



# ENGINEERING 25 – Communicating Academic Research Seminar Course Syllabus

## Introduction to Publishing Student Research

Fall Quarter 2019

**Instructor:** Prof. Richard Wesel  
[wesel@ee.ucla.edu](mailto:wesel@ee.ucla.edu)  
Boelter Hall 6730A

**Lecture: 2 Hours**

**Location: TBD**

**Course Communication:**

Announcements, lecture slides, assignments, and other course materials will be posted on the UCLA CCLE course website.

**Lecturer:** William Herrera  
[williamh@seas.ucla.edu](mailto:williamh@seas.ucla.edu)  
Boelter Hall 6288

**Group Facilitators:** Grad Student #1  
1:25 Ratio Year, Major  
Email

Grad Student #2  
Year, Major  
Email

Grad Student #3  
Year, Major  
Email

**Office Hours:** William Herrera: 2 hours/week  
Group Facilitators: 2 hours/week

### COURSE OVERVIEW:

*Communicating Undergraduate Research Seminar* is designed to engage engineering students in the process of communicating formal research. Students will learn about the various components required in publishing their research. *Communicating Undergraduate Research Seminar* will provide templates and examples as guides for the students to understand technical presentations and writing. This course is designed to help engineering students develop the skills and insights to successfully publish their first research project.

### COURSE PURPOSE:

The purpose of *Communicating Undergraduate Research Seminar* is to provide engineering students the necessary skills and knowledge to communicate and publish their research findings. In addition, *Communicating Undergraduate Research Seminar* will help engineering students develop professionally and prepare them for successful research.

### COURSE FORMAT:

Class time will include lectures, workshops, and labs. Students will meet for weekly meetings in addition to course materials, assessments, and assignments. Due to the participation based nature of this course, class attendance is

extremely important. Missing a class will likely mean the student is missing important information provided by a guest speaker or the instructor. Students are expected to be actively involved in class exercises and discussions.

### 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/>
- Kinkead, Joyce. *Research Writing: An Introduction to Research Methods*. 1st Ed., Utah State University Press, 2016.
- Newsome, Bruce O. *An Introduction to Research, Analysis, and Writing*. SAGE Publication, 2016.

Additional resources will be posted on the course website

### COURSE OBJECTIVES:

1. Students will learn about the three main forms of communicating research: oral, written, and visual.
2. Students will practice preparing for each communication form through Technical Presentation Labs, Poster Workshops, and draft reviews and editing.
3. Students will complete a formal technical presentation and research poster to publish in Samueli URP Journal.
4. Students co-enrolled in both Engineering 99 & 199 will complete a formal research technical report.
5. Students will present drafts with their peers and instructor to receive feedback on their research technical report, presentation, and poster.
6. Students will publish their peer review scientific paper on the Undergraduate Science Research Journal. In addition, students will explore other on-campus and off-campus opportunities for publication, and where they can find these programs.
7. Students will learn about the significance of effective technical writing and how to achieve it.

### COURSE REQUIREMENTS:

There following are the requirements for this course: class participation and attendance, a scientific report, a technical presentation, and a research poster.

**Class Participation and Attendance:** Students are expected to complete all assignments on the date which they are assigned 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.**

**Research Technical Report:**

Complete your technical report following the format demonstrated in class. Identify your research thesis early in the quarter and take advantage of the peer review session during Week 8 of class. By the end of this course, you will also publish your abstract to the Samueli Engineering URP Journal.

Engineering 199 is a credit course for students who are conducting faculty research during the school year (for individual major policies, visit: <https://www.seasoasa.ucla.edu/194-research-group-and-199-research-seminar-course-credit-policy/>). Students enrolled in this course may submit this paper to their professors as their final report. **Due Week 9.**

**Technical Presentation:**

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 first of these presentations is due during the Week 5 class.**

**Research Poster:**

Throughout the quarter, there will be multiple poster workshops for students to work on their research posters with guidance. Students will gain knowledge on how to format their visual presentations during these sessions. **This assignment is due by Week 7.**

**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 must attend 8/10 lectures in order to receive a passing grade. Point breakdowns are included below:

<b>Scientific Paper (15 Points)</b>	<b>Pass/No Pass Rubric:</b>
<b>Research Poster (30 Points)</b>	Pass: $\geq 70$
<b>Technical Presentation (20 Points)</b>	No Pass: $< 70$
<b>Final Presentation (15 Points)</b>	
<b>Attendance (20 Points)</b>	

**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.
- 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](mailto: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](mailto: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.

## COURSE SCHEDULE:

<p><b>Week 1: Art of Communication (September 30)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"><li>● Introduction to ENG 21 course</li><li>● Syllabus review</li><li>● Introduction to Technical Presentation Lab</li></ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"><li>● Ice Breaker</li><li>● Lecture: Forms of Research - Oral, Written, and Visual</li><li>● Assign journal article for Technical Presentation Lab</li><li>● Assign students into two cohorts</li><li>● Sample Technical Presentation Lab</li></ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"><li>● Prepare for Technical Presentation Lab #1 (Cohort 1): Due Week 2</li></ul>
<p><b>Week 2: Technical Presentation Lab #1 (October 7)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"><li>● Cohort 1 Technical Presentation Labs</li></ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"><li>● Cohort 1: present a review of an assigned journal article</li></ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"><li>● Prepare for Technical Presentation Lab #2 (Cohort 2): Due Week 4</li></ul>
<p><b>Week 3: Poster Workshop #1 (October 14)</b></p> <p><b>Objectives:</b></p>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"><li>● Prepare abstract, introduction, and materials &amp; methods sections of your poster: Due Week 5</li></ul>

<ul style="list-style-type: none"> <li>● Introduction to creating a research poster</li> <li>● Introduction to technical writing for 199 report</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● Review components of a research poster</li> <li>● Go over how to write abstract, introduction, and materials &amp; methods</li> <li>● Peer review past research posters from URP</li> <li>● Preview of technical writing for 199 report</li> </ul>	
<p><b>Week 4: Technical Presentation Lab #2 (October 21)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Cohort 2 Technical Presentation Labs</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● Cohort 2: present a review of an assigned journal article</li> </ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"> <li>● Prepare abstract, introduction, and materials &amp; methods sections of your poster: Due Week 5</li> </ul>
<p><b>Week 5: Poster Workshop #2 (October 28)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Introduction to creating a research poster</li> <li>● Introduction to technical writing for 199 report</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● Go over how to write results, analysis, conclusion, and formatting</li> <li>● Peer review past research posters from URP</li> <li>● Overview of required components for 199 report</li> </ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"> <li>● Prepare results, analysis, conclusion, and formatting of your poster: Due Week 7</li> <li>● Prepare for Technical Presentation Lab #3 (Cohort 1): Due Week 6</li> <li>● Work your research poster and 199 report for peer review/editing: Due Week 7</li> </ul>
<p><b>Week 6: Technical Presentation Lab #3 (November 4)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Cohort 1 Technical Presentation Labs</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● <i>Cohort 1: present a review of your research</i></li> </ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"> <li>● Prepare for Technical Presentation Lab #4 (Cohort 2): Due Week 8</li> <li>● Complete drafts of your research poster and 199 report for peer review/editing: Due Week 7</li> </ul>
<p><b>Week 7: Poster Workshop #3 (November 11)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Peer review poster and 199 report drafts</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● Peer review research poster drafts</li> <li>● Peer review 199 report drafts</li> </ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"> <li>● Prepare for Technical Presentation Lab #4 (Cohort 2): Due Week 8</li> <li>● Prepare for Final Technical Presentation Lab: Due Week 10</li> </ul>
<p><b>Week 8: Technical Presentation Lab #4 (November 18)</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Cohort 2 Technical Presentation Labs</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● Cohort 2: present a review of your research</li> </ul>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"> <li>● Prepare for final presentation and final paper</li> </ul>
<p><b>Week 9: Final Poster Workshop (November 25)</b></p>	<p><b>Assignment:</b></p>

<p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Finalize poster and 199 report</li> <li>● Schedule time for final Technical Presentation Lab</li> </ul> <p><b>Class Activities:</b></p> <ul style="list-style-type: none"> <li>● Peer review research poster</li> <li>● Peer review 199 report</li> </ul>	<ul style="list-style-type: none"> <li>● Turn in your final poster and paper by the end of finals week</li> </ul>
<p><b>Week 10: Final Technical Presentation Lab (December 2)</b></p> <p><b>No Lecture</b> Present your final Technical Presentation at your scheduled time</p>	<p><b>Assignment:</b></p> <ul style="list-style-type: none"> <li>● Turn in your final poster and paper by the end of finals week</li> </ul>