Getting Started In

UNDERGRADUATE RESEARCH

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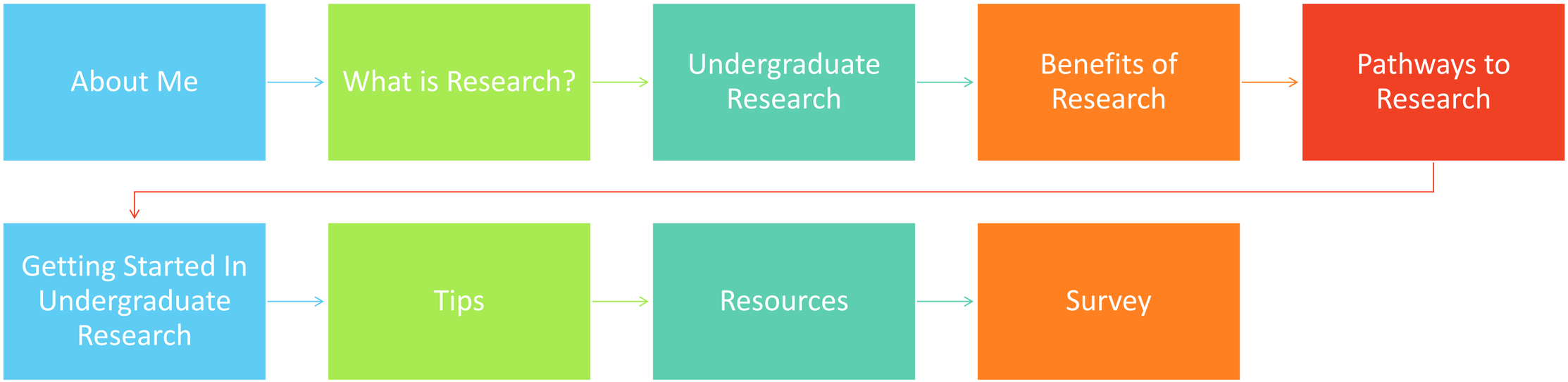
Thursday, February 13, 2024

Agenda


About Me
What is Research?
Undergraduate Research
Benefits of Research
Pathways to Research
Getting Started In Undergraduate Research
Tips
Resources
Survey

About Me

- U-Rise Program Coordinator
- Undergraduate Researcher
- McNair Scholar
- Research Assistant
- California Department of Public Health, Research Intern
- Peer Research Mentor
- Award-Winning Researcher

What is Research?

Let's Define Research!

Scan the QR Code to Get Started!

What is Research?

ⓘ Start presenting to display the poll results on this slide.

What is Research?

Research is a systematic and organized process of investigation that aims to discover new knowledge, expand existing knowledge, or resolve a specific problem. It involves the collection, analysis, interpretation, and evaluation of information in order to answer research questions or test hypotheses.

What is Research?

Research can be conducted in various fields, such as science, social sciences, humanities, technology, art, dance, and more.

Research at CSUDH is for EVERYONE!

What does Research Look Like?

- Research can take many forms depending on the field, goals, and methods employed, but generally, it follows a systematic process of inquiry to generate new knowledge or deepen our understanding of a particular subject.
- A structured methodology may include identifying a research topic, formulating research questions or hypotheses, designing a study or experiment, collecting and analyzing data, and drawing conclusions based on the findings.

Research is for Every Discipline

- Research is for every discipline, not just the sciences. Whether in the arts, humanities, social sciences, business, or health sciences, research allows us to explore new ideas, analyze trends, challenge assumptions, and contribute to the body of knowledge in a field.
- No matter the discipline, research fosters critical thinking, creativity, and problem-solving—skills that are valuable in every career path.

Why is Research Important in Every Discipline?

- **Advances Knowledge** – Helps expand and refine understanding within a field.
- **Informs Decision-Making** – Provides data-driven insights for policies, practices, and innovations.
- **Solves Real-World Problems** – Addresses societal, technological, and health challenges.
- **Encourages Critical Thinking** – Develops analytical and problem-solving skills.
- **Fosters Innovation** – Drives new ideas, discoveries, and improvements.
- **Builds Credibility** – Strengthens arguments with evidence-based findings.
- **Interdisciplinary Impact** – Connects knowledge across fields for comprehensive solutions.

What is Undergraduate Research?

Undergraduate research refers to the involvement of undergraduate (college or university) students in academic research projects, typically under the guidance and supervision of faculty members or researchers.

It provides students with an opportunity to actively participate in the process of inquiry and discovery within their field of study.

Benefits of Undergraduate Research:

- Academic and Intellectual Growth
- Hands-on Application of Knowledge
- Skill Development
- Mentorship and Networking
- Resume and Graduate School Applications
- Personal Growth and Confidence
- Contribution to Knowledge and Society
- Exploration of Career Paths

Learning Experience:

Undergraduate research offers students a hands-on, experiential learning opportunity that goes beyond traditional classroom instruction. It allows them to apply the knowledge and skills they have acquired in their coursework to real-world research questions.

Mentorship:

Mentors guide students in developing critical research skills, including experimental design, data analysis, literature review, and presentation skills. These skills are not only valuable for research but also transferable to various career paths.

Mentors can provide one-on-one guidance tailored to each student's needs and goals.

Mentors often have established networks in their field, and they can introduce students to other researchers, conferences, and opportunities for collaboration. These connections can be invaluable

Undergraduate Research Is For Any Major!

.....And not just students who want to go to research-based graduate programs.

Path to Undergraduate Research

Learn

Learn about Research

Identify

Identify Your Interest

Connect

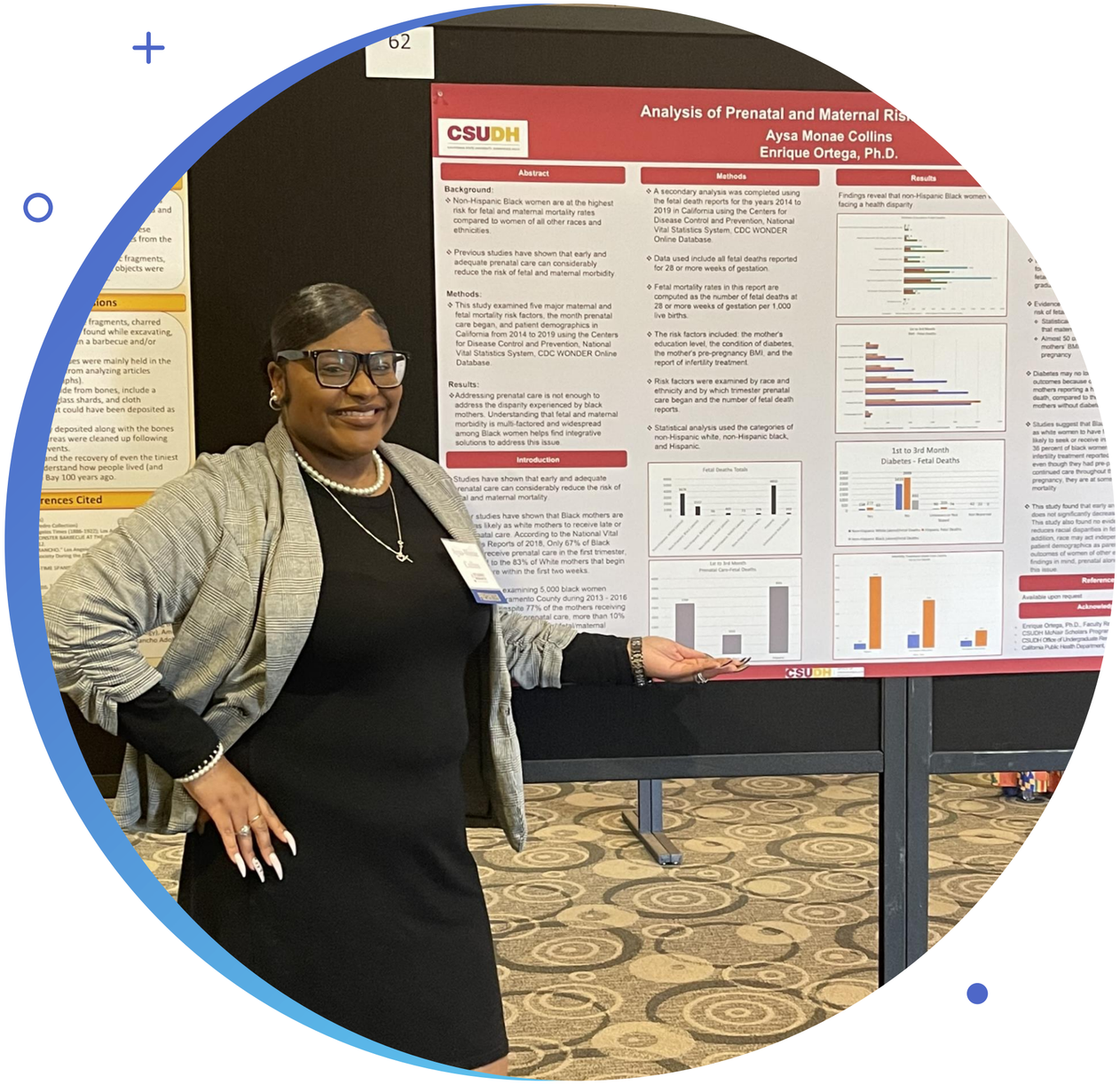
Connect with Faculty and Programs

Plan and Finance

Plan and Finance Your Research

Showcase

Showcase Your Work



Getting Started in Undergraduate Research

Joining a research project is not like registering for a class. Instead, it is much more like finding a job.

Identifying Your Interest

1

Determine the field or area of research that aligns with your academic and career goals.

2

Reflect on your coursework, passions, and long-term aspirations to identify subjects or topics that intrigue you.

3

Look for faculty members or research groups at your university who are involved in research related to your interests. Review their published work, ongoing projects, and areas of expertise.

Finding a Research Mentor at CSUDH

Utilize	Attend	Schedule	Interest in	Consult
Utilize the department faculty directory to identify potential research mentors.	Attend faculty research presentations and department events to learn about ongoing projects.	Schedule meetings with faculty members whose research aligns with your interests.	Express interest in assisting with current research projects or propose your own research ideas.	Consult with the OUR team for personalized guidance on selecting and approaching a mentor.

Contacting Faculty

- If you are contacting faculty directly, email them a cover letter and CV. Your cover letter will comprise the body of your email and should clearly & concisely:
  - Introduce yourself
  - Explain your interest and enthusiasm in their research
  - Identify your goals and how working with them will help you progress toward those goals
  - Request an interview to discuss further a potential research opportunity (include your general availability and potential start date)
  - Include your contact information (email & phone)

- If you don’t hear back from a specific faculty you emailed or a research opportunity you applied to, send a polite follow-up email 1-2 weeks after your initial email. You should not drop into a faculty’s lab or office unannounced.

Finding a Research Mentor Guide

Scan the QR Code

Important Considerations When Starting Research

Understand	Understand research ethics and responsible conduct of research (IRB approval, human/animal subjects policies, data integrity)
Learn	Learn to manage time effectively while balancing coursework and research
Stay	Stay adaptable and open-minded when facing research challenges

Common Challenges & How to Overcome Them

Managing research alongside coursework and other responsibilities

- Create a schedule to balance academic, research, and personal obligations.
- Set realistic goals and prioritize tasks.

Dealing with rejection or setbacks in research applications

- Seek feedback on applications and reapply if necessary.
- Stay persistent and explore multiple opportunities.

Learning to navigate complex academic writing and research methodology

- Utilize writing resources such as the campus writing center and online guides.
- Take research methodology courses or attend OUR workshops.

Building confidence in presenting research findings

- Practice with peers and mentors before conferences or presentations.
- Attend public speaking workshops to improve communication skills.

Final Tips on Getting Started

1

Talk to Professors after class.

2

Look for Off-Campus Opportunities

- Internships
- Volunteer Opportunities
- Off-Campus Research Opportunities

3

Take your Coursework seriously!

4

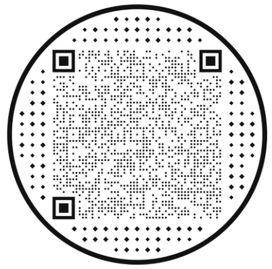
Look for Questions and Not subjects.

5

Research Takes time...it is not bound to semester timeframes.

Research Programs

LSAMP Program	• An undergraduate major in a STEM discipline. • Be an individual who has faced or faces social, educational, or economic barriers to careers in STEM.
McNair Scholars Program	• Aims to support and fund first-generation, low-income, and/or underrepresented students preparing for their future doctoral studies.
Mellon Mays Program	• For students who wish to pursue a PhD in humanities and select social sciences and work as faculty after graduation
U-RISE Program	• A STRONG desire to pursue a Ph.D. in the biomedical sciences after CSUDH • An undergraduate student enrolled full-time at CSUDH, majoring in either Biology, Biochemistry, chemistry, physics, psychology or sociology



Summer Research Experience for Undergraduates:

- Opportunity to conduct a research project in various fields
- Designed to expose undergraduates to research
- Graduate Program Exposure
- Work closely with faculty and other researchers
- 8 –10 weeks at a host university during the winter or summer term (Virtual or Online).
- Paid: Travel, Housing & Food, + stipend

Summer Research Programs Guide

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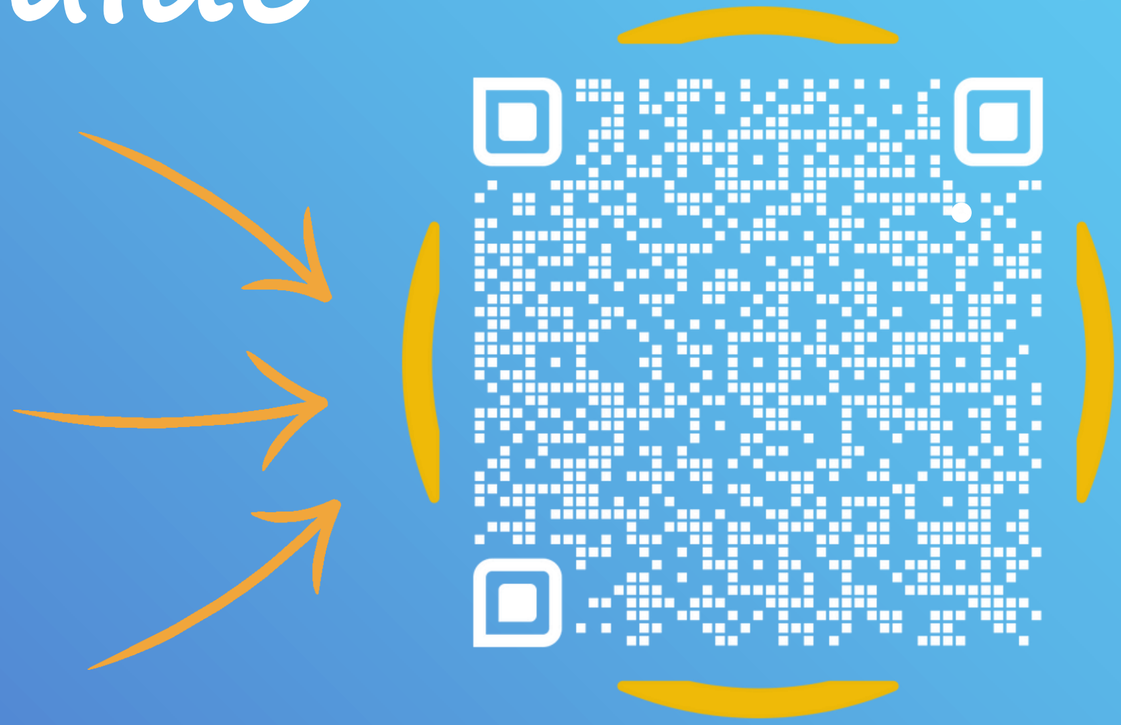

REMEMBER:

- Undergraduate research is a learning experience, and it's okay to make mistakes and ask questions. Embrace the opportunity to grow and contribute to the advancement of knowledge in your field.

- Connecting with your institution's professors, research centers, or programs is important to explore the available research options within your field of interest.

Handout

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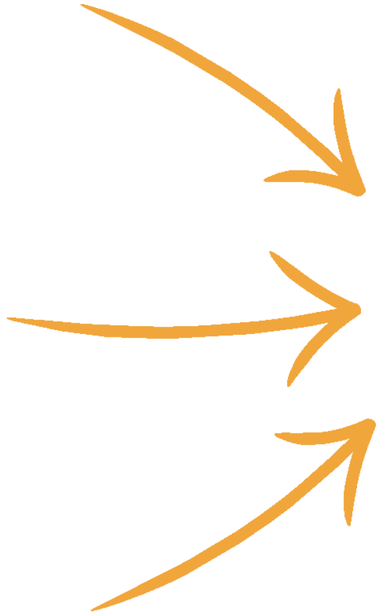
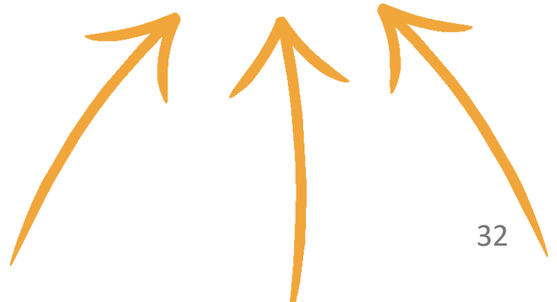


Join the OUR Canvas Page

CSUDH Research Updates

Opportunities

Resources



Thank you!

Questions?

Survey

- Please provide feedback on your workshop experience.
- We appreciate your feedback.