

## Course Syllabus Guidelines

**Course syllabuses submitted for Undergraduate Curriculum and Academic Policy review and inclusion in the WSU Course Inventory should include the following elements.**

### I. College/School

Department: College of Engineering and Computer Science, Office of the Dean

### II. Course Information

Course Title: Technical Communication for Engineers and Scientists

Course Abbreviation and Number: EGR3350

Course Cross Listing(s) Abbreviation and Number:

Check ("x") all applicable:

General Education Course   X   Writing Intensive Course      Service Learning Course     

Laboratory Course      Ohio TAG (Transfer Assurance Guide) Course     

Ohio Transfer Module Course      Others (specify)     

### III. Course Registration

Prerequisites: ENG 1100

Corequisites:

Restrictions: including, e.g., junior standing, majors only, etc.

Other: including, e.g., "Or by permission of instructor"

### IV. Student Learning Outcomes

<p><b>1. Communication</b></p> <p><i>The foundational skills students need in academic discourse, research, and documentation in an electronic environment</i></p>	<p>Effective communication is the primary focus of this course. The goal is for students not only to understand the technology about which they are writing, but also to understand the rhetorical strategies a particular document requires, including types of information, method of presentation, the use of language, analysis of audience, requirements definition, the use of visuals (graphs, equations, diagrams, etc.), and effective presentation of this material in both document and briefing forms.</p> <ul style="list-style-type: none"><li>a. <u>Adapt rhetorical processes and strategies for audience, purpose, and type of task.</u> The primary focus of this course is on rhetorical processes and strategies based on audience, purpose and type of task. The basic rhetorical approach is Aristotelian in nature, focusing on invention (creation of ideas), disposition (proper arrangement of materials), elocution (proper selection and use of language), and declamation (type and method of presenting information). Additionally, the course will focus on logical modes of proof, as well as source credibility (especially for proposals).</li><li>b. <u>Organize and produce texts that meet the demands of specific genres, purposes, audiences, and stances.</u> This objective is covered under rhetorical strategies involving 1) the disposition of ideas in a particular document, and 2) selecting language, level of expertise, and clarity of expression for a particular audience specified for each assignment.</li><li>c. <u>Employ appropriate mechanics, usage, grammar, and spelling conventions.</u> This course enforces traditional English grammar. For example, the approach is prescriptive and includes an emphasis on the traditional parts of speech, moods (including the indicative, interrogative, imperative, and subjunctive), and idioms of the English language (especially phrasal verbs). One goal of doing this is to give English as a Second Language (ESL) students, a parallel grammatical structure to which some may be able to relate their first language. The course will also enforce all traditional rules of punctuation.</li><li>d. <u>Find, analyze, evaluate, summarize, and synthesize appropriate</u></li></ul>
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	<p><u>source material from both print and electronic environments.</u> This course requires several shorter papers and two major reports, all of which require proper research and documentation of technical ideas from both print and electronic media.</p> <p>e. <u>Present focused, logical arguments that support a thesis.</u> Proper adaptation of rhetorical processes (see “a” above) presupposes the use of logical proofs, especially in science and technology where technology and empirical methodology is an absolute requirement. Additionally, successful production of the technical proposal assignment is also reliant on both emotional and ethical proofs as well.</p> <p>f. <u>Use reliable and varied evidence to support claims, incorporate ideas from sources appropriately, and acknowledge and document the work of others appropriate.</u> The use of reliable and varied evidence is covered by the application of logical rhetorical proofs in all the required papers. Additionally, this course is not only sensitive to the academic requirements of sourcing the ideas of others (except for common knowledge of the field), but also, because the course is geared to real-world technical writing, it rigidly requires all constituents in the application of Fair Use under Copyright.</p> <p>g. <u>Use electronic environments to draft, revise, edit, and share or publish texts.</u> All assignments in this course will be prepared and transmitted using electronic resources, except where traditional methods of the field and the nature of a particular assignment may require the use of more traditional resources.</p>
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What students are expected to know or be able to do or demonstrate upon completing the course. For example, students will be able to explain a concept, demonstrate a procedure, evaluate alternatives, or recognize a bias. Students will understand the basic documents in technical writing, will be able to develop rhetorical strategies for the most common documents, and will be able to write said documents.

V. Suggested Course Materials (required and recommended)

Leo Finkelstein, Jr., *Pocket Book of Technical Writing for Engineers and Scientists*, 3<sup>rd</sup> Ed., Boston: McGraw Hill, 2008 [REQUIRED].

VI. Suggested Method of Instruction

Lecture, In-Class Exercises, Distance Learning

VII. Suggested Evaluation and Policy

In-Class Writing, Out-of-Class Writing, Individual Projects, Attendance Required. (percentage distribution)  
 Mechanism Description: 10%  
 Process Description: 10%  
 Informal Proposal: 15%  
 Feasibility Report: 20%  
 Research Report: 30%  
 Research Briefing: 15%

VIII. Suggested Grading Policy

Final course letter grade earned in relation to evaluation and policy.  
 Course grade will relate closely to final Writing Intensive (WI) grade earned.

IX. Suggested Assignments and Course Outline

Organized by week (14 week academic calendar and final exam) or other defined schedules.

Topic and/or typical assignments (textbook assignments, journal articles, internet resources, etc.)

Week 1: Definition and description of technical writing, ethics, multicultural concerns in technical writing, and technical definition.

Weeks 2-3: Description of a mechanism and description of a mechanism in operation or a conceptual process. Discussion of instruction sets. ASSIGNMENTS (2-4 page paper each): (a) Description of a mechanism related in some way to the student's major field of study; and (b) Description of a mechanism in operation or a conceptual process related in some way to the student's major field of study.

Week 4: Formal report assignment overview. Discussion of formal and informal proposals. ASSIGNMENT (4 page informal proposal).

Week 5: Team writing and team-writing exercise.

Week 6: Feasibility and recommendation reports. Problem definition, along with solution identification, criteria development, statistical controls, data collection, and assessment/recommendation. ASSIGNMENT (4-6 page paper): A recommendation report with two or more candidate solutions and at least four evaluative criteria.

Week 7: Laboratory and project reports. Discuss requirements of both project and teaching laboratory reports.

Week 8: Research reports. Discuss both state-of-the-art and historical research reports. ASSIGNMENT: (10 page paper): a formal report that provides either a state-of-the-art or historical research report on technology or procedures related to each student's major field of study, or related field.

Week 9: Documentation, both print and electronic. Technical briefings and presentations. ASSIGNMENT: (10-15 minute briefing on a topic related to the formal report topic).

Week 10: Visuals: design considerations, use of, and production methods.

Week 11: Resumes, cover letters, and interviews for positions related to the individual student's major field of study.

Weeks 12-14: In class presentations based on the formal report topic or the proposal for the formal report.

XI. Other information

None.