Developing Research Plans

EOP Workshop – May 2015

What is Undergraduate Research?

Undergraduate research is an inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution.

General Advice

• Follow your passions and interests. Do research that will help you develop knowledge and skills that will prepare you and set you up well for whatever you imagine doing next.
• Get ideas and find out about research experiences by asking other students about what they have done.
• Not all research needs funding: there are lots of projects you can do with whatever connections you have and with on-campus sources and materials.
• If you do need funding, find out about the resources available through your college, your department, EOP, or the Undergraduate Research Opportunities website (ugr.ucsc.edu)
• Decide if you want to do research by working with a faculty member on their research projects or if you want to do your own independent research.

Keep a Calendar of Important Dates!!
Research With Faculty

In this type of research opportunity you work closely with a faculty member as a research assistant, helping them complete their research projects. While you may have some influence on the research process and can take on a number of different roles based on your experience and the type of research, the faculty member usually sets and directs the research questions and methods. To do research with faculty, you will want to consider the following advice:

- Many programs or faculty have a GPA requirement so grades can matter.
- Go to office hours regularly and build relationships with faculty.
  - Ask questions about the class or the instructor’s research or career path.

To find out about specific research opportunities:
- Meet with the advisor for your major and with your college advisor.
- Look at the UCSC database of research opportunities: https://ugr.ue.ucsc.edu/database
- Read faculty webpages to see what they research, take classes with those whose research interests you, and/or read something that they have written.
- Join a student organization. Clubs provide a community of like-minded peers, and you can learn about many research opportunities from friends.
- Start researching summer opportunities the previous fall and winter. Many summer programs have application deadlines from November-February.

If you want to reach out to a faculty member about doing research with them, set up an appointment.
Prepare for the appointment by writing some notes about your own interests, previous experiences, and goals, as well as some questions you want to ask the faculty member.

Remember to Come Prepared and Make a Good Impression!
Independent Research

In this type of research opportunity, you conduct your own research, guided entirely by your own research questions and concerns. You might have a faculty member or graduate student who provides you with support and mentoring, but you are the primary researcher. To do independent research you will want to consider the following advice:

• Take research methods courses: learn the research skills you need by taking courses that focus on research methods in your major or in related fields.
• Look at senior theses from your major for inspiration. The undergraduate advisor for your major should have these available.
• To identify possible research questions or projects:
  o Think about what you want to do next in your life and consider a related research project on this interest.
  o Consider the issues and topics that get you excited and make lists of possible research questions related to those topics.
  o Reflect on courses that were meaningful to you and the questions that remain for you from those courses.
  o Think about doing research that would meet the needs of a student group or community organization in which you already participate.
  o Look into an internship or volunteering with an organization that has research needs. The Career Center is a great resource for finding these kinds of opportunities.
• Develop a clear proposal and research plan that describes your primary research question and methodology. Bring drafts of this proposal to faculty or other mentors for feedback.
• Remember you can't study EVERYTHING: make clear decisions about the kind of research you can do.
• If your research involves human subjects, start completing the IRB process as early as possible. IRB now requires student training prior to research. http://officeofresearch.ucsc.edu/orca/irb/index.html
• If you need funding, create a list of deadlines for various grants and applications.
• Make a timeline and plan to help you accomplish your goals. Research projects can be daunting and involve many steps. List all those steps and make mini-deadlines for yourself for each step.

SEE THE NEXT PAGE FOR A SAMPLE RESEARCH PLANNING TIMELINE.

Remember you can do this! Research has moments of highs and lows, but stick with it and the process can be so rewarding!
Sample Research Planning Timeline

Note: This suggested timeline is for an imagined 10-week interview-based study. Timelines can vary for different methodologies.

Before you begin any research: write a proposal and plan, develop your research instruments; secure IRB approval.

Week 1: Identify participants to interview; begin library research for literature review.

Week 2: Read at least 5 related research articles; schedule interviews for following week.

Week 3: Continue reading related research articles and books; conduct 1st set of interviews and begin transcribing those interviews. Schedule additional interviews for following week.

Week 4: Start outlining literature review; continue to conduct and schedule interviews and stay on top of transcribing interviews.

Week 5: Continue writing literature review; schedule final set of interviews; finish transcribing interviews from weeks 3 and 4.

Week 6: Finish transcribing interviews and collecting any other primary data needed for your research project.

Week 7: Begin coding and analyzing interview data; finish up literature review.

Week 8: Finish coding and analyzing interview data; outline write-up (thesis, senior paper, etc.)

Weeks 9 & 10: Write, write, write and revise, revise, revise.

Your goal by week 10 is to have a draft of your final research paper or product. Sometimes it works best to start with your final deadline and work backwards to create your research timeline.

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