

## ENGR 190W COMMUNICATIONS IN THE PROFESSIONAL WORLD

(Required for ChE, CpE, EE, and MSE)

**Catalog Data:** **ENGR 190W: Communications in the Professional World (Credit Units: 4) F, W, S, Summer.** Workshop in technical and scientific writing. Oral presentation with video monitoring. Communication with various publics. Real-world professionalism. Students must be of junior or senior standing in Engineering and have completed the lower-division writing requirement. (Design units: 0)

**Textbooks:** *A Guide to Writing as an Engineer* by David Beer, David McMurrey, Wiley & Sons, April 2004 (Second Edition)  
*Writing from A to Z* by Ebest, et al., Mayfield Publishing, 2002 (Fourth Edition)

### References:

**Coordinator:** John C. LaRue

**Relationship to Program Outcomes:** The Program relates to Program Outcomes

ChE: d, f and g, as stated at:

<http://undergraduate.eng.uci.edu/degreeprograms/chemical/mission>

CpE: d, f and g, as stated at:

<http://undergraduate.eng.uci.edu/degreeprograms/computer/mission>

EE: d, f and g, as stated at:

<http://undergraduate.eng.uci.edu/degreeprograms/electrical/mission>

MSE: d, f and g, as stated at:

<http://undergraduate.eng.uci.edu/degreeprograms/materials/mission>

### Performance Criteria / Course Outcomes:

Students will:

Produce technical papers totaling 4,000 words or more of finished work. [UD writing requirement]

Function effectively on multidisciplinary teams to accomplish a common goal. [EAC Criterion 3. PO (d) / CAC Criterion 3. PO (d)]

Demonstrate professional, ethical, legal, security, and social issues and responsibilities. [EAC Criterion 3. PO (f) / CAC Criterion 3. PO (e)]

Communicate effectively with a range of audiences. [EAC Criterion 3. PO (g) / CAC Criterion 3. PO (f)]

Recognize ethical engineering practices represented in written and oral communications in the workplace. [EAC Criterion 3. PO (f)]

Describe the basic process model and identify the key elements that form the basis for effective technical writing and sound scientific research. [EAC Criterion 5. Curriculum (c)]

Demonstrate the ability to make appropriate decisions regarding the form, format, and style of a proposed technical document based on the target audience. [EAC Criterion 5. Curriculum (c)]

Use effective methodologies for reviewing, editing, and revising a technical document. [EAC Criterion 5. Curriculum (c)]

Create presentations of technical data using appropriate use of media. [EAC Criterion 3. PO (g)]

**Prerequisites By Topic:** Lower-division writing

**Lecture Topics:** Technical writing process model.

Form and organization of procedures and results used in scientific writing.

Method of distribution, and useful life of the document.  
 Procedures used in scientific writing for the laboratory.  
 Research strategies and methodologies for evaluating the credibility and relevance of source material during the research process.  
 Legal and ethical responsibilities in engineering.  
 Recognize professional, ethical, legal, security, and social issues and responsibilities in engineering.  
 Ethical reporting of research findings using the scientific method.  
 Using principled reasoning to evaluate/solve ethical, unethical, and non-ethical situations in the workplace.  
 NSPE Code of Ethics  
 Research strategies.  
 Using style guides.  
 Documenting sources.  
 Orientation and demonstrations on research techniques using online electronic resources and databases.  
 Purpose of technical document.  
 Types of readers of technical document.  
 Scope and planning the proper tone for a technical document.  
 Planning document form, format and style.  
 Use of media (e.g. illustration, table, diagram, or picture)  
 Common punctuation rules.  
 Writing concise abstract for research papers.  
 Designing a technical presentation.  
 Editing and re-writing skills.  
 Presentation skills

**Class Schedule:** Meets for 4 hours of lecture and 1 hour of discussion each week for 10 weeks.

**Computer Usage:** Microsoft Office

**Laboratory Projects:** None

**Professional Component:** Contributes to the Engineering Professional Topics.

**Design Content Description:** N/A

**Grading Criteria:**

Homework:	10%
Periodic quizzes:	10%
Group research paper #1:	20%
Midterm exam:	20%
Group research paper #2:	30%
<u>Final exam (comprehensive):</u>	<u>10%</u>
Total	100%

**Estimated ABET Category Content:**

Mathematics and Basic Science: \_\_\_ credit units or \_\_\_%

Engineering Science: \_\_\_ credit units or \_\_\_%

Engineering Design: \_\_\_ credit units or \_\_\_%

Engineering Professional Topics: 4 credit units or 100 %

**Prepared by:** John C. LaRue **Date:** July 2008

**CEP Approved:** Spring 1989