View Outline

View: Compressed | Expanded   **Writing for Science and Technology**   Print friendly

1. **Course Alpha. See HELP for information.**

   ENG

2. **Course Number. See HELP for information.**

   225

3. **Course Title/Catalog Title. See HELP for information.**

   Writing for Science and Technology

4. **Number of Credits. See HELP for information.**

   3

5. **Contact Hours/Type. See HELP for information.**

   - Hour lecture (3)

6. **Course Description. See HELP for information.**

   Develops and applies skills in scientific writing to produce reports on experimentation and research. Analyzes various forms of writing required in scientific and technical careers.

7. **Pre-Requisites. Please click on HELP icon for style sheet.**

   Prereq: ENG 100 with grade C or better, or consent.

8. **Co-requisites**

   None

9. **Recommended Preparation.**

   Successful completion of a science laboratory course.

10. **Is this a cross-listed course? See help for information.**

    NO

11. **Reason for Proposal. Why is this course being proposed or modified? See help for information, as this question requires specific information as part of the explanation.**

    Hour lab
    University of Hawai'i at Hilo

    ENG 225 Writng for Sci & Technology (3) Working from logical and rhetorical principles, this course prepares students to write about science and technology in their academic disciplines and careers. Assignments include synthesis, process analysis, and argumentation. Intended for students majoring in the applied and natural sciences. Includes a formal research project and report. Pre: C or better in ENG 100, ENG 100T, ESL 100 or ESL 100T.

    This course is being created at UHMC as a collaborative effort with UH-Hilo in order to provide students in the science fields a stronger writing foundation for success as they pursue their respective degrees. With an increasing number of upper division science courses at UHMC, there is a growing need for students to become more familiar with scientific and technical writing.

12. Effective Semester and Year. For new or modified courses, the effective year is one year from the semester proposed. For example, if proposed in Spring 2012, the effective semester is Spring 2013. See help for more information.

Fall 2012

13. Grading Method. What grading methods may be used for this course? See help for information.

- Standard (Letter,Cr/NCr,Audit) (0)

14. Is this course repeatable for credit? How often can this course be counted toward a degree or certificate? See help for information.

NO

15. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "COURSE LEARNING OUTCOMES" and enter in that screen. Course Student Learning Outcomes (Course SLOs). These need to be added before the connections are made in question 20. See help for information.

Course SLO/Competency	a. evaluate scientific and technical documents for various purposes and audiences and as relevant sources;	b. write, revise, and edit scientific and technical reports that are clear, concise, and grammatically correct;	c. incorporate synthesis, process analysis, and argumentation into one's own writing;	d. plan, organize, and develop scientific and technical reports using effective rhetorical and logical principles;	e. demonstrate conventional styles of organization for scientific reports of experiments and investigations including the abstract, introduction, methods, results, discussion, conclusion, summary, and references;	f. apply basic format and design standards used by the scientific and technical writing community;	g. use word processing and graphics software to prepare reports;	h. conduct library and electronic research and present findings;
I. Analyze scientific and technical readings, reports, and documents.	☑							
II. Write scientific papers, technical reports, and other forms of writing required in scientific and technical careers.	☑	☑	☑	☑	☑	☑	☑	☑
III. Conduct secondary research in the scientific and technical fields.	☑	☑	☑	☑	☑	☑	☑	☑

Course SLO/GESLO	Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems.	Information Retrieval and Technology - Access, evaluate, and utilize information effectively, ethically, and responsibly.	Quantitative Reasoning - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately.	Written Communication - Write effectively to convey ideas that meet the needs of specific audiences and purposes.
I. Analyze scientific and technical readings, reports, and documents.	☑			
II. Write scientific papers, technical reports, and other forms of writing required in scientific and technical careers.	☑	☑	☑	☑
III. Conduct secondary research in the scientific and technical fields.	☑	☑	☑	☑

Course SLO/PSLO	1. The individual in relation to behavior, ideas, and values.	2. The diversity of human conditions and cultures in local and global communities.	3. Techniques of creative expression and its evaluation.	4. Natural systems and environmental issues.	5. Multiple dimensions of the Asia/Pacific region.	6. Multiple dimensions of Hawaii.
I. Analyze scientific and technical readings, reports, and documents.	☑	☑	☑	☑	☑	☑
II. Write scientific papers, technical reports, and other forms of writing required in scientific and technical careers.	☑		☑	☑	☑	☑
III. Conduct secondary research in the scientific and technical fields.		☑		☑	☑	☑

16. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "COURSE COMPETENCIES/ISSUES/SKILLS" and enter text in that screen. Competencies/Concepts/Issues/Skills

Competency/Content	1-16 weeks Read and analyze scientific reports (I, a)	1-16 weeks Formulate reports with pre-determined data (I, II, III, a, b, c, d, e, f, g, h)	1-16 weeks Learn and apply conventional styles of organization for reports of experiments (I, II, III, a, b, c, d, e, f, g, h)	1-16 weeks Learn and apply appropriate documentation styles (I, II, III, a, b, c, d, e, f, g, h)
a. evaluate scientific and technical documents for various purposes and audiences and as relevant sources;	☑			
b. write, revise, and edit scientific and technical reports that are clear, concise, and grammatically correct;		☑	☑	☑
c. incorporate synthesis, process analysis, and argumentation into one's own writing;		☑	☑	☑
d. plan, organize, and develop scientific and technical reports using effective rhetorical and logical principles;		☑	☑	☑
e. demonstrate conventional styles of organization for scientific reports of experiments and investigations including the abstract, introduction, methods, results, discussion, conclusion, summary, and references;		☑	☑	☑
f. apply basic format and design standards used by the scientific and technical writing community;		☑	☑	☑
g. use word processing and graphics software to prepare reports;		☑	☑	☑
h. conduct library and electronic research and present findings;		☑	☑	☑

17. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "RECOMMENDED COURSE CONTENT..." and enter text in that screen. Recommended Course Content and Timeline. See HELP for information.

Content
1-16 weeks Read and analyze scientific reports (I, a)
1-16 weeks Formulate reports with pre-determined data (I, II, III, a, b, c, d, e, f, g, h)
1-16 weeks Learn and apply conventional styles of organization for reports of experiments (I, II, III, a, b, c, d, e, f, g, h)
1-16 weeks Learn and apply appropriate documentation styles (I, II, III, a, b, c, d, e, f, g, h)

18. Recommended Evaluation and Assessment Methods. See help for information.

- Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics. (0)
- Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and

questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics. (0)
- Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics. (0)
- Includes, but is not limited to: reading logs, reflective journals, mentoring logs, tutoring logs, personal growth journals, professional logs, service learning logs; appropriate rubrics. (0)
- Includes, but is not limited to: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; appropriate rubrics. (0)
- Includes, but is not limited to: speeches, class talks, drama presentations, oral readings, interviewing, capstone or other class presentations, oral presentations using technology, oral presentations given via technology; appropriate rubrics. (0)
- Includes, but is not limited to: research, art, observation, interview, or service learning projects, portfolio development; appropriate rubrics. (0)
- Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics. (0)
- Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics. (0)

Method of Evaluation	Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics.	Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics.	Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics.	Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics.	Includes, but is not limited to: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; appropriate rubrics.	Includes, but is not limited to: reading logs, reflective journals, mentoring logs, tutoring logs, personal growth journals, professional logs, service learning logs; appropriate rubrics.	Includes, but is not limited to: research, art, observation, interview, or service learning projects, portfolio development; appropriate rubrics.	Includes, but is not limited to: speeches, class talks, drama presentations, oral readings, interviewing, capstone or other class presentations, oral presentations using technology, oral presentations given via technology; appropriate rubrics.	Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics.
Course SLOs									
I. Analyze scientific and technical readings, reports, and documents.									
II. Write scientific papers, technical reports, and other forms of writing required in scientific and technical careers.									
III. Conduct secondary research in the scientific and technical fields.									
Course Competencies									
a. evaluate scientific and technical documents for various purposes and audiences and as relevant sources;									
b. write, revise, and edit scientific and technical									

reports that are clear, concise, and grammatically correct;										
c. incorporate synthesis, process analysis, and argumentation into one's own writing;										
d. plan, organize, and develop scientific and technical reports using effective rhetorical and logical principles;										
e. demonstrate conventional styles of organization for scientific reports of experiments and investigations including the abstract, introduction, methods, results, discussion, conclusion, summary, and references;										
f. apply basic format and design standards used by the scientific and technical writing community;										
g . use word processing and graphics software to prepare reports;										
h. conduct library and electronic research and present findings;										

Method of Evaluation
Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter questions, critical thinking questions, class preparation; appropriate rubrics.
Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics.
Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics.
Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics.
Includes, but is not limited to: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; appropriate rubrics.
Includes, but is not limited to: reading logs, reflective journals, mentoring logs, tutoring logs, personal growth journals, professional logs, service learning logs; appropriate rubrics.

Includes, but is not limited to: research, art, observation, interview, or service learning projects, portfolio development; appropriate rubrics.
Includes, but is not limited to: speeches, class talks, drama presentations, oral readings, interviewing, capstone or other class presentations, oral presentations using technology, oral presentations given via technology; appropriate rubrics.
Includes, but is not limited to: term papers, essays, creative writings, reports, or reaction papers; appropriate rubrics.

19. DO NOT ENTER TEXT IN THE TEXT BOX BELOW. Click on the yellow button "PLOs" and enter text in that screen. Program Student Learning Outcomes (PLOs) supported by this course. If you are not a "program" use the Liberal Arts PLOs, view them by clicking on the HELP icon.

Program SLO
1. The individual in relation to behavior, ideas, and values.
2. The diversity of human conditions and cultures in local and global communities.
3. Techniques of creative expression and its evaluation.
4. Natural systems and environmental issues.
5. Multiple dimensions of the Asia/Pacific region.
6. Multiple dimensions of Hawaii.

20. General Education Student Learner Outcomes (CASLOs). FIRST, fill out the CASLO grid located in the UHMC tab above. Click on the HELP icon for tips on determining support for the CASLOs and indicate your choices below by clicking on the box in front of each supported CASLO. NOTE: Our campus does not use the Preparatory Level, Level 1 and Level 2 designations in the chart below.

	Creativity - Able to express originality through a variety of forms.
☑	Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems. ☑ Preparatory Level
☑	Information Retrieval and Technology - Access, evaluate, and utilize information effectively, ethically, and responsibly. ☑ Preparatory Level
	Oral Communication - Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.
☑	Quantitative Reasoning - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately. ☑ Preparatory Level
☑	Written Communication - Write effectively to convey ideas that meet the needs of specific audiences and purposes. ☑ Preparatory Level

	Creativity	Critical Thinking	Information Retrieval and Technology	Oral Communication	Quantitative Reasoning	Written Communication
Includes, but is not limited to: assignments done outside of class in any discipline, such as math problems, reading and questions, chapter		☑	☑		☑	☑

questions, critical thinking questions, class preparation; appropriate rubrics.						
Includes, but is not limited to: attendance, participation, readings, art projects, media reviews, reactions to speakers, critical thinking exercises, or reflective exercises; appropriate rubrics.		☑			☑	☑
Includes, but is not limited to: essay tests, objective tests, mid-term and final exams, unit exams, quizzes of all types, tests may be written, oral, computerized, in-class, take-home, at testing sites; appropriate rubrics.		☑			☑	☑
Includes, but is not limited to: group discussions, group projects, group presentations, group exercises, group/team work in- and out-side of the classroom; appropriate rubrics.		☑			☑	☑
Includes, but is not limited to: lab assignments, lab projects, field assignments, field projects, student teaching, skill-building work, or hands-on projects; appropriate rubrics.		☑	☑		☑	☑
Includes, but is not limited to: reading logs, reflective journals, mentoring logs, tutoring logs, personal growth journals, professional logs, service learning logs; appropriate rubrics.		☑				☑
Includes, but is not limited to: research, art, observation, interview, or service learning projects, portfolio development; appropriate rubrics.		☑	☑		☑	☑
Includes, but is not limited to: speeches, class talks, drama presentations, oral readings, interviewing, capstone or other class presentations, oral presentations using technology, oral presentations given via technology; appropriate rubrics.		☑				
Includes, but is not limited to: term papers, essays, creative writings,		☑	☑		☑	☑

reports, or reaction papers; appropriate rubrics.							

GenED SLO
Critical Thinking - Apply critical thinking skills to effectively address the challenges and solve problems.
Information Retrieval and Technology - Access, evaluate, and utilize information effectively, ethically, and responsibly.
Quantitative Reasoning - Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately.
Written Communication - Write effectively to convey ideas that meet the needs of specific audiences and purposes.

21. Linking Items in Course Outline. CLICK ON CHAIN LINK ICON IN UPPER RIGHT HAND CORNER TO BEGIN LINKING. See HELP for more information on Linking.

22. Method(s) of delivery appropriate for this course. See Help for information.

- Cable TV (0)
- Classroom/Lab (0)
- HITS/Interactive TV (0)
- Hybrid (0)
- Online (0)

23. Text and Materials, Reference Materials, and Auxiliary Materials. See Help for information.

Appropriate text(s) and material will be chosen at the time the course is to be offered from those currently available in the field. Examples include, but are not limited to –

Penrose, Ann. M. & Steven B. Katz. *Writing in the Sciences: Exploring Conventions of Scientific Discourse* . 3rd ed, Pearson 2010.

Sommers, Nancy. *A Writer's Reference*. 7th ed. New York: Bedford/St. Martin's, 2011.

24. Maximum enrollment. See Help for information.

20

25. Particular room type requirement. Is this course restricted to particular room type? See Help for information.

NO

26. Special scheduling considerations. Are there special scheduling considerations for this course? See Help for information.

NO

27. Are special or additional resources needed for this course? See Help for information.

No.

28. Does this course require special fees to be paid for by students? See Help for information.

NO

29. Does this course change the number of required credit hours in a degree or certificate? See help for information.

No.

30. Course designation(s) for the Liberal Arts A.A. degree and/or for the college's other associate degrees.

Degree	Program	Category
AA Liberal Arts:	AA	LE – Elective N/A
AS:	ANY	EN - English
AAS:	ANY	EN - English
BAS:	ANY	EN - English
Developmental/Remedial:	N/A	

31. Course designation(s) for other colleges in the UH system.

This course fulfills an elective requirement within the UH system. The course is also designated as a Writing Intensive (WI) course.

32. Indicate the year and page # of UHMC catalog referred to. For new or modified courses, please indicate the catalog pages that need to be modified and provide a sheet outlining those changes.

UHMC 2011-2012

33. College-wide Academic Student Learner Outcomes (CASLOs). Please click on the HELP icon for more information.

Standard 1 - Written Communication Write effectively to convey ideas that meet the needs of specific audiences and purposes.	
Outcome 1.1 - Use writing to discover and articulate ideas.	3
Outcome 1.2 - Identify and analyze the audience and purpose for any intended communication.	3
Outcome 1.3 - Choose language, style, and organization appropriate to particular purposes and audiences.	3
Outcome 1.4 - Gather information and document sources appropriately.	3
Outcome 1.5 - Express a main idea as a thesis, hypothesis, or other appropriate statement.	3
Outcome 1.6 - Develop a main idea clearly and concisely with appropriate content.	3
Outcome 1.7 - Demonstrate a mastery of the conventions of writing, including grammar, spelling, and mechanics.	3
Outcome 1.8 - Demonstrate proficiency in revision and editing.	3
Outcome 1.9 - Develop a personal voice in written communication.	2
Standard 2 - Quantitative Reasoning Synthesize and articulate information using appropriate mathematical methods to solve problems of quantative reasoning accurately and appropriately.	
Outcome 2.1 - Apply numeric, graphic, and symbolic skills and other forms of quantitative reasoning accurately and appropriately.	2
Outcome 2.2 - Demonstrate mastery of mathematical concepts, skills, and applications, using technology when appropriate.	1
Outcome 2.3 - Communicate clearly and concisely the methods and results of quantitative problem solving.	2
Outcome 2.4 - Formulate and test hypotheses using numerical experimentation.	2
Outcome 2.5 - Define quantitative issues and problems, gather relevant information, analyze that information, and present results.	2
Outcome 2.6 - Assess the validity of statistical conclusions.	3
Standard 3 - Information Retrieval and Technology. Access, evaluate, and utilize information effectively, ethically, and responsibly.	
Outcome 3.1 - Use print and electronic information technology ethically and responsibly.	3
Outcome 3.2 - Demonstrate knowledge of basic vocabulary, concepts, and operations of information retrieval and technology	2

Outcome 3.3 - Recognize, identify, and define an information need.	2
Outcome 3.4 - Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information.	3
Outcome 3.5 - Create, manage, organize, and communicate information through electronic media.	1
Outcome 3.6 - Recognize changing technologies and make informed choices about their appropriateness and use.	1

Standard 4 - Oral Communication
Practice ethical and responsible oral communications appropriately to a variety of audiences and purposes.

Outcome 4.1 - Identify and analyze the audience and purpose of any intended communication.	1
Outcome 4.2 - Gather, evaluate, select, and organize information for the communication.	1
Outcome 4.3 - Use language, techniques, and strategies appropriate to the audience and occasion.	1
Outcome 4.4 - Speak clearly and confidently, using the voice, volume, tone, and articulation appropriate to the audience and occasion.	1
Outcome 4.5 - Summarize, analyze, and evaluate oral communications and ask coherent questions as needed.	1
Outcome 4.6 - Use competent oral expression to initiate and sustain discussions.	1

Standard 5 - Critical Thinking
Apply critical thinking skills to effectively address the challenges and solve problems.

Outcome 5.1 - Identify and state problems, issues, arguments, and questions contained in a body of information.	3
Outcome 5.2 - Identify and analyze assumptions and underlying points of view relating to an issue or problem.	2
Outcome 5.3 - Formulate research questions that require descriptive and explanatory analyses.	3
Outcome 5.4 - Recognize and understand multiple modes of inquiry, including investigative methods based on observation and analysis.	2
Outcome 5.5 - Evaluate a problem, distinguishing between relevant and irrelevant facts, opinions, assumptions, issues, values, and biases through the use of appropriate evidence.	3
Outcome 5.6 - Apply problem-solving techniques and skills, including the rules of logic and logical sequence.	3
Outcome 5.7 - Synthesize information from various sources, drawing appropriate conclusions.	3
Outcome 5.8 - Communicate clearly and concisely the methods and results of logical reasoning.	2
Outcome 5.9 - Reflect upon and evaluate their thought processes, value system, and world views in comparison to those of others.	1

Standard 6 - Creativity
Able to express originality through a variety of forms.

Outcome 6.1: Generate responses to problems and challenges through intuition and non-linear thinking.	1
Outcome 6.2: Explore diverse approaches to solving a problem or addressing a challenge.	1
Outcome 6.3: Sustain engagement in activities without a preconceived purpose.	0
Outcome 6.4: Apply creative principles to discover and express new ideas.	1
Outcome 6.5: Demonstrate the ability to trust and follow one's instincts in the absence of external direction	1
Outcome 6.6: Build upon or adapt the ideas of others to create novel expressions or new solutions.	1

34. Additional Information

Outline Information

Proposer:	DEREK SNYDER
Progress:	APPROVAL
Modify Date:	02/06/2012 5:49 PM
Approved Date:	