

San José State University
Philosophy 57 (section 03)
"Logic and Critical Reasoning"
Fall 2010

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Office Hours: Tuesday 9:00 - 10:00 am,
Thursday 9:00 - 10:00 am,
or by appointment.

Course website: <http://www.stemwedel.org/logic-and-critical-reasoning/>

Course description:

This course will be an introduction to logic and critical reasoning. In logic we will be studying argument identification, fallacy identification, sentential logic, and formally evaluating arguments using techniques such as truth tables. In critical reasoning we will be examining argumentation "in the wild" and writing short critical essays on current events.

Course Goals and Student Learning Objectives

"Logic and Critical Reasoning" is designed to meet the G.E. learning objectives for Area A3.

A.

Critical thinking courses help students learn to recognize, analyze, evaluate, and engage in effective reasoning.

B.

Students will demonstrate, orally and in writing, proficiency in the course goals. Development of the following competencies will result in dispositions or habits of intellectual autonomy, appreciation of different worldviews, courage and perseverance in inquiry, and commitment to employ analytical reasoning. Students should be able to:

1. distinguish between reasoning (e.g., explanation, argument) and other types of discourse (e.g., description, assertion);
2. identify, analyze, and evaluate different types of reasoning;
3. find and state crucial unstated assumptions in reasoning;
4. evaluate factual claims or statements used in reasoning, and evaluate the sources of evidence for such claims;
5. demonstrate an understanding of what constitutes plagiarism;
6. evaluate information and its sources critically and incorporate selected information into his or her knowledge base and value system;

7. locate, retrieve, organize, analyze, synthesize, and communicate information of relevance to the subject matter of the course in an effective and efficient manner; and
8. reflect on past successes, failures, and alternative strategies.

C.

- Students will analyze, evaluate, and construct their own arguments or position papers about issues of diversity such as gender, class, ethnicity, and sexual orientation.
- Reasoning about other issues appropriate to the subject matter of the course shall also be presented, analyzed, evaluated, and constructed.
- All critical thinking classes should teach formal and informal methods for determining the validity of deductive reasoning and the strength of inductive reasoning, including a consideration of common fallacies in inductive and deductive reasoning. To clarify this Content Objective the following was developed by the Critical Thinking General Education Advisory Panel (GEAP) and adopted by the Board of General Studies on May 16, 2002: “Formal methods for determining the validity of deductive arguments” refers to techniques that focus on patterns of reasoning rather than content. While all deductive arguments claim to be valid, not all of them are valid. Students should know what formal methods are available for determining which are which. Such methods include, but are not limited to, the use of Venn’s diagrams for determining validity of categorical reasoning, the methods of truth tables, truth trees, and formal deduction for reasoning which depends on truth functional structure, and analogous methods for evaluating reasoning which may be valid due to quantificational form. These methods are explained in standard logic texts. We would also like to make clear that the request for evidence that formal methods are being taught is not a request that any particular technique be taught, but that some method of assessing formal validity be included in course content.
- Courses shall require the use of qualitative reasoning skills in oral and written assignments. Substantial writing assignments are to be integrated with critical thinking instruction. Writing will lead to the production of argumentative essays, with a minimum of 3000 words required. Students shall receive frequent evaluations from the instructor. Evaluative comments must be substantive, addressing the quality and form of writing.

Required Text:

Merrilee H. Salmon, *Introduction to Logic and Critical Thinking (5th edition)*

Course requirements:

Homework problems: Learning logic requires practice in applying concepts to problem solving. To help you get this practice, there will be homework problems every week, some which we will do during class meetings, some which you will do on your own to discuss at the next class meeting. *I will not be collecting or grading these homework problems*, but there will be significant overlap between the homework problems and the quizzes, so keeping up with the homework (and our discussion of the problems in class) is in your best interests.

Quizzes: Over the course of the term, there will be 5 quizzes (dates listed in course program). I will drop your lowest quiz grade. Taken together, the quizzes will count for 50% of your course grade.

Short papers: You will write two short (500 words) papers, each focused on reconstructing and evaluating an argument. The two short papers will count for 20% of your course grade.

Longer essay: You will write one longer essay (1000 words) that develops an argument and defends it against possible objections. You will work with your classmates to peer review drafts of your essays and to revise in the light of this review. The essay will be due on Tuesday, December 14 by 12 noon, and will count for 20% of your course grade.

Class participation: Dialogue and discussion will help you to master the logical concepts from this course and to understand how the formal features of argumentation work (or don't) in the arguments people make in real life. Small group work, in-class discussions, and online discussions in our class Desire2Learn shell will all contribute to your class participation, which will count for 10% of your course grade.

Grading:

Quizzes:	50%
Short papers:	20%
Longer essay:	20%
<u>Class participation:</u>	<u>10%</u>
Total:	100%

Your marks on assignments will be converted to percentages (e.g., 15/20 = 75%) and used to compute letter grades as follows:

A+	98-100%	B+	87-89%	C+	77-79%	D+	67-69%
A	93-97%	B	83-86%	C	73-76%	D	60-66%
A-	90-92%	B-	80-82%	C-	70-72%	F	0-59%

Academic Honesty: I expect you to be familiar with university policies on plagiarism, cheating, and other forms of academic dishonesty. As well, I expect you to understand the difference between proper attribution of the words and ideas of others and plagiarism. If you do not understand the difference, please make an appointment with me to discuss proper attribution as soon as possible. **Plagiarism or cheating will result in a failing grade for this course, and offenders may be subject to further administrative sanctions.**

Official academic integrity statement from the Office of Judicial Affairs:
Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University's Integrity Policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Judicial Affairs. The policy on academic integrity can be found at:

<http://www.sjsu.edu/senate/S07-2.pdf>

If you need course adaptations or accommodations because of a disability, or if you have emergency medical information to share with me, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours.

Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the DRC to establish a record of their disability.

PROGRAM:

*You should make every effort to complete reading assignments before class on the dates for which they are listed.

**Homework problems will be posted on our class Desire2Learn shell at least one week before the class meeting in which you will work and discuss them.

Th-Aug. 26 INTRODUCTORY REMARKS

Tu- Aug. 31 ARGUMENTS (Reading: Salmon, Chapter 1)

Th- Sep. 2 DIAGRAMMING ARGUMENTS

- Tu-Sep. 7 THE LANGUAGE OF ARGUMENTS (Reading: Salmon, Chapter 2)
- Tu-Sep. 7: Last day to drop without a "W".**
- Th-Sep. 9 DEDUCTIVE AND INDUCTIVE ARGUMENTS
(Reading: Salmon, Chapter 3)
- Tu-Sep. 14 **Quiz 1**
- Tu-Sep. 14: Last day for late adds.**
- Th-Sep. 16 FALLACIES I
- Tu-Sep. 21 FALLACIES II
- Th-Sep. 23 SYNTAX AND SEMANTICS
(Reading: Salmon, Chapter 8, sec. I-IV)
- Tu-Sep. 28 SENTENTIAL LOGIC I
- Short paper #1 due.*
- Th-Sep. 30 SENTENTIAL LOGIC II
(Reading: Salmon, Chapter 8, sec. V-VI)
- Tu-Oct. 5 **Quiz 2**
- Th-Oct. 7 TRANSLATING INTO SENTENTIAL LOGIC I
(Reading: Salmon, Chapter 8, sec. VII-XII)
- Tu-Oct. 12 TRANSLATING INTO SENTENTIAL LOGIC II
- Th-Oct. 14 TRUTH TABLES AND VALIDITY
- Tu-Oct. 19 TAUTOLOGIES, SELF-CONTRADICTIONS, CONTINGENT SENTENCES
- Th-Oct. 21 **Quiz 3**
- Tu-Oct. 26 CATEGORICAL SENTENCES I
(Reading: Salmon, Chapter 9)
- Th-Oct. 28 CATEGORICAL SENTENCES II
- Tu-Nov. 2 ARGUMENTS IN THE WILD I

Th-Nov. 4 ARGUMENTS IN THE WILD II -- **CLASS WILL MEET ONLINE**

Tu-Nov. 9 **Quiz 4**

Th-Nov. 11 VETERAN'S DAY -- CLASS WILL NOT MEET

Tu-Nov. 16 QUANTIFICATION I

Short paper #2 due.

Th-Nov. 18 QUANTIFICATION II
(Reading: Salmon, Chapter 10)

Tu-Nov. 23 QUANTIFICATION III

Th-Nov. 25 THANKSGIVING DAY -- CLASS WILL NOT MEET

Tu-Nov. 30 **Quiz 5**

Th-Dec. 2 ARGUMENTS IN THE WILD III

Tu-Dec. 7 WRITING AND PEER REVIEW

Th-Dec. 9 ARGUMENTS IN THE WILD IV

FINAL EXAM: Longer Essay due Tuesday, December 14, 2010, by 12 noon.