Overview: Getting involved in biology-related research

This overview of getting involved in biology-related research at the University of Pittsburgh covers:

- 1. Find independent research projects
- 2. Contact possible research mentors
- 3. Signing up for research for credit

1. Find independent research that interests you

- a. **First Experiences in Research (FE-R) matching program.** Students can choose from a list of researchers looking for undergraduate research assistants and try to get matched. Applications are in the fall only, research begins in the spring (this also includes enrollment in a 1 credit course that discusses research and culminates in a poster session). This program is not limited to biology, but includes the natural sciences, social sciences, and humanities. https://www.asundergrad.pitt.edu/research/getting-started
- b. Network. Talk to your instructors, TAs, UTAs, friends, neighbors, cousins and see if anyone:
 - i. is involved in research and then \rightarrow ask how they got started
 - ii. knows of any labs that are looking for undergrad researchers and then → reach out (see #2)
 - iii. knows of any labs doing research that interests you and then → reach out (see #2)
- c. Search for research that interests you!
 - i. Think about which areas in biology are most interesting to you. You can think about your favorite topics from a class, an interesting blog or article you read, or maybe a personal connection from your own life.
 - ii. Look for research that matches your interest you can check research departments at Pitt that overlap with your topic area or just search for key words:
 - a) Check departmental websites to find interesting projects and then email PIs (see #2 below)
 - a. Department of Biological Sciences
 - b. Center for Neuroscience
 - c. Department of Microbiology & Molecular Genetics (SoM)
 - d. Department of Developmental Biology (SoM)
 - e. Computational and Systems Biology (SoM)
 - f. Department of Cell Biology (SoM)
 - g. Division of Infectious Diseases (SoM)
 - h. School of Medicine list of all departments
 - i. Magee Women's Research Institute list of researchers
 - j. Human Genetics Department in Public Health
 - k. Epidemiology in Public Health
 - b) Search on the internet! You can use google or an organized research database such as pivot (https://pivot.proquest.com/profiles/main) that lists all faculty doing research across Pitt and UPMC
- d. Look for paid research positions. Pitt's Talent Center lists student research assistant positions. These are often prep positions (and not so much independent research), but they usually require little-to-no research experience and can be a great way to get your foot into the door and build experience. Use these steps as a guide:
 - 1. Go to join.pitt.edu
 - 2. Click on "Find Positions" and then on "Students".
 - 3. Browse through job postings or enter keywords such as "Research" or "Lab".
 - 4. Apply for the job directly.

2. Reach out to potential research mentors

For most professors, the best way to contact them is by e-mail. Professors get many emails from students looking to join their labs. You want to make sure that your email is personalized and succinct. We suggest you include:

- a. Who you are (major, year, career interests)
- b. Why you are interested in this specific research project (what's your connection?)
- c. Your availability weekly (hours/week) and long-term (how many more semesters you have); remember that most labs would expect students to invest at least 5-10 hr/week, and that large chunks of time (e.g., 2-3 hours in 1 day) are more conducive to research than going into the lab 1 hour per day
- d. An attached, updated, proofread resume (or be sure to say that you can send if requested)
- e. Ask if the professor would be interested in meeting to talk about the possibility of you working in their lab
- f. Your contact information (phone number and/or e-mail address)
 - ** Note that professors can get flooded with requests for research positions**
 - If you do not hear back from one particular lab, do not be discouraged
 - Read the professor's lab web site(s) before contacting them. Some may even have guidance for how to contact them regarding research positions (Professors will often have both department profile web sites as well as personal lab web sites; useful information is more likely on the latter)
 - We recommend that you start by contacting 6-8 labs to increase your chances of matching
 - Plan ahead: If you would like to start research in the fall semester, do not wait until the fall to contact professors; instead, start making contacts in the spring or summer for these positions

3. Signing up for bio research for credit

Students can do research as a paid job, for credits, or occasionally on a volunteer-basis. This section describes signing up for research for BIOSC credit. These credits require departmental consent and thus require that the student complete a contract with their mentor(s) before being enrolled. Research credits are for S/NC credit only and do not count toward meeting requirements of any Department of Biological Sciences major.

All forms are available as fillable PDFs here: https://www.biology.pitt.edu/undergraduate/advising/docsforms More info can be found here: https://www.biology.pitt.edu/undergraduate/research/academic-credit

- a. Choosing the correct enrollment form
 - 1. **BIOSC 1901: Independent Study**. For students choosing to do a biology-related internship at a company (Zoo, Aviary) or just beginning research in a lab where they will be learning the techniques and the project. This form can be used for working on projects inside or outside the Department of Biological Sciences
 - 2. **BIOSC 1903: Undergraduate Research**. For students continuing in research and participating in an independent project. Students complete different forms for doing research inside the Dept (INTERNAL) or in a lab outside of the Dept of Biological Sciences (EXTERNAL)
 - 3. **BIOSC 1904: Undergraduate** *Honors* **Research**. Only for students who have been accepted into the BIOSC Dept honors program. Students complete different forms for doing research inside the Dept (INTERNAL) or in a lab outside of the Dept of Biological Sciences (EXTERNAL)
- b. Co-Sponsorship: for research in a lab outside of the department of Biological Sciences (External), students will need a faculty member from the Department of Biological Sciences to oversee their research and assign their S/NC grade at the end of the term. Students may choose any BIOSC faculty member for this role and it is recommended that students use this as an opportunity to build a relationship with one of your instructors.
- c. <u>Turning in the enrollment form</u>: once you have completed the form and have all needed signatures: Completed and signed forms are turned into the biology advisors who will enroll you for the credits.

Be sure to get your forms completed and turned in before the end of add/drop