

Phil 110 - Introduction to Logic

Summer 2025 (6-Week Course)

Online Asynchronous

UMass Amherst

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Course Overview

[1] Course Description: This course introduces students to Symbolic Logic. Two logical systems are examined:

- (1) Sentential Logic
- (2) Predicate Logic

Work is equally divided between:

- (1) translating English sentences into symbolic notation, and
- (2) constructing formal derivations.

[2] Required Materials: We will be reading [Gary Hardegree's *Symbolic Logic: A First Course*](#). The full text can be found online.

[3] Schedule and Assignments: Below is both your weekly schedule of readings and exams as well as links to the readings and practice exercise sets. Exams will be on Canvas.

[4] Weekly Optional Office Hours: I will hold optional office hours *during each "Review Day" (11am - 2pm) or by appointment (email me if you need more help)*.

Assignments/Grades

I will provide *weekly optional* exercise sets along with answer sheets.

These are ungraded.

The graded assignments will be **Four Exams**.

Each is worth 25% of your grade.

You will have the option to take a *Fifth Exam for extra credit*.

Additional Information

Communication: If you need to contact me outside of office hours, you can reach me by email. You must use your UMass email when emailing me. During the week, I will respond to emails within 24 hours and try to reply to emails sent during business hours the same day. If you send me an email outside of business hours, do not expect a same-day response.

Accommodation: If you find the course in any way inaccessible, please let me know. If you need academic accommodation, please contact [Disability Services](#). The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Academic Honesty: Academic dishonesty includes, but is not limited to, cheating, fabrication, and plagiarism (including the use of AI). UMass has a zero tolerance policy for academic dishonesty. If you have any questions, look [here](#) or ask me. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent

Title IX Policy: In accordance with Title IX of the Education Amendments of 1972 that prohibits gender-based discrimination in educational settings that receive federal funds, the University of Massachusetts Amherst is committed to providing a safe learning environment for all students, free from all forms of discrimination, including sexual assault, sexual harassment, domestic violence, dating violence, stalking, and retaliation. This includes interactions in person or online through digital platforms and social media. Title IX also protects against discrimination on the basis of pregnancy, childbirth, false pregnancy, miscarriage, abortion, or related conditions, including recovery. There are resources here on campus to support you. A summary of the available Title IX resources (confidential and non-confidential) can be found at the following link: <https://www.umass.edu/titleix/resources>. You do not need to make a formal report to access them. If you need immediate support, you are not alone. Free and confidential support is available 24 hours a day / 7 days a week / 365 days a year at the SASA Hotline 413-545-0800.

***Note:** *The syllabus/schedule is subject to change at the discretion of the instructor.*

Day	Date	Topic	Readings	Practice Exercise Sets	Answer Sheets		Due Date
1	5/19	Basic Concepts	Readings: 1.1-1.5				
2	5/20		Readings: 1.6-1.9	Week 1 Exercise Set 1	Week 1 Set 1 Answers		
3	5/21	Truth Functional Connectives	Readings: 2.1-2.5				
4	5/22		Readings: 2.5-2.10				
5	5/23		Readings: 2.10-2.13	Week 1 Exercise Set 2	Week 1 Set 2 Answers		
6	5/26	Validity in Sentential Logic	Readings: 3.1-3.5	Week 2 Exercise Set 1	Week 2 Set 1 Answers		
7	5/27	Translations in Sentential Logic	Readings: 4.1-4.11				
8	5/28		Readings: 4.12-4.17	Week 2 Exercise Set 2	Week 2 Sets 2-3 Answers		
9	5/29		Readings: 4.18-4.23				
10	5/30		Readings: 4.24-4.25	Week 2 Exercise Set 3			
11	6/2		Review Day			Exam 1	midnight Mon 6/02
12	6/3	Derivations in Sentential Logic	Readings: 5.1-5.5	Week 3 Exercise Set 1	Week 3 Set 1 Answers		
13	6/4		Readings: 5.6-5.8	Week 3 Exercise Set 2	Week 3 Set 2 Answers		
14	6/5		Readings: 5.9-5.10	Week 3 Exercise Set 3	Week 3 Set 3 Answers		
15	6/6		Readings: 5.11-5.12	Week 3 Exercise Set 4	Week 3 Set 4 Answers		
16	6/9		Readings: 5.13-5.14, 5.17-5.18	Week 4 Exercise Set 1	Week 4 Set 1 Answers		

17	6/10		Review Day			Exam 2	midnight Tue 6/10
18	6/11	Translations In Predicate Logic	Readings: 6.1-6.17	Week 4 Exercise Set 2	Week 4 Set 2 Answers		
19	6/12		Readings: 6.7-6.10	Week 4 Exercise Set 3	Week 4 Sets 3-4 Answers		
20	6/13		Readings: 6.11-6.13	Week 4 Exercise Set 4			
21	6/16		Readings: 6.13-6.16	Week 5 Exercise Set 1	Week 5 Sets 1-2 Answers		
22	6/17		Readings: 6.17-6.18				
23	6/18		Readings: 6.19-6.20	Week 5 Exercise Set 2			
24	6/19		Review Day			Exam 3	midnight Thu 6/19
25	6/20	Derivations In Predicate Logic	Readings: 8.1-8.6	Week 5 Exercise Set 3	Week 5 Set 3 Answers		
26	6/23		Readings: 8.7-8.9	Week 6 Exercise Set 1	Week 6 Set 1 Answers		
27	6/24		Readings: 8.7-8.9	Week 6 Exercise Set 2	Week 6 Set 2 Answers		
28	6/25		Readings: 8.10-8.11	Week 6 Exercise Set 3	Week 6 Set 3 Answers		
29	6/26		Readings: 8.12	Week 6 Exercise Set 4	Week 6 Set 4 Answers		
30	6/27		Readings: 8.13-8.14	Week 6 Exercise Set 5	Week 6 Set 5 Answers		
31	6/30		Review Day			Exam 4 (Final)	midnight Mon 6/30
						Exam 5 (*EC)	midnight Tue 7/1