEM are often very different from admissions to undergraduate or other graduate programs. In the Department of Biology, prospective

students are generally sponsored by a faculty member. This does not mean a prior relationship with a faculty member is required (e.g., having conducted research in their lab); instead, this means that the faculty member has shown interest in the prospective student, usually after communicating with the prospective student (discussed below). Students interested in the program should visit [our research labs' pages](#) to learn about ongoing research and then reach out to faculty whose lab's research is interesting to them via email. Faculty may schedule phone or video calls to have more in-depth conversations.

Prospective students can also opt to do rotations through several labs to identify the best fit (PhD specific). In their first year, incoming students conduct research in 2-3 labs ("rotations" of ~3 months per lab). In this case the applicant would identify two to three potential sponsors in their application. The Department of Biology typically provides 1 rotation fellowship in any given year. Students under a rotation fellowship do not have the same work responsibilities (e.g., teaching assistantships) during their first year. After the first rotation year, students decide with whom they will complete their PhD. Students should identify willing faculty sponsors if interested in rotating.

### **Why should I email faculty prior to applying?**

Emailing faculty prior to application serves many purposes. You will be working closely under your chosen principal investigator (PI, a lab's lead faculty) for several years, so it is important to make sure your potential mentor is a good fit for you and your goals. Communication with a potential mentor prior to applying to the program allows you to introduce yourself and your background. By emailing faculty, you can confirm that they are accepting new students and learn about the lab's ongoing projects. In some cases, a PI may discuss developing an independent research project that is not reflected on their laboratory website.

### **How should I structure the email?**

Your email should begin with a subject line making it clear why you are reaching out. Our faculty have an automatic flag for the subject line "[Inquiry] Potential graduate student," although variations are of course accepted.

As for the content of the email, you should seek to accomplish the following: 1) an introduction of yourself and your study/work history, 2) determine if the PI is accepting new lab members, and 3) convey why you are interested in the lab's work and why you think you are a good fit. An example email can be found below:

Good afternoon Dr. [X],

My name is [Name] and I am reaching out to discuss applying to the University of Miami's Biology [PhD/MS] program. I received my B[X] degree from [Institution] in 20[XX] and am very interested in continuing my education at UM. I found your lab's research on anthropogenic changes to tropical forests to be very interesting, especially

your recent paper on leaf temperatures and photosynthetic heat tolerance. During my undergraduate studies, I conducted habitat loss research in Dr. [X]'s lab and think my background and experience mesh well with your lab mission.

I was hoping to first confirm that you are accepting new graduate students to your lab and if so, that we could discuss my potential application to UM's program? Any advice or suggestions you have would be much appreciated. I have attached my CV for your reference.

Thank you for your time,  
[Name]

### **Should I discuss my background/identity?**

If you're a member of a group typically underrepresented in STEM/academia, you are welcome to share that information if you are comfortable. The Department of Biology is dedicated to recruiting and supporting a graduate population to reflect our diverse undergraduate student body. Discussing your identity is not required, but there are funding opportunities such as the McKnight and Ford fellowships that you may be eligible for that your potential faculty member can help you navigate.

### **What response can I expect to my email?**

There is a range of responses you can expect from faculty, but most importantly you SHOULD expect one. If you don't receive one within two weeks, please feel free to send a follow-up email. If there is no response at that point, you are still welcome to apply to the program, though you may want to consider reaching out to other potential mentors.

The faculty member may simply confirm whether they are or aren't taking new graduate students. They may want to communicate with you further, potentially by email or phone. It is also possible they will tell you that you aren't a good fit for their lab's projects so you can adjust your application plans accordingly.