All About Finding Research & Creative Endeavor Opportunities
Undergraduate Research Office

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Location: Sears Library 247
Appointments Available Through My Journey
Session Outline

Purpose
Terminology
Office Summary of Resources
What is Undergraduate Research
Getting Started: Why, When, and Compensation
Panel
How: Finding Undergraduate Research & Communicating with Faculty
Q&A
Purpose

To assist and prepare students to engage in research and creative endeavors, and to guide and, where appropriate, to supplement institutional, departmental, and divisional work with this effort.
Terminology

Faculty Mentors; Primary Investigators

Other project mentors/advisors may be:
Graduate Student & Post Doctoral Advisors
Research Staff

At CWRU - Professors, Associate and Assistant Professors
At CC – STAFF

STEM: Science, technology, engineering, mathematics
Resources for Students

Assistance in Finding Opportunities

Intersections Poster Session
  April 19, 2024; August 1, 2024

Funding
  SOURCE Travel Funding          SOURCE Summer Funding
  Other Funding Opportunities

Educational Information Sessions
  Responsible Conduct of Research
  How To Present Research
  How To Make a Poster
  And Many More!

Research Student Groups: Discussions and the Undergraduate Research Society
What is Undergraduate Research?

Research - new knowledge

Faculty Mentored

Research Intensive University, most undergraduate researchers, especially in STEM and the social sciences happens with connecting to faculty members’ research.

More independent research, but still faculty mentored, happens in the humanities.
WHY, WHEN, AND COMPENSATION
Why?

**Preparation for Present and Future Goals**
- Explore a college major
- Prepare for Senior Capstone
- Preparation for Graduate School or Professional School

**Professional Skill Development**
- Build a professional network and establish mentoring relationships
- Develop thinking and problem-solving skills
- Enhance needed workplace skills, including verbal and written Communication, teamwork, and adaptability
When & Compensation

During the Academic Year
Available Time
Volunteer/For Pay/Academic Credit

During the Summer
Many opportunities on or off Campus
Compensation
Shreya Balaji

Project: Impact of Social Needs/Support Intervention Programs on Patient Health and Unmet Needs in Cleveland, OH

Mentor: Dr. Sarah Ronis, Department of Pediatrics, University Hospitals Center for Child Health & Policy

Summary: This project evaluated the impact of social support and social needs intervention programs on the prevalence of unmet social needs (such as food insecurity, financial insecurity and utilities-related needs and disconnections) as well as mental and physical health appraisals in the patient population that seeks care at the University Hospitals Ahuja Center for Women and Children in Cleveland, Ohio.
Jenny Lian

Project: Real-time Microfluidic Evaluation of Hemostatic Properties of Procoagulant Synthetic Platelets

Mentor: Dr. Anirban Sen Gupta, Department of Biomedical Engineering

Summary: The goal for this project is to test natural platelet mechanisms of hemostasis using a synthetic platelet particle in injury site-localized amplification of coagulation using real-time microfluidic evaluation.
Hannah Yan

Project: Impacts of chronic ethanol exposure and withdrawal on gut microbiota and the gut-brain axis

Mentor: Dr. Gail Cresci, Ph.D., R.D., L.D., Department of Inflammation and Immunity, Cleveland Clinic

Summary: The objective of this project is to better determine the influence of ethanol exposure and withdrawal on various neuroactive metabolites of the gut microbiome, inflammatory markers, and pain.
Snapshot of Previous Participant

Physical Sciences

Xavier Moskala

Project: Binary Star System Timing
Mentor: Dr. Benjamin Monreal, Physics

Summary: By modelling binary star systems and their light curves, our objective is to determine the required timing precision needed for any system of interest and use that information to make proposals for observations on real telescopes.
Questions?
HOW
Lots of Ways!

- Think about your research interests
- Learn who is doing what
- Connections with faculty (class & department lectures), staff, and friends
- Undergraduate Research Society
- Read *The Daily*
  - There often are features articles about faculty and student research
URO Website

- Explore the [Undergraduate Research Office Website](#)
  - The Opportunity List

- Faculty Research Profiles
  Explore all possible departments - beyond the undergraduate departments

- Keep many doors open at the same time
Finding Summer Opportunities

The Undergraduate Research Office website provides info about on- and off-campus summer programs, around the country and internationally.

• Plan to conduct your summer search during winter break.
• Most program deadlines are in January and February
• Programs require recommendation letters: plan ahead

If searching at a particular university, utilize the faculty research profiles in the same way as here at CWRU.
• Explore all possible departments - beyond the undergraduate departments
• Keep many doors open at the same time
Undergraduate Research Office
Contacting Mentors
Making The Initial Email Contact

Must be brief

**Most important**: Know about and connect with the research

Express interest in learn about the research

Discuss number of hours per week

Discuss compensation - Volunteer, work-study, course credit

Attach a resume

(Career Consultants Schedule on Handshake)
Making the Initial Contact: Outline

Dear Professor X

Introduce yourself

State where you learned about their opportunity (if applicable). Share that you read their research profile. Connect with their research/desire to learn/ etc.

Provide information about when you can begin, hours per week, volunteer/paid-work-study?/ course credit.

Desire to meet with them.

Closing
Making the Initial Contact: Sample

Dear Dr. Last Name,

I hope your summer went well! My name is First Last, and I am a rising sophomore at planning to major in biology. I’m currently a volunteer at University Hospitals for Rainbow Babies and am also interested in finding a research position for the fall semester. I noticed that the research you are conducting regards gene expression and have been drawn to your studies because I want to be involved in the field of developmental biology and genetics.

Your research involving the Drosophila melanogaster is particularly interesting because I learned about this organism in Biology lab and learned about gene expression. It would be exciting to apply what this learning in class to this field of study. Since this type of investigation concerns important aspects of biology and its future, it would be exciting to be a part of your investigations.

If you are looking for any undergraduates to assist you with your research, I would greatly appreciate it if you considered me as a candidate. While I am very willing to volunteer, I have a work-study award, so I would prefer to be paid if at all possible. I am eager to be part of a research team where I can learn and be involved in a topic that intrigues me. I am able to work up to 8-10 hours a week. I have also attached my résumé. Thank you for your time.

Best Wishes,
First Last
Barriers?

What barriers might you encounter at this time in your search for undergraduate research?
Overcoming Barriers

Email several PIs individually and at once
Follow-up 7-10 days later, if you do not receive a reply
  Thread onto previous email
Make appointments with all who respond

Make appointment with the Undergraduate Research Office

Remember: Keep Several Doors Open at Once
Interview/Meeting

Know where you are going (may be virtual)

Be on time

Be prepared: Review research profile

Share your desire (and enthusiasm) for the work and learning
What Can You Do Now?

- Read Often and Critically
- Attend/Complete Responsible Conduct of Research series
- Attend Department/University Lectures
- Improve written and Oral Communication Skills
- Learn to Search Academic Databases
- Teach Yourself Basic Coding (Linked-In)
- Statistical Thinking Skills
- Content Production Illustration
Questions