RESEARCH OPPORTUNITIES FOR UNDERGRADUATE STUDENTS IN THE MATERIALS DEPARTMENT AT UC SANTA BARBARA

If you are a student from a different College or University than UC Santa Barbara looking for summer research opportunities, please go to the end of the document.

Courses

While the UC Santa Barbara Materials Department is primarily focused on Graduate Education, the faculty teach a number of undergraduate courses and the Department offers certain UC Santa Barbara majors the option of the BS/MS Program. Please look at https://www.materials.ucsb.edu/academics/bsms-5-year-program for detailed information.

Research

As an undergraduate student in a Research University, in addition to consuming knowledge (through classes and labs), you also have opportunities to help create and advance new knowledge (see https://undergrad.research.ucsb.edu/). Researchers in the program, including graduate students, postdoctoral fellows, and faculty strongly encourage undergraduate interns to involve themselves in research. This document provides details on how to get involved in research as an undergraduate.

Finding and contacting a research group

Browse the websites of professors in the department to try and learn about the research being carried out, but also talk to as many people as you can to learn about what goes on. Google Scholar is a helpful resource to find publications that describe the research in different research groups. The most important quality that researchers will seek in a potential intern is interest and enthusiasm, not prior knowledge and training, so feel free to ask questions and keep an open mind.

While emailing professors (or knocking on their doors) sometimes works, reaching out directly to graduate students and postdoctoral fellows (who can be found on the websites of the different Professors) is a very effective strategy. Reaching out graduate student TAs from a course you took and asking for their help in making connections is also a good idea.

A sample email could be as simple as (text in italics to be suitably changed):

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Hi *Prof. X/Dr. Y/Grad Student*:

My name is *Sally Samplestuden*t and I am finishing my *freshman year* in *Chemical Engineering*. I am very interested in acquiring research experience. I found the web description of the research that *you do/your group carries out* on *new materials for turbine applications* exciting.

I would be grateful for the opportunity to talk to you further regarding possibilities for a research internship.

If you are unable to take on an intern or unable to make the time, I would be grateful to be pointed in the right direction.

Sincerely,

Sally

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Ways to carry out undergraduate research.

1. Joining a formal internship program. Resources for these can be found on:
    I. The Materials Research Laboratory: https://www.mrl.ucsb.edu/education/undergraduate-opportunities
    II. Center for Science and Engineering Partnerships (CSEP): https://csep.cnsi.ucsb.edu/programs/undergrad
    III. NSF Q-Amase-I Quantum Foundry: https://quantumfoundry.ucsb.edu/education

2. Taking research for course credit: Please look at the website of your program or please discuss this with your undergraduate advisor.

3. Being directly supported (paid) by the research group you join. Please bring this up in the direct discussions.

For students from other colleges and universities

The Materials Department does not run summer or school-year research opportunities at this time for undergraduate interns from other colleges and universities. However, research groups in the Department host several undergraduate interns drawn in through formal summer programs. Some of these opportunities can be found on the websites listed previously.