

## Phil 114: Introduction to Logic

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### COURSE DESCRIPTION AND GOALS

This course is an introduction to formalizing and evaluating (deductive) arguments. In particular, the course will focus on four modules (these terms will become familiar to you as you progress through the course):

- Translating English sentences into sentential logic.
- Evaluating sentential logic arguments through natural deduction.
- Translating English sentences into predicate logic.
- Evaluating predicate logic arguments through natural deduction.

The first goal in this class is the class-specific goal of becoming proficient at translating and evaluating deductive arguments in sentential and predicate logic. The second goal is broad. Being able to properly evaluate arguments and understand the logical relations between statements is a skill with wide-ranging applications. Arguments appear in many aspects of our lives—not only in philosophy—and the ability to properly evaluate them is a crucial skill for everyone.

### EXAMS, HOMEWORK, AND GRADES

Grades comprise two components: exams and participation.

Exams. Before finals week, there are four scheduled exams. The final exam will be an exam that will replace your lowest exam grade. The final exam will look similar to either exam 3 or 4. Your lowest score between exam 3 and 4 will determine which final you get. If you did worse on exam 3, your final will look like exam 3. If you did worse on exam 4, your final will look like exam 4. (If you have the same score on both exams 3 and 4, it's your pick.) There is no risk in taking the final. Each exam is worth 20% of your grade. I will normalize the exam grades so they're out of 100 points.

Homework and participation. To learn logic, you have to practice. Each reading is associated with a homework set. Periodically, we will do homework in class in groups (or alone if you please), and you will turn in those problems. I will grade these participation assignments mostly on effort. Participation assignments will make up 20% of your grade. These participation assignments will be random and can't be made up. While I don't strictly speaking take attendance, being in class for participation assignments will incentivize attendance.

Final grade calculation. I calculate your grade as follows:

$$\left( \left( 100 * \frac{\# \text{ of participation assignments completed}}{\text{total participation assignments}} \right) + \text{exam} + \text{exam} + \text{exam} + \text{exam} \right) / 5$$

I assign letter grades according to the standard scale.

#### CLASS STRUCTURE

On each non-exam day, I'll usually lecture on the ideas assigned in the reading. Then, I'll go through homework problems. Sometimes, after lecturing, we'll break into groups and solve homework problems together.

#### SCHEDULE

Date	Reading	Exercises
<b>Module 1: Intro &amp; SL translations</b>		
Week 1 1.15 1.17	No school Syllabus	No school Syllabus
Week 2 1.22 1.24	§§1.1-1.9 §§2.1-2.13	1A-1C 2C
Week 3 1.29 1.31	§§3.1-3.5 §§4.1-4.17	3A-3D 4A,4B
Week 4 2.5 2.7	§§4.18-4.23 §§4.24	4C 4D
Week 5 2.12 2.14	Review EXAM 1	Review EXAM 1
<b>Module 2: SL derivations</b>		
Week 6 2.19 2.21	No school §§5.1-5.5	No school 5A
Week 7 2.26 2.28	§§5.6-5.8 §§5.9-5.10	5B, 5C 5D,5E
Week 8 3.5 3.7	§§5.11-5.12 5.13-5.14	5F 5G(91-96)
Week 9 3.12 3.14	Review EXAM 2	Review EXAM 2
Date	Reading	Exercises
<b>Module 3: PL translations</b>		
Week 10 3.19 3.21	§§6.1-6.10 §§6.11-6.16	6E-6G 6H-6I
Week 11 4.2 4.4	§§6.17-6.20 §§7.1-7.4	7A-7B 7C-7D
Week 12 4.9 4.11	§§7.4-7.5 Review	7C-7D Review
Week 13 4.16	EXAM 3	EXAM 3
<b>Module 4: PL derivations</b>		
4.18	§§7.4-7.5	7C-7D
Week 14 4.23 4.25	§§8.1-8.6, 8.13 §§8.7-8.9, 8.13	8A, 8B 8C, 8D, 8G
Week 15 4.30 5.2	Review EXAM 4	Review EXAM 4
Week 16	FINAL	FINAL

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**Religious Holidays Policy:** Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

**Library Resources:** Students may consult with a librarian on research needs. For this class, the subject librarian is [https://www.library.unlv.edu/contact/librarians\\_by\\_subject](https://www.library.unlv.edu/contact/librarians_by_subject). UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu/>.

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