

Finding Undergraduate Research

Undergraduate research is a great way to hone your technical skills, build your resume, or prepare for graduate school. In addition to the research programs offered at the College and UM, there are many hands-on research opportunities in engineering department labs. Follow the guide below to uncover them! This process can take time so be patient; there are many professors looking for dedicated undergrad lab members.

PLAN

- Determine when you want to engage in research and start your search a semester in advance
- Begin thinking about the topics that interest you
Examples: Applying computer science to medicine; working with autonomous vehicles

RESEARCH

- Review your department's website or check out this link: engin.umich.edu/research/student-research/
- Review the list of departmental faculty and their research; identify 7-10 labs of interest

EMAIL

- For each lab on your list, send an email to the professor expressing your interest in a research position on their team
- See next page for sample interest email

FOLLOW-UP

- Be patient! It is common for professors to take a few weeks to respond
- If you don't hear back in two weeks, send a concise, polite follow-up email using the same email thread from your original outreach
- See next page for sample follow-up email

DISCUSSION

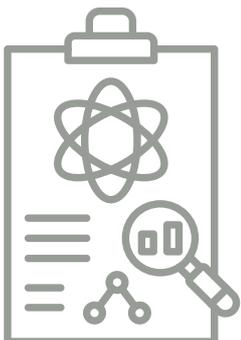
At this stage, the professor has responded to your email and is willing to speak with you. Often, these meetings are a balance between an interview and conversation. You should expect interview style questions but also anticipate the conversation to naturally flow after initial introductions. Specifically, to prepare for this meeting:

1. Prepare a "tell me about yourself" pitch
2. Review all technical experience on your resume
3. Be ready to discuss your project interests and how they align with the professor's ongoing research. To do this, review the professor's website and skim papers of interest.

Note: While some professors do not have updated websites, it is always a good idea to know a few main points of their research.

You can always ask if what you read is still relevant information!

4. Prepare 3-4 questions about the professor's projects and lab



Sample Communication

Sample Interest Email

Subject: Interest in LAB NAME research opportunity

Dear FACULTY PROFESSIONAL NAME,

My name is Anne Arbor, and I am a junior majoring in Biomedical Engineering with a minor in Computer Science. I learned about your lab through the spotlight of your most recent publication in the BME newsletter. After taking Quantitative Cell Biology, I am really interested in systems biology, so I was very intrigued to read about your research studying cellular mechanisms related to HIV. I would like to learn more about how you use measurements of cytokines as input to computational models to investigate disease susceptibility.

Over the summer, I participated in a research experience where I was involved in a project using data-driven modeling in order to study gene interactions related to melanoma drug resistance. While involved with this project, I gained skills using Python to organize data and perform principal component analysis, solve differential equations, and perform least-squares optimization. I believe my strong background in computation would allow me to quickly learn any languages or libraries used in your research.

I strongly believe that my dedication and skills would be beneficial to your project, and I would appreciate being considered for any openings on your team. I have attached my resume for your review and I look forward to speaking with you further.

Thank you for your time and consideration.
Anne Arbor

Sample Follow-Up Email

Subject: FWD: Interest in LAB NAME research opportunity

Dear FACULTY PROFESSIONAL NAME,

I hope you are doing well! I am writing to follow up on my recent email expressing interest in an opportunity to contribute to your lab's research.

As a junior Biomedical Engineering student with a minor in Computer Science, I am interested in systems biology and the possibility of conducting undergraduate research in your lab. I believe my experience in data-driven modeling and fascination with cellular mechanisms makes me a good fit for an opening on your team, especially your study on HIV.

Would you have some time to speak with me in the next week to discuss your ongoing projects and any undergraduate opportunities in your lab?

Thank you for your consideration.
Anne Arbor

