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

Course Outcomes / Performance Criteria: Students will:

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

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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)]

Plan, organize, prepare, and deliver effective technical reports in written, oral, and other formats appropriate to the discipline and goals of the program. [EAC Criterion 5. Curriculum (c), ETAC Criterion 5. Curr/Comm (a)]

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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)]

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

Prerequisites By Topic: Lower-division writing

Lecture Topics:

Overview of program and course outcomes; Importance of effective communication skills. **(2 hours)**
Communication modalities; Communication/technical writing process models. **(2 hours)**
Elements of form, format and style used for technical documentation. **(2 hours)**
Analyzing a target audience to determine the scope and purpose of a technical document. **(2 hours)**
Research strategies using the UCI Library's electronic resources/databases. **(2 hours)**
Recognizing professional, ethical, legal, security, and social issues and responsibilities in engineering. **(3 hours)**
Adopting a Code of Ethics as a foundation for sound engineering practices (e.g., NSPE, IEEE, ASME, etc.). **(2 hours)**
Overview of copyright, trademark and patent laws. **(2 hours)**
Conventions used in scientific writing for laboratory research and reporting. **(2 hours)**
Conducting responsible research – documenting your sources. **(2 hours)**
Writing concise abstracts for scientific papers. **(2 hours)**
Evaluating printed/online sources for relevance and credibility as part of the research process. **(2 hours)**
Constructing logical hierarchies of information for technical documentation. **(2 hours)**
Stylistic considerations in designing/writing technical documentation. **(2 hours)**
Methodologies for comprehensive review/revision of a technical document. **(2 hours)**
Strategies for developing/refining clarity and precision in technical writing. **(3 hours)**
Use of media in technical communication (e.g., figures, tables, etc.). **(2 hours)**
Planning, preparing and presenting effective technical presentations. **(4 hours)**

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

Design Content Description: N/A

Grading Criteria:

Homework assignments:	10%
Periodic quizzes:	10%
Collaborative research paper 1:	20%
Individual research paper:	20%
Collaborative research paper 2:	30%
Final exam (comprehensive):	10%
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__%

Contribution of course to meeting requirements of ABET Criterion: EAC Criterion 5. Curriculum (c)

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

CEP Approved: Spring 1989