University of Wisconsin - Madison College of Engineering [EGR] Last Offered: 2014 Spring [1144] Direct Link to this Syllabus:

http://aefis.engr.wisc.edu/index.cfm/page/CourseAdmin.ViewABET?coursecatalogid=86&pdf=True

- 1. E P D 397, Technical Communication
- 2. Credits: 3.00 Contact Hours: 37.5
- 3. Textbook and Materials: Radioactive; Lauren Redniss; 1st edition; No Year Given
 - a. Other Supplemental Materials:

Writing models and course resources on course websites

4. Specific Course Information:

a. Brief description of the content of the course (Course Catalog Description):

Communication for engineering, science, and technology; theory and practice in planning, preparing, and critiquing reports, proposals, instructions, and business correspondence; research strategies, collaborative work; oral presentations.

b. Pre-requisites or Co-requisites: Junior standing

c.

Required

5. Specific Goals for the Course:

- a. Course Outcomes:
 - Write effective technical and research reports, proposals, procedures, memoranda, process explanations, and/or professional correspondence aimed at an interdisciplinary audience.
 - 2. Prepare and deliver professional presentations and briefings, in a style suitable for both future engineering design courses and a multidisciplinary workplace using visual aids and computer technology.
 - 3. Develop life-long learning skills through identifying, retrieving, and critically analyzing technical information gathered through library research, online databases, interviews with experts, primary research, and other sources.
 - 4. Review and revise written and oral communications; improve structural, stylistic, grammatical, and mechanical writing skills.
 - 5. Develop, integrate, and edit tables, charts, and diagrams to better illustrate technical concepts.
 - 6. Work productively in a team, through sharing ideas, collaborating on decisions, planning projects, and reviewing each other's work as a team.
 - 7. Practice making thoughtful, well-informed career choices through crafting emails, cover letters, resumes, letters of transmittal, self evaluations, or other daily business communications.
 - 8. Research, listen, and intelligently participate in discussions of contemporary engineering issues; understand and identify the economic, environmental, political, and societal impacts of engineering decisions.
 - 9. Understand and identify ethical and professional responsibilities; show knowledge of the

role of moral theories and codes of ethics in decision making.

b. ABET Student Learning Outcomes:

- (d) Ability to function on multidisciplinary teams.
- (f) Understanding of professional and ethical responsibility.
- (g) Ability to communicate effectively.
- (h) The broad education necessary to understand the impact of engineering solutions in a global and societal context.
- (i) Recognition of the need for and an ability to engage in life-long learning.
- (j) Knowledge of contemporary issues.

6. Brief List of Topics to be Covered:

- Developing communication processes: understanding the situation, purpose, and audience
- Understanding communication attributes: content, structure, format, language, illustrations, appropriateness
- Listening and reading critically; thinking logically; evaluating information sources; using evidence effectively
- Designing and producing effective persuasive, informative, or analytic documents and presentations
- Reviewing, evaluating, and revising technical documents and presentations
- Writing email, letters, and memos; formal technical proposals, technical and research reports; procedures and instuctions
- Giving technical presentations using visual aids: illustrations, graphs, tables, charts, diagrams
- Writing and presenting for a variety of audiences, including experts, managers, technicians, and the general public
- Working and writing as a team
- Finding library and internet resources; creative research strategies
- Reviewing grammar, syntax, and editing
- Understanding intellectual property: patents, trademarks, copyright, and plagiarism
- Understanding workplace communication needs: Resumes, job market research, employment correspondence, interviewing, organizational culture, professional ethics, inter-office survival skills, globalization, and international communications