



COURSE NUMBER: VE300		COURSE TITLE: Technical Communication	
CREDIT: 1		PREREQUISITES: VG100	
TEXTBOOKS/REQUIRED MATERIAL: Various		PREPARED BY: Nathaniel Murray, Michele Campbell LAST UPDATED: July 24, 2020 DATE OF DISCIPLINE GROUP APPROVAL: DATE OF UC APPROVAL:	
CATALOG DESCRIPTION (No more than 100 words): This course provides a practical introduction to technical reporting and engineering project design. Students will learn how to create a variety of technical charts and visuals, and to incorporate them into a technical report. Students will also learn to deliver key information through e-mails and short presentations. The course also covers the structures and linguistic features of technical language.		COURSE TOPICS: <ul style="list-style-type: none"> • Designing an engineering project through problem-need-solution analysis • Structures and linguistic features of technical language • Paraphrasing, direct quotation, and citation formatting • Creating and formatting technical charts and visuals • Reporting of charts, diagrams, and equations • Resumes and statements of purpose • Professional correspondence • Technical presentations 	
COURSE STRUCTURE and CONTACT HOUR: 16 contact hours, divided into two-hour lectures over eight weeks			
<p>COURSE OUTCOMES [Student Outcomes* in brackets]</p> <p><i>for each course outcome, links to the Student Outcomes are identified in brackets.</i></p>	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Define an engineering problem through benchmarking, and articulate needs and solutions [1, 2, 7] 2. Paraphrase and directly quote references from academic journals and trade magazines, with appropriate citation formatting [4] 3. Create a variety of technical charts and diagrams, based on the type of data being reported [2, 4, 6] 4. Integrate charts, diagrams, and equations into a report, with appropriate signaling words to highlight key points in the visuals [3, 6] 5. Craft a resume for employment or graduate school, with objective descriptions of academic and professional achievements [4] 6. Craft a cover letter for employment or statement of purpose for graduate school [4] 7. Write a professional e-mail, with tone and structure that is appropriate for purpose and audience [3] 8. Deliver a short technical presentation, with appropriate structure, intonation, and body language [3] 		
	<p>COURSE OBJECTIVES [Course Outcomes in brackets]</p> <p><i>for each course objective, links to the course outcomes are identified in brackets.</i></p>	<p>Students will be required to</p> <ul style="list-style-type: none"> • Design an engineering project through problem-need-solution analysis based on measurable benchmarks/criteria [1] • Paraphrase and directly quote material from publications in their fields, and analyze the significance of the quoted material [2] • Design several technical diagrams which highlight key trends and variables, with clean colors and typographical appearance [3] • Report on those diagrams, describing their major trends and analyzing the implications of those trends [4] • Develop a resume with informative content, typographical neatness, and no grammatical mistakes [5] • Write a cover letter or statement of purpose that is targeted to a specific school or institution [6] • Write a professional e-mail in response to a case study scenario, complete with appropriate subject line and signature line [7] • Give a presentation on a specific topic related to their discipline interests [8] 	
<p>ASSESSMENT TOOLS [Course Outcomes in brackets]</p> <p><i>for each assessment tool, links to the course outcomes are identified</i></p>		Project design assignments	[1, 2]
	Chart and diagram assignments	[3, 4]	
Job search-related assignments	[5, 6]		
Workplace-related assignments	[7, 8]		

ABET Student Outcomes* — Apply to Engineering, Math, and Science Courses Only

- 1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- 2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- 3) an ability to communicate effectively with a range of audiences
- 4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- 5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- 6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- 7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies