

2023-2024

J. Crayton Pruitt Family Department of Biomedical Engineering Undergraduate Research Guidebook

WITH A FOCUS ON THE NEEDS AND INTERESTS OF STUDENTS, THIS GUIDEBOOK WILL HELP STUDENTS TAKE FULL ADVANTAGE OF THE RESEARCH AND ACADEMIC RESOURCES THAT UF BME HAS TO OFFER.



BME.UFL.EDU

**Developing Leaders in
Biomedical Engineering**

Research Areas



**Biomaterials &
Regenerative Medicine**



Biomechanics & Bionics



**Biomedical Imaging &
Applications**



**Modeling & Biomedical
Data Science**



**Molecular & Cellular
Engineering**



Neural Engineering

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WELCOME

Welcome to the J. Crayton Pruitt Family Department of Biomedical Engineering at the University of Florida!

There is little doubt that the tremendous advances in medicine over the past few decades can be attributed to the exciting achievement and growth in the field of biomedical engineering. At UF BME, our dedicated faculty of educators/researchers are preparing students to be leaders of this movement. Our rigorous and comprehensive program educates students with an eye toward solving problems at the intersection of engineering and health sciences.

There are numerous opportunities for undergraduate students to get involved with biomedical research across the university. Each research laboratory has its own unique research vision and personnel management. This student handbook provides insight into how BME research laboratories operate, specifically how they recruit and include undergraduate students in their research endeavors.



Sarah Furtney, Ph.D.
Instructional Associate Professor &
Undergraduate Coordinator

ABOUT US

The J. Crayton Pruitt Family Department of Biomedical Engineering is one of only a few departments in the nation to be co-localized with a top-ranked medical school, veterinary school and dental school.

The department is housed in a state-of-the-art building (completed in 2010) that is co-located with the medical school and steps from engineering and houses researchers from the colleges of Medicine, Engineering, and Public Health and Health Professions, creating unique opportunities for new collaborations. Biomedical engineering at UF partners with many local research centers and institutes including the McKnight Brain Institute, the Clinical and Translational Science Institute, the National High Magnetic Field Laboratory and the Malcolm Randall VA Medical Center.

In addition to its close proximity of health sciences, biomedical engineering is uniquely positioned to contribute to clinical translation of biomedical technologies because of the outstanding resources for entrepreneurship and commercialization, including Florida's 40-acre Innovation Square and the Sid Martin Biotechnology Incubator.



Kyle Allen, Ph.D.

Professor

Research: Novel strategies to diagnose and treat degenerative joint disease

[Orthopaedic Biomedical Engineering Laboratory](#)

What years do you accept?

- All years, but with a preference for freshmen and sophomore year. We typically take 3-5 students per graduating class.

How many semesters do you expect?

- At least one year.

When should I reach out to you?

- It is OK to inquire at any time, but we tend to hire most of our undergraduate students at the beginning of the semester or after meeting them in BME1008. The best time to contact me is after a presentation in BME1008. I will also often bring members of my lab to the class, so you can meet them as well. If you past BME1008, you can contact me via email or my students via our lab website.

How should I reach out to you?

- Stay after BME1008 to talk, or you can email me any time. We also have a form on our website for undergraduates to apply to the lab. I would recommend filling out the online form, as those contacts are monitored by my students and they are the ones you'll really be working with.

What kind of background experience are you looking for?

- We want dedicated people that are enthusiastic about research and learning. That's the only real requirement. We also look for people with diverse skills – art, creative writing, music backgrounds, athletics, dance, gymnastics, journalism, etc. I (Dr. Allen) really value having a group that has diverse interests and skill sets, and so don't forget to include extracurricular activities on your resume.

What is the work environment like?

- We are a team-oriented lab with a great deal of collaborative spirit. We highly value diversity, creativity, and ability to work with a broad range of people. Mistakes are ok, as long as we are safe and learning to do better. We also invest in our mentees through undergraduate lab meetings and other career guidance events.

What will my schedule look like?

- It depends. We have lab helpers, individual projects, and team projects. For helpers, these are students that just help out when needed, which could be taking notes during surgeries or dissections, helping with histology, or running simulations on the computer. For individual projects, students can get a more complete research experience from start to finish. Here, undergraduates are paired with a graduate student or post-doctoral mentor, and the schedule really depends on the projects needs. These projects are often for credit and typically go to students that want to do an honor's thesis or are hoping to get their name on a research paper. For team projects, we give a group of 4-5 students a design challenge, access to our maker space (under supervision, of course), and have them work with a graduate student or post-doctoral advisor. Here, we usually have design-oriented learning objectives, scheduled meeting times, and some deliverables. Like individual research projects, students can take this for credit through BME4931, and this can provide more experience with engineering design. We usually have one design challenge per semester.

What materials would you like to review in order to make a decision?

- A resume and an in person interview with one of my graduate students and/or me is required.

If you like my lab, you might be interested in labs of...

- Blanka Sharma (BME), Kevin Otto (BME), Brittany Taylor (BME), Jennifer Nichol (BME), Lakeisha Williams, (BME), Heather and Kevin Vincent (Orthopedics and Sports Medicine), Carlos Rinaldi-Ramos (CHE), Scott Banks in (MAE), Yenisel Cruz-Almeida (Pain Research Center of Excellence), Aaron Mickle (VetMed)





Wesley Bolch, Ph.D.

Distinguished Professor

Research: Dosimetry, computational medical physics and dose assessment

What years do you accept?

- Preference for sophomores and juniors.

How many semesters do you expect?

- The first semester is used for evaluation purposes. You will be paired with a MS or PhD student in the laboratory who will serve as your primary mentor.
- Ideal time to start is summer term, and then you would continue into the following fall semester following a favorable review by Dr. Bolch and your graduate mentor.

When should I reach out to you?

- Either early in the semester or at the end of the semester, in which case, work would start the following term.

How should I reach out to you?

- By email, wbolch@ufl.edu

What kind of background experience are you looking for?

- Strong interest in medical imaging, medical physics and radiation therapy.
- Programming skills are highly recommended, along with a strong interest and competency in physics and mathematics.

What is the work environment like?

- You will be expected to attend biweekly one-hour project meetings with your graduate student mentor to review the past two weeks of effort, and plan for the following two weeks of research activities.
- In addition, you are expected to attend two-hour monthly meetings of the ALRADS (Advanced Laboratory for Radiation Dosimetry Studies) research team.

What will my schedule look like?

- The hours per week and work schedule are totally dependent upon arrangements with your graduate student mentor. Again, project meetings as noted above are a requirement.

What materials would you like to review in order to make a decision?

- Please submit to me by email the following – (1) resume, (2) transcript, (3) letter of interest.
- Also, we will have an in-person interview to discuss your interest and possible projects, before a final decision is made.





Mingzhou Ding, Ph.D.

Distinguished Professor

Research: Cognitive neuroscience, signal processing neural imaging

What years do you accept?

- I prefer sophomores and juniors; freshmen and seniors can also be considered.

How many semesters do you expect?

- Our projects involve months of planning, we require at least 1 year commitment.

When should I reach out to you?

- Anytime

How should I reach out to you?

- By email, mding@bme.ufl.edu

What kind of background experience are you looking for?

- We have no specific requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student mentor.
- Will work directly with faculty.
- Will work with upperclassman BME undergraduate.

What will my schedule look like?

- You should dedicate at least 10 hours a week to research work.
- You are required to attend lab meetings every week.

What materials would you like to review in order to make a decision?

- Your resume.
- An in-person interview with me.





Xiao Fan, Ph.D.

Assistant Professor

Research: Computational approaches to study genetic architecture of human diseases and interpretation of genetic variants

What years do you accept?

- Students from all year levels are welcome.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.
- We prefer at least a one-year commitment.

When should I reach out to you?

- End of semester in preparation for the following semester.

How should I reach out to you?

- By email (XFan@bme.ufl.edu).

What kind of background experience are you looking for?

- Programming skills are required. Strong interest in genomics is preferred.

What is the work environment like?

- Mostly individual work. Can work remotely. Will work with me or a PhD student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- You are required to attend weekly meetings with me or your PhD student mentor.

What materials would you like to review in order to make a decision?

- Your resume and a letter of interest including what you expect to gain in this experience.





Ruogu Fang, Ph.D.

Associate Professor

Research: Big data analytics, brain informatics, medical image analysis

[SMILE Lab](#)

What years do you accept?

- Prefer sophomores and juniors.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.
- You must start in the summer and continue for at least the fall semester.
- Our projects involve months of planning, we require 1 year commitment.

When should I reach out to you?

- Beginning of semester.
- End of semester in preparation for following semester.
- Beginning of summer in preparation for Fall semester.

How should I reach out to you?

- By email, ruogu.fang@bme.ufl.edu
- Contact one of my graduate students, see list of graduate students on my lab website.

What kind of background experience are you looking for?

- We require experience with programming, or at least strong interest in coding.

What is the work environment like?

- Mostly individual work, but will conduct research in a shared computer space/lab space.
- Will be paired with a graduate student mentor or work directly with faculty.
- Will also work with upperclassman BME undergraduate.

What will my schedule look like?

- You are required to attend group meetings every week and individual meetings with either the graduate student mentor or faculty every week.
- Work time and location is flexible as long as you complete the assignment each week on time with quality.

What materials would you like to review in order to make a decision?

- Your resume (including research experience if any).
- Your transcript.
- Your cover letter.
- An in-person interview with me.





Meghan Ferrall-Fairbanks, Ph.D.

Assistant Professor

Research: Quantitative systems biology, mathematical modeling, cancer heterogeneity and evolutionary dynamics

What years do you accept?

- Freshman – Juniors (prefer at least a full year in the lab).

How many semesters do you expect?

- Ideal time to start is summer term to create an experience where the student is able to gain significant research experience, and then you would continue into the following fall semester following a favorable review by Dr. Ferrall-Fairbanks.
- Students continuing their research in the lab after the summer can make their own schedule or leverage their project into an Honors Thesis or other research experience.
- A goal of at least one-year commitment.

When should I reach out to you?

- Towards the end of the semester before you would like to work in the lab.

How should I reach out to you?

- By email, mferrall.fairbanks@bme.ufl.edu

What kind of background experience are you looking for?

- We will make decisions based on your resume, cover letter, and interview; preferred experience, or strong interest, in programming.

What is the work environment like?

- Mostly individual work, but will conduct research in a shared computer space / lab space.
- Will work directly with faculty and graduate students.

What will my schedule look like?

- Students who join the lab in the summer are expected to dedicate at least 20 hours a week to the lab for at least 8 weeks and will adapt based on course-load in the fall and spring terms.
- You are required to attend lab meetings and journal club, if your schedule permits (time and day may change each semester).
- If meeting deadline for paper/abstract will meet one on one with Dr. Ferrall-Fairbanks weekly month prior.

What materials would you like to review in order to make a decision?

- Your resume and cover letter describing interested research topics and an in-person interview with Dr. Ferrall-Fairbanks.

If you like my lab, you might be interested in labs of...

- Wesley Bolch (BME), Ruogu Fang (BME), Ivana Parker (BME), Parisa Rashidi (BME), Blanka Sharma (BME)





Daniel Ferris, Ph.D.

Professor

Research: Biomechanics, neuromechanical control, locomotion and prosthetics

[Human Neuromechanics Laboratory](#)

What years do you accept?

- All years.

How many semesters do you expect?

- Students have to volunteer for one semester and if they do well, they become paid research assistants.
- Normal minimum is two semesters.

When should I reach out to you?

- Anytime

How should I reach out to you?

- Send a resume and unofficial transcript to Daniel Ferris via dferris@bme.ufl.edu.

What kind of background experience are you looking for?

- We have a wide range of projects ongoing in the lab so there is no one set of background experiences needed.
- It is on a project by project basis.

What is the work environment like?

- Most undergraduate research assistants are paired with a graduate student or postdoctoral mentor.

What will my schedule look like?

- You will need to devote 10-20 hours per week in the lab.

What materials would you like to review in order to make a decision?

- The resume and unofficial transcript are the starting point.
- That will be followed with a Zoom or in-person interview.

If you like my lab, you might be interested in labs of...

- Jen Nichols (BME), Kevin Otto (BME), Ayse Gunduz (BME), Mingzhou Ding (BME), Kyle Allen (BME), Scott Banks (MAE), Warren Dixon (MAE), David Clark (Institute on Aging), Julia Choi (APK), or Chris Hass (APK).





Aysegul Gunduz, Ph.D.

Professor

Research: Human brain mapping, neuromodulation and neural interfacing

[Brain Mapping Laboratory](#)

What years do you accept?

- Sophomores and juniors.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.

When should I reach out to you?

- We currently accept students at the beginning of Fall and Spring semesters.

How should I reach out to you?

- Complete a form online through my lab website.
- Contact one of my graduate students, see list of graduate students on my lab website.

What kind of background experience are you looking for?

- We require experience with MATLAB software/programming language.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.

What materials would you like to review in order to make a decision?

- Your resume.





Gregory A. Hudalla, Ph.D.

Associate Professor

Research: Peptide-based nanomaterials and immune therapies

[Hudalla Lab](#)

What years do you accept?

- Only sophomores and juniors.

How many semesters do you expect?

- We require 1-year commitment, including summer unless another arrangement is made.

When should I reach out to you?

- Any time, but we typically cycle out in May.

How should I reach out to you?

- By email to me or to one of my graduate students, see list of graduate students on my lab website (preferred).

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- You are required to also attend lab meetings on Friday 3-5PM.

What materials would you like to review in order to make a decision?

- Your resume.
- An in-person interview with a graduate student.





Benjamin G. Keselowsky, Ph.D.

Professor

Research: Peptide-based nanomaterials and immune therapies

What years do you accept?

- I'm okay with freshman, sophomores and juniors.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.
- Our projects involve a lot of training and planning, we require 1 year commitment.

When should I reach out to you?

- No preference.

How should I reach out to you?

- By email, bkeselowsky@bme.ufl.edu

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- Our experiments take a long time, you will need to commit large blocks of time each week.
- You are required to also attend lab meetings on Wednesday from 12:00-2:00 pm unless class conflicts.

What materials would you like to review in order to make a decision?

- Your resume.
- Your cover letter.
- An in-person interview with a graduate student.
- An in-person interview with me.





Jamal Lewis, Ph.D.

Associate Professor

Research: Biomaterials, drug delivery, immunoengineering

What years do you accept?

- Preference for freshman and sophomores.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters. If you are accepted into the lab, we require at least 1 year commitment.

When should I reach out to you?

- Beginning of summer in preparation for Fall semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- You will be paired with a graduate student or post doc mentor.

What will my schedule look like?

- It is expected that you will commit at least 15 hours in the lab each week. Experiments will be planned around your classes. You will also be required to attend lab meetings on Wednesdays every week.

What materials would you like to review in order to make a decision?

- A cover letter, your resume and unofficial transcript. An in-person interview with a graduate student is also required.

If you like my lab, you might be interested in labs of...

- Ben Keselowsky (BME), Cherie Stabler (BME), Greg Hudalla (BME)





Peter S. McFetridge, Ph.D.

Associate Professor

Research: Naturally inspired biomaterials for implants and regeneration

What years do you accept?

- Ultimately the number of UG's or MSc's students is limited to the number of PhD's and the time they have available to mentor - with that said, if there're open positions I will consider second semester freshmen through junior level.

How many semesters do you expect?

- Projects are usually complex and require a reasonable amount of time to learn new techniques and become productive. I don't usually set time limits but if a recommendation letter is needed then 2-3 semesters would be a minimum for an evaluation. The goal is to learn and publish - you can only do that with a significant time input.

When should I reach out to you?

- Anytime

How should I reach out to you?

- Drop by my office with a printed CV - then follow up with an email for more formal interview.

What kind of background experience are you looking for?

- BME, ChemE, MechE, Mat Sci + enthusiasm and patience.

What is the work environment like?

- Relaxed but with set expectations.

What will my schedule look like?

- Depends on the project.

What materials would you like to review in order to make a decision?

- Bring a CV and we can discuss open positions - if there are any.





Walter Lee Murfee, Ph.D.

Associate Professor

Research: Cell dynamics, microcirculation, angiogenesis, lymphangiogenesis and neurogenesis

[Microvascular Dynamics Laboratory](#)

What years do you accept?

- I'm okay with freshmen, sophomores, juniors or seniors.

How many semesters do you expect?

- We start with one semester, evaluate your commitment and interest, and then increase your involvement in projects in future semesters.

When should I reach out to you?

- Anytime

How should I reach out to you?

- By email, wmurfee@bme.ufl.edu

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Initially undergraduate students are paired with a graduate student mentor.

What will my schedule look like?

- The expectation is that you can commit at least 10 hours per week.

What materials would you like to review in order to make a decision?

- Student openings are dependent on position availability.
- Decisions will be based on student resumes and an in person interview with me.





Jennifer A. Nichols, Ph.D.

Assistant Professor

Research: Biomechanics, musculoskeletal modeling, predictive simulation, medical imaging and machine learning

[Musculoskeletal Biomechanics Lab](#)

What years do you accept?

- I accept students across all years, with a preference for students who have at least three semesters remaining on campus (can include summer).

How many semesters do you expect?

- I am interested in students who want to commit to at least three semesters. However, every student is evaluated on a semester-by-semester basis.

When should I reach out to you?

- Please refer to my website for the most up-to-date information.
- We currently accept students at the beginning of Fall and Spring semesters.

How should I reach out to you?

- Please refer to my website for most up-to-date information. Currently, I request contact via e-mail, jnichols@bme.ufl.edu.

What kind of background experience are you looking for?

- No previous experience is necessary. I select student based on their resumes and interviews in combination with the current needs of the lab.
- Students who have a strong interest in physics, mechanics, and computer programming often excel in my lab.

What is the work environment like?

- Students are assigned an individual project. The project will be topically related to the work of at least one other student in the lab, thereby enabling peer support. Research is conducted in a shared office and lab space. The lab also extensively uses Slack to enable communication between lab member and with Dr. Nichols.

What will my schedule look like?

- All undergraduates are required to commit 10 hours per week to the lab. It is preferred that these hours occur during “regular” business hours, which I define as between 8 am and 7 pm. This time commitment includes a 1-hour lab meeting each week.

What materials would you like to review in order to make a decision?

- Please refer to my website for most up-to-date information.
- Currently I request an e-mail that includes your major, expected graduate date, a brief statement (2-5 sentences) explaining why you are interested in joining the lab, and a copy of your current resume.
- I typically respond to e-mails within 1 week to schedule an interview.

If you like my lab, you might be interested in labs of...

- Kyle Allen (BME), Dan Ferris (BME), Brittany Taylor (BME), Lakiesha Williams (BME), Jessica Allen (MAE), Kerry Costello (MAE), Julie Choi (APK), Stephen Coombes (APK), David Vaillancourt (APK), Heather Vincent (PM&R), Mary Beth Horodyski (Othopaedics), Adam Biedrzycki (Vet Med), Federico Pozzi (Physical Therapy), Emily Fox (Physical Therapy), Boyi Hu (ISE), Warren Dixon (MAE), and James Liao (Whitney Lab in St. Augustine)





Kevin J. Otto, Ph.D.

Professor

Research: Neural engineering, device-tissue interfaces and neurostimulation

[Neuroprostheses Research Lab](#)

What years do you accept?

- All

How many semesters do you expect?

- Students are welcome to leave as they wish; however, most of our undergraduates stay involved for 2+ semesters.

When should I reach out to you?

- Anytime

How should I reach out to you?

- Complete a form online through my lab website.
- Supplement this form with your CV/resume emailed directly to Dr. Otto (kevin.otto@bme.ufl.edu).

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a post-doc, graduate student, or senior undergraduate mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- You are strongly suggested to also attend 2 hour weekly lab meetings (days and times vary by semester).
- You are also strongly suggested to attend 1 hour weekly journal clubs

What materials would you like to review in order to make a decision?

- Your resume.
- An in-person interview with a graduate student.

If you like my lab, you might be interested in labs of...

- Ayse Gunduz (BME), Dan Ferris (BME), Kyle Allen (BME), Jack Judy (ECE, NIMET), Sara Burke (NIMET), Jen Bizon (MBI), Damon Lamb (Psychiatry)





Ivana Parker, Ph.D.

Assistant Professor

Research: : Trained immunity, HIV prevention, proteomics and systems biology

What years do you accept?

- I'm okay with Sophomores, Juniors, Seniors

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.

When should I reach out to you?

- End of semester in preparation for following semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will work directly with faculty or be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- You are required to also attend lab meetings and journal club, organized around students class schedule.
- Depending on project student may attend a 30 min weekly one on one meeting with me.

What materials would you like to review in order to make a decision?

- Your resume
- Cover letter
- An in-person interview with me
- An in-person interview with a graduate student

If you like my lab, you might be interested in labs of...

- Ana Maria Porras (BME), Meghan Ferrall-Fairbanks (BME), Greg Hudalla (BME)





Edward Phelps, Ph.D.

Assistant Professor

Research: Cell and tissue regeneration, islet biology, diabetes and autoimmunity

[Phelps Laboratory](#)

What years do you accept?

- I prefer to recruit sophomores and juniors.

How many semesters do you expect?

- We are looking for students to make a long-term commitment of 2-3 years.

When should I reach out to you?

- Anytime during the year. New undergraduate positions in our lab open spontaneously and are usually filled quickly.

How should I reach out to you?

- Contact me by email. I share promising candidates with my graduate students who make the recruiting decisions based on their needs and availability.

What kind of background experience are you looking for?

- We have no formal requirements. An interest in type 1 diabetes research helps students succeed in our lab.

What is the work environment like?

- Will be paired with a graduate student mentor. Students are expected to be self-sufficient and complete some work independently.

What will my schedule look like?

- Our experiments take a long time, you will need to have a two 4-hr blocks each week.
- You are required to also attend lab meetings on Fridays at 3:00-4:30pm.

What materials would you like to review in order to make a decision?

- Your resume.
- Your cover letter.
- An in-person interview with a graduate student.

If you like my lab, here are others to check out:

- [UF Diabetes Institute](#)





Ana Maria Porras, Ph.D.

Assistant Professor

Research: Biomaterials, in vitro disease models, host microbe interactions, inclusive science communication

[Tissue-Microbe Interactions \(TMI\) Lab](#)

What years do you accept?

- We prefer to start working with freshmen and sophomore.

How many semesters do you expect?

- We ask students to commit to one semester, we then evaluate our mutual expectations and decide whether staying on is best for the lab and student.

When should I reach out to you?

- Beginning of semester.

How should I reach out to you?

- Via email.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- All students are paired with a graduate mentor. We strive to maintain a highly collaborative environment.

What will my schedule look like?

- Your involvement will depend on your schedule and assigned projects. You will be expected to meet regularly with your graduate mentor and if possible, to attend our lab meetings.

What materials would you like to review in order to make a decision?

- Your resume.
- Your cover letter.
- An in-person interview with me.
- An in-person interview with a graduate student.





Parisa Rashidi, Ph.D.

Associate Professor

Research: Biomedical data science, machine learning, pervasive health and clinical informatics

[intelligent Health Lab \(i-Heal\)](#)

What years do you accept?

- Juniors and seniors.

How many semesters do you expect?

- Our projects involve months of planning, we require 1 year commitment.

When should I reach out to you?

- Beginning of semester.

How should I reach out to you?

- By email, parisa.rashidi@bme.ufl.edu

What kind of background experience are you looking for?

- We require experience with programming.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.

What materials would you like to review in order to make a decision?

- Your resume.
- Your cover letter.
- An in-person interview with me.
- An in-person interview with a graduate student.





Carlos Rinaldi-Ramos, Ph.D.

Professor & Chemical Engineering Department Chair

Research: Nanomedicine and magnetic nanoparticles

[Rinaldi-Ramos Lab](#)

What years do you accept?

- Freshman only in the summer after the first year.
- Sophomores and juniors any term but must be committed to a minimum of two consecutive terms (e.g., Fall/Spring, Spring/Summer, Summer/Fall).

How many semesters do you expect?

- Because a lot of training will often be required, we expect student to commit to at least two consecutive terms.

When should I reach out to you?

- End of semester in preparation for following semester.
- For Summer and Fall, contact by April 1.
- For Spring contact by November 1.

How should I reach out to you?

- By email, carlos.rinaldi@ufl.edu

What kind of background experience are you looking for?

- We have no requirements and will decide based on your application, resume, and interview.

What is the work environment like?

- Undergraduate students will be paired with a postdoc or graduate student mentor.

What will my schedule look like?

- Our experiments take a long time, you will need to have at least two 4-hr blocks each week, in addition to about 2 hours a week spent analyzing your data, reading literature, and summarizing your work. Undergraduate students are encouraged but not required to attend weekly group meetings.

What materials would you like to review in order to make a decision?

- Initial screening based on cover letter and resume, followed by in-person interview with graduate student or with Prof. Rinaldi.





Christine E. Schmidt, Ph.D.

Distinguished Professor

Research: Biomaterials for neural tissue regeneration and neural interfacing

[Biomimetic Materials & Neural Engineering Lab](#)

What years do you accept?

- Freshman – Juniors (prefer at least a full year in the lab, so don't usually take seniors).

How many semesters do you expect?

- Goal is at least a one year commitment, but we will start with one semester and evaluate your progress.

When should I reach out to you?

- End of semester in preparation for following semester.

How should I reach out to you?

- Contact the lab manager, see contact info on lab website.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student or postdoc mentor.

What will my schedule look like?

- Time commitment per week will vary depending on the project and student's course-load, but we ask for a commitment of at least 10 hours per week.
- Time commitment will include blocks of time in the lab for experiments and outside time spent analyzing data, reading literature, and summarizing your work.
- We will attempt to plan your lab involvement around your class schedule, but blocks of 2-4 hours for experiments in the lab are best.
- You are strongly encouraged to also attend lab meetings and lab journal clubs (times and days change each semester).
- At the end of each semester, you will be expected to present a short oral research summary to the entire lab.

What materials would you like to review in order to make a decision?

- Your resume.
- Your cover letter.
- An in-person interview with a graduate student or postdoc.





Blanka Sharma, Ph.D.

Associate Professor

Research: Nanomedicine, stem cells, biomaterials, tissue engineering & targeted drug/gene delivery

[Sharma Laboratory](#)

What years do you accept?

- I'm okay with Sophomores and Juniors.

How many semesters do you expect?

- Our projects involve months of planning, we require 1 year commitment.

When should I reach out to you?

- Beginning of semester.
- End of semester in preparation for following semester.

How should I reach out to you?

- By email blanka.sharma@bme.ufl.edu

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.

What materials would you like to review in order to make a decision?

- Your resume.
- Your cover letter.
- An in-person interview with me.
- An in-person interview with a graduate student.





Cherie Stabler, Ph.D.

Professor & Biomedical Engineering Department Chair

Research: Biomaterials, controlled release, regenerative medicine & diabetes

[Diabetes Tissue Engineering Laboratory](#)

What years do you accept?

- All levels (freshman to junior) are eligible.

How many semesters do you expect?

- To create an experience where the student is able to gain significant research experience, we only accept new undergraduate students for the summer terms.
- After that summer, students can then stay on in the lab, if they wish, where they can make their own schedule or leverage their new experience for other research opportunities

When should I reach out to you?

- January - February
- Our lab hosts a Volunteer Open House every year in early March. We invite all interested volunteers that can commit to some summer work (so email me around Jan-Feb to get on the list). During the visit, students get an opportunity to tour the lab and chat with current students. Mentors seeking volunteers then reach out to volunteers they meet at this Open House for positions.

How should I reach out to you?

- Email, cstabler@bme.ufl.edu

What kind of background experience are you looking for?

- The Stabler lab accepts motivated undergraduate students for volunteer research opportunities or as a part of the University Scholars Program.
- No prior experience is necessary.

What is the work environment like?

- Volunteers in the lab can expect to be matched to a PhD or postdoc mentor, who will train them and also help them transition to their own project. The scope of the work is dependent only on the motivation of the student.

What will my schedule look like?

- Students who join the lab in the summer are expected to dedicate at least 20 hours a week to the lab for at least 8 weeks.

What materials would you like to review in order to make a decision?

- Resume and outline your interest in working over the summer.
- Attend lab open house, where you can come by the lab to meet the team, learn more about our research and specific projects, and discuss your interests.





Brittany Taylor, Ph.D.

Assistant Professor

Research: Musculoskeletal tissue engineering, bioactive biomaterials, tendon injury and repair

[The Taylor Lab](#)

What years do you accept?

- I will accept students from all year levels, but preference will be given to rising sophomores and juniors.

How many semesters do you expect?

- We require a 1 year of commitment and will evaluate progress at the end of each semester.

When should I reach out to you?

- Feel free to inquire at any time, but the end of the semester before the start of the following semester is the ideal time to reach out to me.

How should I reach out to you?

- By email (Brittany.taylor@ufl.edu)

What kind of background experience are you looking for?

- We have no requirements for background lab experience and will make a decision based on your resume and initial meetings. However, experience in cell culture, nanofabrication, and animal handling will be highly preferred. All students will be expected to value diversity, inclusivity, and teamwork.

What is the work environment like?

- All new undergraduates will work in groups with other undergraduates or paired with a graduate student or upperclassman undergraduate student. Undergraduates will then work on their own once they have demonstrated the ability to work independently.

What will my schedule look like?

- We will plan your lab involvement around your class schedule. Time commitment per week will vary depending on the project and student's course-load, but we ask for a commitment of 5-10 hours per week. You are required to also attend lab meetings (time and day TBD) and participate in journal club. Project meetings will be scheduled as needed.

What materials would you like to review in order to make a decision?

- Send an email stating your interest and resume. Undergraduates will also have a virtual meeting with me followed by a brief meeting with current lab members.

If you like my lab, you might be interested in labs of...

- Kyle Allen (BME), Blanka Sharma (BME), Jen Nicholas (BME), Whitney Stoppel (CHE), and Scott Banks (MAE)





Lakiesha N. Williams, Ph.D.

Professor

Research: Traumatic brain injury, soft tissue mechanics, bio-inspired design & materials characterization

[Williams Laboratory](#)

What years do you accept?

- We will accept Sophomores and Juniors.
- Seniors can be an exception for those who have 3 or more full (fall/spring) semesters remaining.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.
- Start in summer and continue until the end of next spring.
- We require 1 year commitment.

When should I reach out to you?

- Reach out in early to mid-spring semester for a summer start.

How should I reach out to you?

- By email lwilliams@bme.ufl.edu

What kind of background experience are you looking for?

- We have no requirements and will decide based on your application, resume, and interview.
- Preferred proficiency in Solidworks or other CAD program.

What is the work environment like?

- Will be paired with a senior level PhD student. Volunteer students will meet once weekly during the lab meeting and regularly as scheduled by lab PhD student mentor.

What will my schedule look like?

- Schedule will vary. Depending on project, may need some days with 4+ straight hours available for experiments.
- Required to attend weekly lab meetings. Special meetings scheduled with project team and Dr. Williams as needed.

What materials would you like to review in order to make a decision?

- Email resume and list of research topics of interest, in person interview with graduate students, in person interview with Dr. Williams

If you like my lab, you might be interested in labs of...

- Chelsea Simmons (MAE), Ghatu Subhash (MAE)



BME Affiliate Faculty

The core faculty, together with affiliated faculty from other departments form a network of mentors dedicated to training the next generation of biomedical engineers. Our goal is to educate students in an interdisciplinary manner so that they can effectively collaborate with physicians, biologists and other life scientists to build their careers.



BME - A Collaborative Community

29

**Primary
Faculty**

55+

**Affiliate
Faculty**

30+

**Departments,
Centers & Institutes**



Josephine Allen, Ph.D.

Associate Professor, Genzyme Professor of Materials Science & Engineering Materials Science & Engineering

Research: Stem Cell Engineering; Directed Stem Cell differentiation, Cell Materials Interactions; Tissue Engineering; Regenerative Medicine

[Allen Research Group](#)

What years do you accept?

- I welcome students who are Sophomores and Juniors.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.
- In general, however, our projects involve months of planning, and if it decided a student will stay on board, we require 1 year commitment.

When should I reach out to you?

- End of semester in preparation for following semester.
- Beginning of summer in preparation for Fall semester.

How should I reach out to you?

- By email to Dr. Allen or contact one of my graduate students, see list of graduate students on my lab website.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student mentor initially. Working towards more individual work, but will conduct research in a shared computer space / lab space.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- We do many short experiments each week, you will need to come to lab every day for 1 hr.
- Our experiments take a long time, you will need to have a two 4-hr blocks each week.
- You are highly encouraged to attend weekly 1 hour lab meetings if schedule permits.
- You are also required to attend progress meetings with me on x day at x time.

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me
- An in-person interview with a graduate student

If you like my lab, you might be interested in labs of...

- Erika Moore (MSE), Chris Batich (MSE), Whitney Stoppel (ChE), Chelsey Simmons (MAE), Dmitry Traktuev (COM)



Thomas E. Angelini, Ph.D.

Associate Professor, Department of Mechanical and Aerospace Engineering

Research: Collective cell motion, mechanical instabilities in tissue cell assemblies, bacterial biofilm physics, soft matter physics, biomolecular self-assembly, and tribology of soft matter interfaces

[Soft Matter Research Laboratory](#)

What years do you accept?

- I'm okay with Sophomores and Juniors.

How many semesters do you expect?

- Our projects involve months of planning, we require 1 year commitment.

When should I reach out to you?

- End of semester in preparation for following semester.

How should I reach out to you?

- By email or contact one of my graduate students, see list of graduate students on my lab website.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- Our experiments take a long time, you will need to commit to multiple 4-hr blocks each week.

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me
- An in-person interview with a graduate student



David Clark, Sc.D.

Professor, Department of Neurology

Research: Neural control of walking: including brain imaging, non-invasive brain stimulation, electromyography, and biomechanics

What years do you accept?

- All years.

How many semesters do you expect?

- All applicants will be considered, but at least two semesters is preferred.

When should I reach out to you?

- I am happy to discuss your goals at any time.

How should I reach out to you?

- Please email me: davidclark@ufl.edu.

What kind of background experience are you looking for?

- Matlab programming skills are preferred, but not necessary.

What is the work environment like?

- The work environment varies depending on the project/assignment. In general, you will work in a collaborative clinical research environment that includes scientists, engineers, physical therapists, post-docs, graduate students, undergraduate students, and administrative professionals.
- You will work on data analysis at a computer in a comfortable office setting, and probably also be involved with data collection related to walking function in human research participants. You will also be welcome to attend lab meetings, journal clubs, and seminars.

What will my schedule look like?

- Your schedule can be flexible, but in general should include a few mornings and/or afternoons per week.
- The minimum weekly commitment (on average) should be 10 hours.

What materials would you like to review in order to make a decision?

- Your resume and a short paragraph about your goals for seeking an undergraduate research position.
- This will be followed by an in-person meeting with me for applicants who seem like a good fit.





Kerry Costello

Assistant Professor, Department of Mechanical & Aerospace Engineering

Research: Biomechanics & Bionics; Modeling & Biomedical Data Science

[Costello Laboratory](#)

What years do you accept?

- All years, with a preference for those who can commit to research for multiple semesters.

How many semesters do you expect?

- I prefer for students to commit to at least two semesters; however, every student will be evaluated individually.

When should I reach out to you?

- Anytime. Most decisions will be made at the end of the semester in preparation for the following semester; however, every student will be evaluated individually.

How should I reach out to you?

- By email (k.costello@ufl.edu) with the materials listed below

What kind of background experience are you looking for?

- Different projects in our lab require different skill sets (these could include experience working with patients, computer programming, knowledge of anatomy, and/or physics, among others). I select students based on their resumes and interviews in combination with the current needs of the lab. Students who are self-starters and have good attention to detail often do well in our group.

What is the work environment like?

- Mostly individual work, but will conduct research in a shared computer space / lab space. Depending on the project, may be paired with a graduate student mentor

What will my schedule look like?

- We will plan your lab involvement around your class schedule and identify specific days/times each semester that will do lab work (usually during typical business hours). I prefer students who can commit 8-10 hours per week to the lab, which includes our weekly 1-hour lab meeting.

What materials would you like to review in order to make a decision?

- Your resume
- An email stating your interests in our research
- An in-person interview with me and/or a graduate student

If you like my lab, you might be interested in labs of...

- Kyle Allen (BME), Dan Ferris (BME), Jen Nichols (BME), Brittany Taylor (BME), Jessica Allen (MAE), Warren Dixon (MAE), Julia Choi (APK), Stephen Coombes (APK), Diego Guarin (APK), Heather Vincent (PM&R), Mary Beth Horodyski (Orthopaedics)





Hugh Fan, Ph.D.

Professor, Departments of Mechanical & Aerospace Engineering, Biomedical Engineering, and Chemistry

Research: Microfluidics, Biomedical devices, Sensors, Pathogen Detection, and Cancer

[Microfluidics and BioMEMS Laboratory](#)

What years do you accept?

- Sophomores and juniors are preferred.

How many semesters do you expect?

- One semester is a good start for both sides to evaluate mutual interest, and 1-year commitment has a chance to lead to some productivities such as a journal publication.

When should I reach out to you?

- In summer or at the beginning of the fall for starting in the fall semester.

How should I reach out to you?

- Please send an email to hfan@ufl.edu, and enclose your resume, unofficial UF transcript, and a letter of interest.

What kind of background experience are you looking for?

- We have no requirement.

What is the work environment like?

- You will be paired with a PhD student mentor.
- Please check this video to get an idea about the lab experience, [click here for a video link](#).

What will my schedule look like?

- You will plan your lab involvement around your class schedule, with a total time commitment of ~8 hr/week.

What materials would you like to review in order to make a decision?

- Based on your resume, UF transcript, and letter of interest, we will decide an in-person interview to discuss your interest and possible projects.

If you like my lab, you might be interested in labs of...

- Yong Zeng (Chemistry), Mei He (Pharm), and Jack Judy (ECE)





Yong Huang, Ph.D.

Professor, Department of Mechanical & Aerospace Engineering

Research: Tissue engineering, Cell and organ printing, and Biomaterials

[Florida Advanced Manufacturing and System Integration Laboratory](#)

What years do you accept?

- No freshman.

How many semesters do you expect?

- Our projects involve months of planning, we require 1 year commitment.

When should I reach out to you?

- End of semester in preparation for following semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- No previous experience is required, but we prefer students with strong academic credentials who have time to seek additional challenges.

What is the work environment like?

- Will be paired with a graduate student mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- Our experiments take a long time, you will need to have a two 4-hr blocks each week.

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me
- An in-person interview with a graduate student





Jack Judy, Ph.D.

Professor, Director of the Nanoscience Institute for Medical and Engineering Technologies, Department of Electrical and Computer Engineering

Research: The development of novel micro/nano scale systems and their use in a wide variety of engineering and bio medical applications

[Nanoscience Institute for Medical & Engineering Technology](#)

What years do you accept?

- Freshman through juniors.

How many semesters do you expect?

- We start with one semester, if things go well, which we hope they do, the projects can evolve into full year projects
- Students who demonstrate good skills and work ethic can be so productive that after a year the effort can result in paper submissions.

When should I reach out to you?

- As soon as possible.

How should I reach out to you?

- Contact admin support by email for more information:
- Quinn, Dina R <dina.quinn@ufl.edu>
- Alternatively contact one of my graduate students.

What kind of background experience are you looking for?

- Ability to rapidly gain knowledge (or already have knowledge) of:
- Python (Spyder/Jupyter)
- Matlab
- Labview
- Electronic Bioelectric Test & Measurement Equipment

What is the work environment like?

- Work with graduate student on your own project or with a few other students.
- Weekly meetings with faculty mentor and graduate students.

What will my schedule look like?

- We will plan your lab involvement around your class schedule, but we will want to develop a regular schedule (i.e., block out certain times and certain days for lab work).

What materials would you like to review in order to make a decision?

- All of the following:
- Your resume
- Your cover letter
- An in-person interview with me An in-person interview with a graduate student





Damon Lamb, Ph.D.

Assistant Professor, Department of Neuroscience

Research: Complex interaction of autonomic, emotional function and cognition

What years do you accept?

- Motivated freshmen through Juniors and, in special cases, seniors.

How many semesters do you expect?

- We will start with one semester, evaluate your progress and will evaluate fit. Successful students typically work with the lab for 2-4 years. During the semester, expect to dedicate a consistent 10-20 hours per week.

When should I reach out to you?

- Any time, however it is best to reach out well in advance.

How should I reach out to you?

- By email with a clear explanation of your motivations, goals, expectations and previous experience (see below)

What kind of background experience are you looking for?

- We have students from a wide variety of backgrounds and expect students to come with strong motivation to learn, collaborate, expand their own expertise, and contribute to the lab. Recent graduates who completed honors theses were in Psychology and Computer Science. Programming, mathematics, neurobiology/neurophysiology and machine learning/statistics are all useful as a large proportion of our work makes extensive use of computing tools.

What is the work environment like?

- We organize students into groups based on their interests and abilities, usually led by a graduate student or post-doc. Center, lab, project and individual meetings occur regularly, but students are expected to be self-motivated and proactive.

What will my schedule look like?

- In general, students need to dedicate blocks of time in coordination with other students, staff or faculty working on the same project. Attendance and participation in regularly scheduled meetings (center, lab, etc.) is expected. Students should be using careful scheduling and planning to ensure they are able to execute the responsibilities of research while preserving work-life balance and academic excellence.

What materials would you like to review in order to make a decision?

- Interested students should send an email with your CV or resume, transcripts, and answers to these questions:
- What is(are) your long-term career goal(s)?
- What career path(s) are you considering and why?
- What are your current computational (biomedical, computer science, engineering, mathematics) skills and interests?
- What do you expect to learn?
- What are your neuroscience interests?
- What interests you about our work and how do you expect to contribute?

If you like my lab, you might be interested in labs of...

- Dr. Otto (BME), Dr. Allen (BME), Dr. Schiefer (VA), Dr. Williamson (Psychiatry), Dr. Febo (Psychiatry), Dr. Burke (Neuroscience) amongst many others.



Samsun Lampotang, Ph.D., FSSH, FAIMBE

Director, Center for Safety, Simulation & Advanced Learning Technologies

Research: Mixed-Reality Simulation, Medical Devices, Patient Safety Innovations

[The Center for Safety, Simulation & Advanced Learning Technologies](#)

What years do you accept?

- Sophomores and Juniors preferred; we will consider freshmen and seniors.

How many semesters do you expect?

- One semester minimum with options to expand to multiple semesters depending on performance and project.

When should I reach out to you?

- We accept volunteers at anytime throughout the year.

How should I reach out to you?

- Contact myself at slampotang@anest.ufl.edu and our project manager at dlizdas@anest.ufl.edu.

What kind of background experience are you looking for?

- Preferred:
 - C/C++/C#
 - Unity Game Engine
 - HoloLens/VR
 - Arduino
 - Mechanical design
- We have a wide variety of tasks so please apply even if you don't have the preferred qualifications.

What is the work environment like?

- Volunteers will work with lab faculty and staff directly.
- Volunteers will have variety of independent and group based work.
- Fast-paced, timeline driven work environment. Frequent communication expected.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- Frequent meetings (minimum one per week) will be required.
- Meetings will be in-person or online depending on circumstances.
- Prefer 10 hours per week.

What materials would you like to review in order to make a decision?

- Your resume.
- An in-person interview with myself or the project manager.





Mamoun T. Mardini, Ph.D.

Assistant Professor, Institute on Aging

Research: Data Science, Wearables, Health Informatics, Digital phenotyping

What years do you accept?

- I'm okay with Sophomores, Juniors, and Seniors.

How many semesters do you expect?

- We require a 1 year commitment. However, we will evaluate your progress every semester.

When should I reach out to you?

- Any time.

How should I reach out to you?

- By email. Include [BME undergraduate research] in the email's subject.

What kind of background experience are you looking for?

- We require coding/programming experience.

What is the work environment like?

- Will be paired with a graduate student mentor
- Will work with upperclassman BME undergraduate

What will my schedule look like?

- We will plan your lab involvement around your class schedule.

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me





Thomas Mareci, Ph.D.

Professor, Department of Biochemistry and Molecular Biology

Research: Study of Nervous System Structure and Function with Magnetic Resonance

What years do you accept?

- We recruit sophomores and juniors.
- Seniors are not usually accepted because of the time required for training and planning.

How many semesters do you expect?

- We start with one semester, then evaluate your progress.
- Projects require extensive training and planning, so we require at least a 1-year commitment.

When should I reach out to you?

- As soon as possible before the end of a semester in preparation for following semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- We make decisions based on your resume, course work, and interviews.
- We desire experience with programming languages (e.g. Matlab, Python).
- Interest in learning methods for magnetic resonance imaging and spectroscopy.

What is the work environment like?

- Will work on brain magnetic resonance image processing, simulations, and analysis.
- Mostly individual work but conduct research in shared lab and online computer environment.
- Will be paired with a graduate student or postdoctoral associate mentor.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.
- Some work can be accomplished remotely.
- To contribute, you need to plan lab work and meeting time for ~ 10-hours per week.
- You are required to attend one-hour, lab-wide meetings once a week.

What materials would you like to review in order to make a decision?

- Your resume
- Course transcript
- An in-person interview with me
- An in-person interview with a graduate student





Amor Menezes, Ph.D.

Assistant Professor, Department of Mechanical & Aerospace Engineering

Research: Dynamical systems theory and control, with applications to the fields of systems biology and synthetic biology

[SYBORGS lab](#)

What years do you accept?

- I accept students across all years, with a preference for students who have at least three semesters until graduation (can include a full summer semester).

How many semesters do you expect?

- I am interested in students who want to commit to at least three semesters, and who want to produce enough research to strongly support a graduate school application, like a published first-author conference paper, at least half of a co-authored journal paper, etc.
- Every student is evaluated on a semester-by-semester basis, primarily on their commitment, trustworthiness, and enthusiasm.

When should I reach out to you?

- Anytime.

How should I reach out to you?

- By email: amormenezes@ufl.edu.

What kind of background experience are you looking for?

- No previous experience is necessary. I select students based on their resumes, unofficial transcript, interview performance, and the current needs of the lab. Successful students are typically multidisciplinary, and have diverse interests, skills, and talents.

What is the work environment like?

- Students are assigned an individual project based on their interests. Students are then assigned a postdoc or graduate student mentor based on their project.
- Students are expected to attend the weekly group meeting, and to present during their turn in the group meeting rotation. They will also meet weekly with their mentor to update progress. Update meetings will also be scheduled regularly with Dr. Menezes.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.

What materials would you like to review in order to make a decision?

- An email that doubles as a cover letter that explains your interest in a lab research area and associated papers (see lab website), as well as potential future contributions that you envision.
- Attach your resume and unofficial transcript.





Aaron Mickle, Ph.D.

Assistant Professor, Department of Physiological Sciences

Research: Using optogenetics, small implantable devices, and 3D organoid cultures to answer questions related to mechanisms of visceral pain and function

[Mickle Lab](#)

What years do you accept?

- Sophomores and Juniors, potentially freshmen.

How many semesters do you expect?

- We expect at least a one year commitment.

When should I reach out to you?

- The best time is the end of the spring semester or the beginning of summer in preparation for Fall semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will work with upperclassman undergraduates and others in the lab. Most work will be done in pairs working as a team.

What will my schedule look like?

- We will plan your lab involvement around your class schedule.

What materials would you like to review in order to make a decision?

- Please send an email with your resume and a short description of why you are perusing research in my lab. I will then do an in person interview.





Gordon Mitchell, Ph.D.

Professor, Department of Physical Therapy and McKnight Brain Institute

Research: Neurophysiology, pharmacology, physiological measurements, immunofluorescence imaging, cell/molecular biology techniques

What years do you accept?

- I'm okay with Sophomores and Juniors.

How many semesters do you expect?

- Our projects involve months of planning, we require 1 year commitment.

When should I reach out to you?

- End of semester in preparation for following semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.

What is the work environment like?

- Will be paired with graduate student, postdoc or junior faculty mentor.

What will my schedule look like?

- Our experiments take a long time, you will need to have a two 4-hr blocks each week.

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me
- An in-person interview with a graduate student



Walter O'Dell, Ph.D.

Associate Professor, Department of Radiation Oncology

Research: General: Medical Image and Computation Analysis, Current specific interests: effects of cancer treatment on heart function and lung tissue damage

[MIACALab](#)

What years do you accept?

- I find it better for freshman to focus on integrating into college their first year, though it is helpful sometimes to begin looking into lab opportunities so that they can start actual research during the summer after their freshman year.

How many semesters do you expect?

- I find it best to be involved in a research project for at least a semester to see if the project is working for all parties.
- I recommend that students apply for the University Scholars Program and/or Emerging Scholars Program and these involve 2+ semesters of supported research.

When should I reach out to you?

- When you are starting to get serious about committing to some research time. You can attend our weekly lab meetings to get ideas for a research project that you can immerse yourself in prior to making a commitment to our group.

How should I reach out to you?

- email works best: wodell@ufl.edu

What kind of background experience are you looking for?

- It is best to have some familiarity with using sophisticated software, and coding in java or Matlab is usually helpful. Additional background knowledge and skills will be accumulated while doing your research.

What is the work environment like?

- Typically you'll have a graduate student or upper under-graduate student as a mentor. We work on computers and human/patient medical images almost exclusively — no direct wet labs and no animal work. Our "lab" consists of a room with 4 powerful computers that are used for the larger program tasks, but many tasks can be run at home.

What will my schedule look like?

- We typically do not have a fixed schedule around experiments, so we work around your class schedule. Once a project is set up, students often work from home and do so evenings and on weekends. We have a weekly lab meeting. I also typically meet every other week with each group of 2-4 students working on specific projects.

What materials would you like to review in order to make a decision?

- Typically a resume or other document that outlines your goals for doing research and your current skillset. We would then meet one-on-one to discuss our options.

If you like my lab, you might be interested in labs of...

- Our lab involves specialized image processing tools and concepts in medical imaging that are similar in a general sense to those of the labs of others like Drs. Bolch and Fang, but our lab tends to focus more heavily on projects with direct application to patients and cancer outcomes.





Karim Oweiss, Ph.D.

Professor, Department of Electrical and Computer Engineering

Research: Sensorimotor Integration, Computational and Systems Neuroscience, Brain-Machine Interfaces

[Oweiss Lab](#)

What years do you accept?

- Juniors, No freshman.

How many semesters do you expect?

- At last two, upon approval of performance in the first.

When should I reach out to you?

- End of semester in prep for next one.

How should I reach out to you?

- Email

What kind of background experience are you looking for?

- Wet lab technique and/or Matlab programming or any other high level language is preferred.

What is the work environment like?

- Paired with Grad student mentor.

What will my schedule look like?

- We will plan around your schedule, but expected to show up regularly for at 2 hours min/day

What materials would you like to review in order to make a decision?

- Resume, in person interview with me and a grad student.





Pinaki Sarder, Ph.D.

Associate Professor, Section of Quantitative Health of the Department of Medicine

Research: artificial intelligence; machine learning; digital pathology; computational pipelines; spatial 'omics data; clinical diagnostics; kidney disease; software development

[Computational Microscopy Imaging Laboratory](#)

What years do you accept?

- Juniors & Seniors

How many semesters do you expect?

- Our projects involve months of training; therefore, we require a 1-year commitment, but prefer a 2-year commitment.

When should I reach out to you?

- At any time.

How should I reach out to you?

- Contact Dr. Sarder by email directly (pinaki.sarder@ufl.edu), graduate student Myles Tan (tan.m@ufl.edu), IC3 project manager Jessica Kirwan (jessica.kirwan@medicine.ufl.edu), or Dr. Sarder's administrative assistant Jessica Grecco (jessica.grecco@medicine.ufl.edu).

What kind of background experience are you looking for?

- Strong interest in creating computational tools for use in the clinic and desire to work on inter-disciplinary team science. Familiarity with C programming languages, Python, Java, JavaScript, HTML, CSS, and SQL of benefit, but will make a decision based on your resume and interview.

What is the work environment like?

- The researcher will be paired with a graduate student mentor and conduct inter-disciplinary team research in a shared computer / lab space. Weekly updates will be provided to the PI and occasional presentations will be expected during biweekly lab meetings. Attendance at other meetings, with collaborators, may be required depending on the project.

What will my schedule look like?

- We will plan your lab involvement around your class schedule; however, you will be expected to work from the lab at least 10 hours a week. You will be required to attend lab meetings every 2 weeks, schedule allowing.

What materials would you like to review in order to make a decision?

- Your resume, which will be followed by a Zoom interview with Dr. Sarder and the lab personnel.

If you like my lab, you might be interested in labs of...

- Ben Shickel (COM), Wei Shao (COM), Ramon Sun (COM)





Whitney Stoppel, Ph.D.

Assistant Professor, Department of Chemical Engineering

Research: Design and optimization of natural biomaterials for a variety of clinical applications

[Stoppel Lab](http://www.stoppelab.org)

What years do you accept?

- Preference is given to students who have taken BME fundamentals, but students enrolled in this course are encouraged to apply for the next semester. The Stoppel lab does occasionally take freshman, but usually through the CURE Honors Program coursework. Students are encouraged to reach out to current BME undergraduates working in the Stoppel Lab for more information.

How many semesters do you expect?

- Our projects require extensive training, so we would like to accept students who will continue to work in lab throughout the duration of their time at UF. Most Stoppel Lab UGs complete an honors thesis. However, we start with one semester at 0 research credits and evaluate your happiness, interest in the work, and progress to determine continued involvement.

When should I reach out to you?

- Any time is fine, but I usually conduct interviews in November and April for spring and fall semesters, respectively.

How should I reach out to you?

- Please fill out the form available on my website and email it to me using the instructions on the form. (www.stoppelab.org).

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your application, interview, and course schedule.

What is the work environment like?

- Most undergraduates join the lab and work in a team with other HWCOE undergraduates. Teamwork is essential as our experiments often have many time points that sometimes interfere with class schedules. Thus, as a team, things are much easier since the workload can be shared across the team. As the student spends more time in the lab and gains skills and seniority, they transition into leadership roles within their project and gain more independence. Sometimes the projects are led by graduate students and sometimes the projects are led by Dr. Stoppel.

What will my schedule look like?

- We will plan your lab involvement around your class schedule, but we usually ask our students to spend an average of 10-12 hours on lab work (in lab running experiments, at home planning your experiments, reading papers, or analyzing your data, lab meeting attendance and participation, journal club participation). The timing of lab meeting and journal club are determined by a doodle poll at the start of each semester to ensure as many students can participate as possible.

What materials would you like to review in order to make a decision?

- After receiving your application, you will be given further instructions with a paper to read and an interview time (usually these communications occur in November and April).

If you like my lab, you might be interested in labs of...

- Erika Moore, MSE, Jamal Lewis, BME, Cherie Stabler, BME, Edward Phelps, BME, Blanka Sharma, BME, Chelsey Simmons, MAE



Xin Tang, Ph.D.

Assistant Professor, Department of Mechanical & Aerospace Engineering

Research: Mechanobiology; Bioengineering; Biophysics; Tumor metastasis; Functional imaging in vivo/vitro; Nanobiotechnology; Synthetic biology; Biophysical tools development to probe biological function and structure.]

[Tang Lab: Integrative Mechanobiology & Biophysics](#)

What years do you accept?

- All years. Sophomores, Juniors, and seniors are preferred.

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters. 1.5-year commitment has a chance to lead to some productivities such as a journal publication.

When should I reach out to you?

- I am happy to discuss with any applicants at any time.

How should I reach out to you?

- By email (xin.tang@ufl.edu) and please enclose your detailed resume/CV, unofficial UF transcript, and a letter of interest.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview. Student who have a strong interest in physics, mechanics, mathematics, and computer programming often excel in my lab. Please list your background/expertise/previous-training in your resume/CV.

What is the work environment like?

- Students are assigned an individual project and are paired with a graduate student or postdoctoral mentor.
- The project will be topically related to the work of at least one other student in the lab, thereby enabling peer support.
- Research is conducted in a shared office and lab space.

What will my schedule look like?

- Our experiments take a long time, all undergraduate students will need to commit at least 10 hours each week.
- You are required to attend lab meetings weekly.

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me
- An in-person interview with a graduate student



Vinata Vedam-Mai, Ph.D.

Assistant Professor, Department of Neurology

Research: PD; cellular mechanisms of disease and therapies including immunotherapy and DBS.

What years do you accept?

- I'm okay with Sophomores and Juniors
- Freshmen accepted on case by case basis

How many semesters do you expect?

- We start with one semester, evaluate your progress and will decide whether you stay for future semesters.

When should I reach out to you?

- End of semester in preparation for following semester.

How should I reach out to you?

- By email.

What kind of background experience are you looking for?

- We have no requirements and will make a decision based on your resume and interview.
- We will also train you as necessary. Previous experience with tissue culture, immunohistochemistry and animal handling is a plus

What is the work environment like?

- Will conduct research in a shared computer space / lab space, paired with a graduate student, tech, or experienced undergrad.

What will my schedule look like?

- We will plan your lab involvement around your class schedule

What materials would you like to review in order to make a decision?

- Your resume
- Your cover letter
- An in-person interview with me



Ali Zarrinpar, M.D., Ph.D.

Associate Professor, Division of Transplantation and Hepatobiliary Surgery

Research: Computational approaches to drug/dose optimization in cancer and immunosuppression. Focused drug delivery using nanodelivery methods and localization.

[Transplantation and Hepatobiliary Surgery Laboratory](#)

What years do you accept?

- First-years with significant previous experience, sophomores and juniors, or seniors with a focused question or project in mind.

How many semesters do you expect?

- To get anything truly valuable done, projects involve months of planning and at least a 1 year commitment.
- We will start with one semester and evaluate the progress and fit and can decide whether things are working out for the future.

When should I reach out to you?

- At any time.

How should I reach out to you?

- Email is most robust, ali.zarrinpar@surgery.ufl.edu.

What kind of background experience are you looking for?

- There are no specific requirements. Strong interests in biology, chemistry, data analysis, programming, patient-centered questions go a long way.

What is the work environment like?

- Students will be paired with a postdoctoral mentor initially. We have a small group that work in overlapping yet wide-ranging projects.

What will my schedule look like?

- We will plan your lab involvement around your class schedule, but the best experience will be if you can devote set blocks of time each week.
- You will be required to attend lab meetings on Fridays at 11 am or alternatively have progress meetings with me and your lab mentor at least once a week.

What materials would you like to review in order to make a decision?

- Your resume, a cover letter on what you would like your experience to be like and an in-person interview with me and your potential mentor.

Below are opportunities UF BME students have participated in.

Each program has its own application system and deadline, check each program's eligibility before applying.

[Center for Undergraduate Research](#)
[HWCOE Project Database](#)

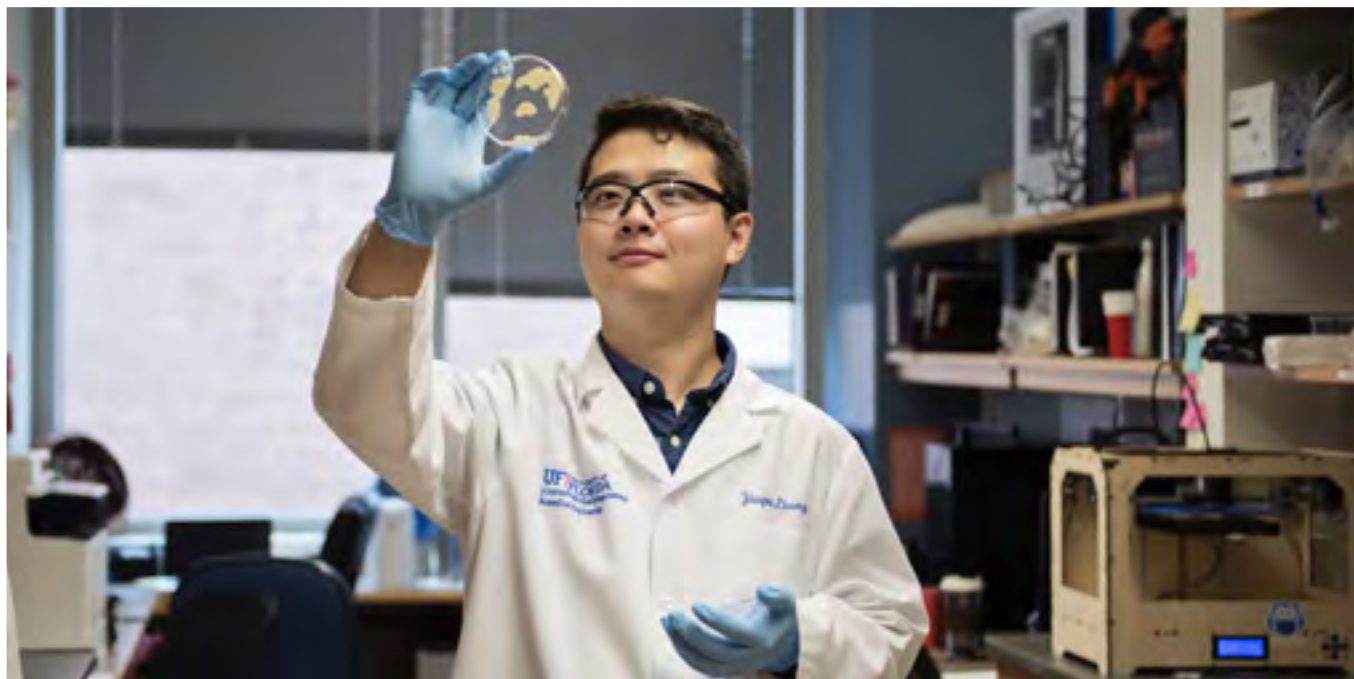
(many of the resources below are found on this page)

University

McNair Scholars Program
University Scholars Program
Emerging Scholars Program
Summer Undergraduate International Research Program

External

National Institutes of Health – Summer Internship Program (SIP)
National Science Foundation – Research Experience for Undergraduates (REU)
National Science Foundation – Summer Undergraduate Research Fellowship (SURF)
Big Ten Academic Alliance Summer Research Opportunities Program (SROP)
Leadership Alliance Summer Research Early Identification Program
Amgen Scholars Program



The J Crayton Pruitt Family Department of Biomedical Engineering, in collaboration with the Herbert Wertheim College of Engineering, is committed to providing a safe and healthy working and learning environment for all of its students.



Sustaining a culture of excellent laboratory safety starts with rigorous training. To facilitate appropriate training of safety concerns, all BME students are required to complete a BME laboratory checklist prior to gaining access to the laboratory. This checklist outlines required general safety training needed for general work in the building. Additional training will be needed, given the specific research conducted and risk encountered in your work. Guidance on the lab-specific training needed will be provided by your Supervisory Chair, as all Chairs are to provide a safe working environment, ensure adequate safety training of their personnel, and maintain appropriate safety records for their own laboratory.

- Online EHS 809 - Hazardous waste management [for non-HW managers] (UF_EHS809_OLT)
- Online EHS 851 - Biomedical Waste Training (UF_EHS851_OLT)
- Online EHS 853 - General Biosafety Training (UF_EHS853_OLT)

It would be very impressive if you completed this training prior to reaching out to a faculty member (wink wink!).

Earn course credit for your hands-on experiences!

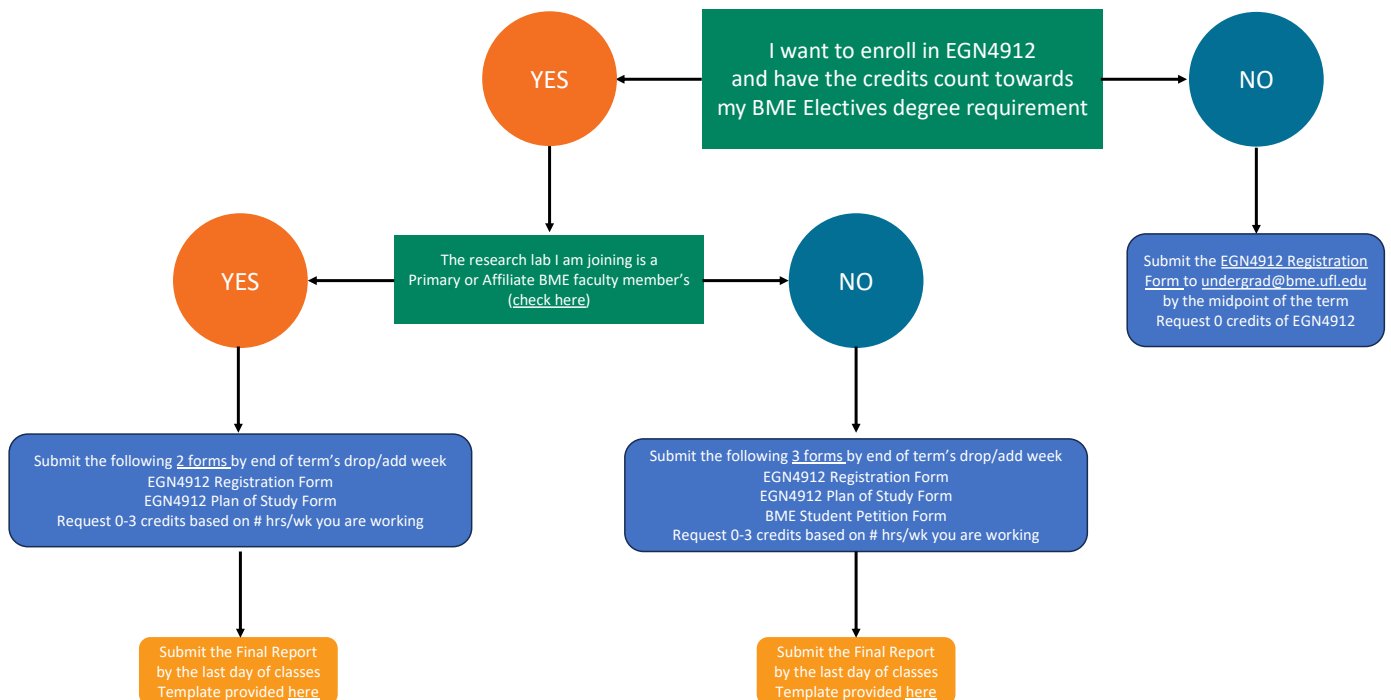
Academic Research

All biomedical engineering undergraduate students ARE REQUIRED to be registered in EGN4912 if you are conducting research in a BME or non-BME lab. Registration credits range anywhere from 0-3 credits depending on hours per week workload. Upon petition to the BME Undergraduate Programs Committee, up to 3 credits of EGN4912 can be used towards your Specialization Track/ Elective requirements for graduation.

Industry Internship

Students may count up to 3 credits of industry internship experience toward the requirements for graduation.

Please check out our website to find registration forms, class syllabi, and other guidance documents related to these opportunities.





1275 Center Drive
Biomedical Sciences Building, JG-56
P.O. Box 116131
Gainesville, FL 32611



352.273.9222



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Biomedical Engineering