UCLA | Samueli School of Engineering | **Undergraduate Research Program**

ENGINEERING 24 - Finding an Undergraduate Research Opportunity Seminar
Course Syllabus

Undergraduate Research Program

Spring Quarter 2020

Lecturer:	William Herrera williamh@seas.ucla.edu	**Lecture: 2 Hours, 2-3:50pm on Thursday** **Course Communication:** Announcements, lecture slides, assignments, and other course materials will be posted on the UCLA CCLE course website. https://ccle.ucla.edu/course/view/20S-ENGR24-1

Zoom Meeting Link: https://ucla.zoom.us/webinar/register/WN_g3qAOP2OTuC7b-g32znbGA

Group Facilitators:

Pardis Habibi	Rossana Rico	Peter Wang
4th Year	4th Year	4th Year
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Office Hours: William Herrera: Thursday 4:30PM-5:30PM (https://ucla.zoom.us/j/354937940)
Rossana Rico: Monday 10-11AM (https://ucla.zoom.us/j/177783249)
Pardis Habibi: Tuesday 10-11AM (https://ucla.zoom.us/j/840575975)

COURSE OVERVIEW:
Finding an Undergraduate Research Opportunity Seminar is designed to engage engineering students, primarily those without prior experience, in the process of soliciting, securing, and beginning research. Students will learn about the various methods as well as resources they can utilize to obtain a lab position. *Finding an Undergraduate Research Opportunity Seminar* will encourage students to explore opportunities and then provide guidance on how to approach those openings. This course is also designed to provide students a smooth transition into their research lab.

COURSE PURPOSE:
The purpose of *Finding an Undergraduate Research Opportunity Seminar* is to encourage undergraduate engineering research participation. Students enrolled in this seminar should be able to obtain and start in a lab by the end of the quarter. Students will not only learn about ways to apply for openings, but also actions needed to begin research.

COURSE FORMAT:
Lectures will be pre-recorded and uploaded to CCLE along with the lecture slides. Class time will be set aside for additional office hours where students will be able to ask questions. Students must check in to office hours to receive points for attendance.

GRADING AND BEHAVIORAL EXPECTATIONS:
Grading for this course will be on a P/NP (Pass/Not Pass) basis and reflect students' completion of reading and reflective assignments, section meetings, and active discussions. Students are expected to be on time, attend each class, and actively participate.

Academic Honor Code: Students are expected to follow the academic honor code established by The College at UCLA and adhere to the True Bruin Ethics and Values. http://www.truebruin.ucla.edu/statement.htm

Americans with Disabilities Act: Students with disabilities who need academic assistance and/or accommodation should be registered appropriately with the UCLA Students with Disabilities Office and bring a letter to the instructor indicating the need for accommodation.

COURSE RESOURCES

- URP Website: https://www.seasoasa.ucla.edu/undergraduate-research-program/
- UCLA CCLE Website: http://www.ccle.ucla.edu/

Additional resources will be posted on the course website

COURSE OBJECTIVES:

1. Students will learn about the commitment of a research lab and how to get course credit for conducting research with a faculty member.

2. Students will learn about sites and resources where they can explore research openings.

3. Students will learn to apply for a lab position through emailing and online applications.

4. Students will learn to evaluate an offer and secure their desired lab.

5. Students will view samples and create their resumes and a cover letters tailored to research opportunities.

6. Students will learn from sample technical presentations and research plans and create their own presentations in order to better communicate their research

7. Students will learn about the three main communication formats of a published research: oral, written, and visual.

8. Students will learn about possible formal research program opportunities and how to apply for them.

COURSE REQUIREMENTS:
Following are the requirements for this course: class participation and attendance, a resume, a cover letter, an elevator pitch, a technical presentation, and a research plan

Class Participation and Attendance: Students are expected to complete all assignments on the date which they are due and come to class prepared to discuss them. To get the most out of this interactive course, it is important that students show up on time. Attendance is essential in order to truly learn and apply professional skills on real situations. It is the student's responsibility to inform the instructor prior to class absence. **Students who miss more than two classes will receive a No Pass grade. Use of laptops and cell phones during class is prohibited unless approved by instructor.**

Resume :
After viewing samples handed out in this course, create your own resume highlighting skills that are relevant to a possible research position. Make sure to make this resume as specific as possible. **The resume is due during the Week 3 class.**

Cover Letter:
One important component to your research application is your cover letter. With the template and examples given in class, create your own cover letter for a lab opening. This letter should include your passion, motivation, and qualifications for this opportunity. **The cover letter is due during the Week 4 class along with the resume**.

Elevator Pitch:
One important component to your research solicitation is your elevator pitch introduction. With the template and examples given in class, you will prepare your introduction and practice with engineering graduate students. This introduction will explain who you are and why you are interested in the research lab. **The elevator pitch is due during the Week 8 class**.

Curriculum Vitae:
One important component to your research application is your CV. With the template and examples given in class, you will prepare and share your CV with your classmates. Your CV will go into greater detail about you and your accomplishments. **The CV is due during the Week 8 class**.

Technical Presentations:
One important part of communicating research is the technical oral presentation. Throughout the course, students will learn to format and present a research powerpoint. Students will then create their own technical presentations as one of the assignments in this class. **The 1st technical presentation is due during the Week 7 class.**

Students will review a journal article assigned in class. With the templates and example presentation given in class, students will present a journal article review TPL in class. At the end of the quarter, students who have secured a research lab position will present an introduction to his/her research project, while those who have not secure a position will present his/her research plan, a detailed outline of steps towards securing a position in the near future. **The 2nd technical presentation is due during Week 10.**

COURSE GRADING:
This course (P/NP) will be graded out of 100 points. A score of 70 points or higher must be attained in order to receive a passing grade for the course. Course attendance is extremely important. Please note that you cannot miss more than 2 lectures in order to receive a passing grade. Point breakdowns are included below:

Resume (15 Points)	**Pass/No Pass Rubric:**
Cover Letter (10 Points)	
Curriculum Vitae (10 Points)	Pass: ≥70
Elevator Pitch (10 Points)	No Pass: <70
1st Technical Presentation (15 Points)	
2nd Technical Presentation or Research Plan (15 Points)	
Attendance (25 Points)	

ACADEMIC INTEGRITY

- UCLA expects and requires all of its students to act with honesty and integrity, and respect the rights of other in carrying out all academic assignments and projects.
- Working in groups is allowed and encouraged. However, submitting the work of other, cheating, and plagiarism are unacceptable. The key to working in an effective group is compiling input from all members and making equal contributions.
- In accordance with UCLA policy, any cases of suspected cheating or academic dishonesty will be reported to the Dean of Students Office and the Department of Student Affairs. Sanctions may include zero credit to an assignment or a no-pass. If warranted, a student may be disqualified, suspended, or expelled from the School of Engineering. It is your responsibility to know and understand the University Academic Integrity Policy and the UCLA Student Code of Conduct (http://www.deanofstudents.ucla.edu/).

ADDITIONAL INFORMATION:

- Counseling and Psychological Services (CAPS) exists to support your mental health needs as you pursue your academic goals. CAPS services are designed to foster the development of healthy well-being necessary for success in a complex environment. A variety of services are available including: crisis counseling by phone 24/7, emergency intervention, individual counseling and psychotherapy, group therapy, psychiatric evaluation and treatment, educational programs and workshops, and campus mental health and well promotion. Visit http://www.counseling.ucla.edu/ for more information or call (310) 825-0768. For emergencies, please contact 911. CAPS also offers services in 6288 Boelter Hall during Weeks 5-10 Wednesday 10-12PM and Thursday 2-4PM.
- Students requesting accommodations for a disability, including additional time or resources for taking exams, must be registered with the UCLA Center for Accessible Education (CAE; http://www.cae.ucla.edu/) and must submit appropriate documentation from the CAE.
- Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the CARE Advocacy Office for Sexual and Gender-Based Violence, 1st Floor Wooden Center West, CAREadvocate@caps.ucla.edu, (310) 206-2645. In addition, Counseling and Psychological Services (CAPS) provides confidential counseling to all students and can be reached 24/7 at (310) 825-0768. You can also report sexual violence and sexual harassment directly to the University's Title IX Coordinator, 2241 Murphy Hall, titleix@conet.ucla.edu, (310) 206-3417. Reports to law enforcement can be made to UCPD at (310) 825-1491.
- Faculty, Lecturer, and Group Facilitators are required under the UC Policy on Sexual Violence and Sexual Harassment to inform the Title IX Coordinator and should they become aware that you or any other student has experienced sexual violence or sexual harassment.
- Wellness support is offered by Resilience in the Student Experience (RISE), a physical extension of CAPS. Find out more at https://risecenter.ucla.edu/.

COURSE SCHEDULE:

Week 1: Research Exploration (April 2) **Objectives:** ● Introduction to finding research ● Utilizing UCLA resources **Class Activities:** ● Ice Breaker ● Content: Research Lab Structures and Hierarchy ● Content: Tutorial on how to utilize UCLA Research Portal and other online resources	**Assignment:** ● Focus 2 Assessments ● Ikigai Vocational Personality Test ● Myers-Briggs Assessment ● Access and familiarize with UCLA Research Portal ● Visit departmental websites, individual faculty lab websites, and/or Undergraduate Research Portal to identify 3-4 labs you would like to solicit

● Content: Graduate student presentations on research	● ENGR 24 Pre-Course Survey DUE: Week 2
Week 2: Creating a Competitive Resume (April 9) **Objectives:** ● Properly format a resume with necessary components **Class Activities:** ● Content: Overview of components of a professional resume	**Assignment:** ● Create 3 drafts of a research resume for the 3 programs/labs you want to apply to DUE: Resumes - Week 3
Week 3: Cover Letter (April 16) **Objectives:** ● Write a coherent cover letter **Class Activities:** ● Content: Overview of the components of a professional cover letter	**Assignment:** ● Create 3 drafts of a cover letter for the 3 programs you want to apply to ● DUE: Week 4
Week 4: Soliciting a Lab CV (April 23) **Objectives:** ● How to solicit potential research faculty members ● Email desired faculty members/graduate students for research opportunities **Class Activities:** ● Content: Solicitation Emails ● Review sample solicitation emails	**Assignment:** ● Send out 3-4 lab solicitation emails or apply through Undergraduate Research Portal DUE: Week 6
Week 5: Securing a Lab (April 30) **Objectives:** ● How to find journal articles? ● Deciphering research journal articles ● Learn different methods to publish research: oral presentation, written paper, and visual poster **Class Activities:** ● Content: How to find journal articles using Google Scholar and PubMed? ● Content: Tutorial on how to decipher journal articles	**Assignment:** ● Find and read a review journal article from one of the 3-4 labs you have solicited ● Write down 5-10 questions about the journal article and the lab's research ● Attend faculty office hours to solicit a lab position ● Read and critique the selected paper ● Prepare a 10-12 minute journal review Technical Presentation DUE: Week 6
Week 6: Joining a Lab (May 7) **Objectives:** ● Introduction to Technical Presentations **Class Activities:** ● Content: Present a sample Technical Presentation	**Assignment:** ● Re-read research paper you found ● Read and critique the selected paper ● Prepare a 10-12 minute journal review Technical Presentation

	DUE: Week 7
Week 7: Curriculum Vitae and Elevator Pitch (May 14) **Objectives:** ● Properly format a CV with necessary components ● Present an effective elevator pitch **Class Activities:** ● Content: CV Components ● Content: Introduction to Elevator Pitch	**Assignment:** ● Create a CV ● Prepare your elevator pitch
Week 8: Paid Research Programs & Communicating Research (May 21) **Objectives:** ● How to find and apply to formal/paid research programs ● How to ask professors for letters of recommendation ● How to publish research? Methods of published research: oral presentation, written paper, and visual poster **Class Activities:** ● Content: Overview of formal/paid academic year and summer research programs ● Content: Browse through sample of REU programs, Samueli URP, and UCLA SURP. ● Content: Components of a published research: oral, written, and visual ● Content: Overview of on campus research journals ● Content: Overview of research conferences	**Assignment:** ● Find 3-4 paid research programs that you're interested in applying for ● Find a list of research conferences in your major field or research interest ● Find funding application sites for research conferences DUE: Week 9
Week 9: Intro to Research Plan (May 28) **Objectives:** ● Introduction to Research Plan presentation **Class Activities:** ● Present sample Research Plan presentation	**Assignment:** ● Prepare a 10-12 minute Research Plan Presentation DUE: Week 10
Week 10: Take-Aways and Next-Steps (June 4) **Objectives:** ● Recognizing steps that should be taken to achieve career goals **Class Activities:** ● Review of grading scheme and final scores ● Feedback forms and discussion	**Assignment:** ● N/A
Finals Week: Final scores posted! (June 11)	**Assignment:** ● Have a great Summer Break!