



## RESEARCH GUIDELINES - UNDERGRAD

Thanks for your interest in the Simmons Biomimetic Actuators and Integrated Technologies Lab. It requires great time, energy, and money to have undergraduates in the lab doing research, so we can only have students working in the lab who are responsible, professional, and committed to the work. Please read the entire document carefully to decide if you would like to pursue a research position with us. These steps are designed to give you the opportunity to prove that you are motivated and can work independently, so you are encouraged to read carefully and use search engines before asking Dr. Simmons or members of the lab for help. Asking questions that are already answered in this document or that are easy to “google” indicates that you are not detail-oriented and implies that you will not do well in the lab.

In addition to this document, you must read the “Labmember Agreement” provided. That document covers many important topics like expectations for teamwork, co-authorship, and safety.

### **Semester 0: You just found out about the lab and want to learn more**

- Attend an open house. You can find out when the next one is scheduled by looking at our lab website, [www.GatorBAITLabs.com](http://www.GatorBAITLabs.com)
- Attend group meetings. Details are on the website and posted on Dr. Simmons’ door.
- Read journal articles. They are linked off of our website, and you can find many others using web search engines.

### **Semester 1: You like what you’ve heard so far and want to make an initial commitment**

Before the end of Drop/Add, email Postdoctoral Fellow Janak Gaire ([jgaire@ufl.edu](mailto:jgaire@ufl.edu)) and CC Dr. Simmons the following documents:

- A literature review that combines information on at least three journal articles you have been reading. At least two articles should be original research (i.e. not review articles). The document should be two-to-three pages, 11 pt font, single-spaced, 1” margins. There are lots of online resources for writing reviews:
  - Here is one place to start: <http://guides.lib.umich.edu/c.php?g=283300&p=2915110>
  - And another: <https://essaypro.com/blog/article-review/>
- A screen shot of your online training record showing you have successfully completed the following classes:
  - EHS 862 – Laboratory Action/Reactions
  - EHS 861 – Chemical Hygiene Plan for Lab Staff
  - EHS 809 – Hazardous Waste Management (for non-HW managers)
  - EHS 850 – Bloodborne Pathogen
  - EHS 851 – Biomedical Waste Training

You can access these courses by going to [my.ufl.edu](http://my.ufl.edu): Main Menu -> My Self Service -> Training & Development -> Request Training Enrollment -> Select Course.

- A **completed** EGN4912 Registration Form for **zero** credits
  - Fill in Dr. Simmons' contact information (can be found online).
  - For the project description, you can write "Read journal articles and participate in training sessions on hydrogel fabrication and mechanical characterization."
  - The project will involve "no" export-controlled, "no" infectious agents, but "yes" specific safety training. Below that, you can write "An initial safety orientation and detailed operating procedures that include safety protocols".
  - Expectations for the student's attendance in this project are "1-2 hours/week in meetings and 3-4 hours/week in lab".
- A signed copy of this document, acknowledging that you read it in its entirety.
- The email should also include 3-4 hours/week that you can be in the lab. These hours should occur in no more than two blocks during normal working hours (e.g. Tues & Weds from 3-5pm).
- Once your literature review has "passed" and Dr. Simmons signs your registration form, take your form back to your own department to register. You will also be added to the mailing list and the Wiki.
- Throughout the semester, during your lab time, use the doorbell to get into the lab and be sure to use the sign in sheet to document your activity. Continue to attend group meetings.
- Before the last day of classes, email email Postdoctoral Fellow Janak Gaire (jgaire@ufl.edu) and CC Dr. Simmons a 1-2 page essay (typed single-spaced, 11pt font, 1" margins) describing what you learned this semester and the project(s) that you wish to work on independently the next semester(s). Dr. Gaire or Dr. Simmons will respond to set up a time during reading days or finals period to discuss. Please read section below and be prepared to discuss your plan for fulfilling requirements. *If you are interested in an independent project but wish to start it in a later semester, you should indicate that in your essay and plan on "repeating" Semester 1. If you stop participating in lab activity entirely, another student will likely take your place.*

### **Semester 2+: You want an independent project**

After having gone through the process above, if you are interested in an independent project that could result in publication (senior thesis, honors thesis, journal article), you must be willing to commit at least two consecutive semesters to the lab, including Summer C (i.e. at least Spring-Summer C or Summer C-Fall). A full year (three semesters) is preferred. Dr. Simmons requires that you enroll for a total of 3 credits of EGN4912 over the course of 2-3 semesters. In most engineering departments, this will count as a technical elective toward your degree.

Expectations for independent project (each semester):

- Weekly lab work (document hours using sign-in sheet). Each credit equates to 4-6 hours/week in the lab minimum (6-8 hours/week in summer since there are fewer weeks). An example schedule to meet the 3-credit requirement is: Spring - 1 credit (4-6 hrs/wk in lab), Summer C - 2 credits (15+ hours/wk in lab)
- Weekly attendance at lab meeting
- Monthly reports due on 15<sup>th</sup> of each month (*Format below*)
- Final Report due a week before the last day of class (usually a Wednesday in Fall/Spring, Friday in Summer) at 11:59pm by email (*Format and interim deadlines below*)

***N.B. I will only write grad school letters of recommendation for students who have completed independent projects.***

## Formatting and Deadlines for Monthly/Final Report

To help you write a complete report, intermediate deadlines and instructions are provided below. The final report should be formatted as an 8- to 10- page journal article (not including references, 11 pt font, single spaced, 1" margins) for the *Journal of Undergraduate Research*:

<http://courses.writing.ufl.edu/JUR/WritingGuidelines.pdf>

Before you begin to write, please scan 2-4 articles published in the *Journal of Undergraduate Research* so that you get a feel for writing style and formatting. Strong examples are posted on the wiki, but you may wish to read more. **If you miss more than one of these deadlines, you cannot earn a satisfactory grade for the semester.**

Monthly Report 1 (Due Sept 15/Jan 15/May 15): This report should be an outline of your journal article in keeping with your proposed project and the requirements of the journal. You should include hand-drawn placeholders for the figures/data you expect to get from your experiments this semester.

Monthly Report 2 (Due Oct 15/Feb 15/June 15): Updated outline, updated figures, and full-length (2-3 page) introduction.

Monthly Reports 3 (Due Nov 15/Mar 15/July 15): Updates to what you've written previously, and complete Methods and Results section.

Final Report (Due a week before the last day of class)

- A full-length, complete paper is due at 11:59pm by email
- Dr. Simmons will provide you feedback within 7 days. If the draft is excellent, you are done for the semester! If the draft needs substantial revisions (i.e. earns a B or lower), you must submit a revised report by the end of finals period.
- If you hope to submit your article to a peer-reviewed journal, you may format your final manuscript for that journal instead. If choosing this option, you must attach 3 similar papers and author guidelines from the journal to your report.

## GatorBAIT Laboratory Undergraduate Agreement

I have read the Research Guidelines for Undergraduates and Labmember Agreement, and I understand their contents. I understand that my access to the lab and participation in related activities can be revoked at any time and will be revoked if I fail to meet any of the deadlines articulated above. I understand that there are additional departmental, university, and legal guidelines governing my behavior in the lab, and violations of these safety and other guidelines may result in disciplinary action, up to and including termination.

\_\_\_\_\_  
Student Name

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

***For completion by Dr. Simmons***

Received on:

Grad Student Mentor:

Lab Schedule: