ENGL A109: CRITICAL REASONING AND WRITING FOR SCIENCE AND TECHNOLOGY

Item	Value
Curriculum Committee Approval Date	02/12/2025
Top Code	150100 - English
Units	4 Total Units
Hours	72 Total Hours (Lecture Hours 72)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• Area 1B Communication and Analytical Thinking (OA2)
Associate Science Local General Education (GE)	• Area 1B Communication and Analytical Thinking (OAS2)
California General Education Transfer Curriculum (Cal-GETC)	• Cal-GETC 1B Critical Thinking (1B)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 1B Critical Thinking (1B)
California State University General Education Breadth (CSU GE-Breadth)	• CSU A3 Critical Thinking (A3)

Course Description

Read, analyze, and write on works about science and technology applying critical thinking skills and research. Formulate and compose written arguments. Recognize logical fallacies, rhetorical strategies, and technical writing formats. PREREQUISITE: ENGL C1000 or ESL A100. Transfer Credit: CSU; UC. C-ID: ENGL 105.**C-ID:** ENGL 105.

Course Level Student Learning Outcome(s)

1. Students will be able to present significant evidence and support from non-fiction sources and draw appropriate conclusions in order to build a thesis in persuasive essays, researched writing, and in various technical writing formats.

Course Objectives

- 1. Write five or more each college scientific essays and technical writing formats (6,000 to 8,000 words in total) applying the principles of summary, analysis, synthesis, evaluation, exposition, and argumentation.
- 2. Read, summarize, interpret, evaluate, and synthesize texts that are central to research-based writing.
- 3. Read, analyze and appraise nonfiction literature from a variety of scientific and technical fields that focuses on similar topics and that represents different viewpoints on those topics.
- 4. Distinguish between approaches to issues and problems that are revealed by the texts in various academic fields.
- 5. Write convincing arguments by developing an argumentative thesis or claim, offering reliable support, employing logical reasoning, inductive and deductive patterns of logic, appropriate organizational forms, and suitable lines of argument (causation, analogy, parallel case, appeals to authority, and appeals to emotion).
- 6. Illustrate competency in standard English grammar, punctuation, mechanics as well as clarity and precision in written expression.
- 7. Recognize and employ the processes of writing: planning, pre-writing, editing and polishing.
- I Writing Objectives: In response to complex scientific and technical texts, students will be able to do the following in essays of 750 or more words:
- I. 1. Organize ideas to develop a specific thesis with a clear purpose, such as to argue, analyze, or define.
- I. 2. Support a thesis in discussion paragraphs.
- I. 3. Maintain unity and coherence while developing adequate content in paragraphs.
- I. 4. Effectively arrange paragraphs and link them with transitional devices.
- I. 5. Accurately summarize and paraphrase readings.
- I. 6. Integrate quotations that advance the discussion.
- I. 7. Employ, when appropriate, rhetorical modes, such as illustration, comparison and contrast, cause and effect, and classification, to support a thesis.
- I. 8. Analyze and synthesize information embodied in course readings.
- I. 9. Skillfully employ expressive, expository, and argumentative strategies to support a thesis.
- I. 10. Skillfully use a variety of argument strategies, both inductive deductive.
- I. 11. Recognize and revise logical fallacies.
- I. 12. Write arguments and define procedures and processes for reading audiences of different technical and non-technical backgrounds.
- II Reading Objectives: When reading, analyzing, and annotating complex, primarily scientific and technical texts, students will be able to do the following:
- II. 1. Analyze basic reasoning patterns, distinguishing between inductive and deductive constructions.
- II. 2. Distinguish fact, inference, and opinion expressed in texts.
- II. 3. Distinguish between evidence and conclusions in texts.
- II. 4. Evaluate the diction, style, and tone in texts.
- II. 5. Evaluate argument strategies by recognizing the following: a. stated and unstated assumptions; b. denotative and connotative meaning and biased language; c. logical fallacies and propaganda devices; d. slanted and euphemistic language; e. relevant and irrelevant evidence and appeals to authority.
- II. 6. Recognize and synthesize related ideas, arguments, and evidence in different texts on the same related issues and themes.

Lecture Content

I. The development of critical reading and thinking skills A. Analysis and evaluation of scientific and technical texts 1. Distinctions among various types of texts and their purposes (narration, exposition, and argumentation) 2. Appraisal of arguments in various texts (thesis or claim, reliable support, logical reasoning, organizational patterns, and lines of argument, such as inductive deductive reasoning) 3. Comparison and contrast of argument positions established in various texts B. Correlation of textual issues and arguments to broader issues C. Identification of agreement or disagreement with arguments in texts II. The construction of the college essay A. Practice in writing summaries of scientific texts B. Incorporation of textual summaries and direct quotations into students writing projects C. Generation of students ideas and information relative to issues in scientific and technical texts D. Generation of students expository theses or argument claims E. Evaluation of nonfiction texts relevant to students theses or claims F. Synthesis and the development of students essays 1. The purposes of the synthesis essay (exposition and argumentation) 2. The development of the argument synthesis a. Development of support for argument claim b. Practice in inductive deductive reasoning c. Practice in using lines of argumentation (appeals to reason, authority, emotion) III. The process of revision A. The early draft: discovery of thesis or claim and initial development of support B. The later drafts: the refocusing of thesis or claim, developing further support, responding to the editorial advice from teacher and peers C. The final draft: editing for clarity and correctness

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

Instructional Techniques

Lecture and application of ideas, group discussion, projects, readings, and videos.

Reading Assignments

Students will read on average 2-3 hours per week from non-fiction collections on technical, scientific anthologies.

Writing Assignments

In response to non-fiction works, the student will be able to do the following in both scientific essays and basic technical writing formats of 750 or more words: Analyze and synthesize information embodied in course readings; skillfully employ expressive, expository, and argument strategies to support a thesis and a variety of argument strategies, such as arranging evidence from abstract to concrete, and from specific to general using concession, one-sided argumentation, and multi-sided argumentation; recognize and correct logical fallacies.

Out-of-class Assignments

Students will spend on average 4-5 hours per week on out-of-class assignments, including reading assignments, essays, research papers, summaries, responses, and take-home exams.

Demonstration of Critical Thinking

Writing outcomes: Originate a clear specific thesis, including a claim or controlling idea; generate support for that thesis, summarize and paraphrase a text, maintain unity and coherence, arrange paragraphs and link them with transitional phrases, integrate quotations into essays and utilize expressive, expository, and argumentative strategies to support a thesis. Use appropriate diction avoiding sentence level errors, sustain consistent word choice throughout an essay and use both abstract (general) and concrete (specific) language in an essay. Appropriately use technical writing formats. Reading outcomes: Identify an implied or stated controlling idea in a complete text or paragraph, distinguish between facts and inferences in an argument and draw inferences from facts or details in texts, recognize the lexicon and vocabulary of critical thinking and literary analysis, summarize arguments in primary and secondary sources, identify transitional phrases in a text, and identify and describe the complexities of format. Research outcomes: Integrate information from multiple texts to support, contrast, and clarify a thesis or claim; use sources according to MLA standards; introduce, quote, summarize,e and paraphrase from sources; and evaluate the quality and relevance of published texts.

Required Writing, Problem Solving, Skills Demonstration

In response to non-fiction works, the student will be able to do the following in both scientific essays and basic technical writing formats of 750 or more words: Analyze and synthesize information embodied in course readings; skillfully employ expressive, expository, and argument strategies to support a thesis and a variety of argument strategies, such as arranging evidence from abstract to concrete, and from specific to general using concession, one-sided argumentation, and multi-sided argumentation; recognize and correct logical fallacies.

Eligible Disciplines

English: Master's degree in English, literature, comparative literature, or composition OR bachelor's degree in any of the above AND master's degree in linguistics, TESL, speech, education with a specialization in reading, creative writing, or journalism OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Faigley, Lester and Jack Selzer. Good Reasons: Designing and Writing Effective Arguments, 6th Edition ed. New York: Longman, 2014 Rationale: Faigley, Lester and Jack Selzer. Good Reasons: Designing and Writing Effective Arguments, 3rd. New York: Longman, 2006. 2. Required Lannon, John M.. Technical Communication, 13th Edition ed. New York: Longman, 2013 Rationale: Lannon, John M. Technical Communication, 9th Ed.New York: Longman, 2003 latest. 3. Required Yong, Ed. An Immense World: How Animal Senses Reveal the Hidden Realms Around Us, ed. Penguin Random House, 2022 4. Required Zimmer, Carl and Jamie Green. The Best American Science and Nature Writing 2023, ed. Mariner Books, 2023

Other Resources

1. Selected handout materials to be provided and distributed by the instructor.