

Syllabus

PHIL 114 Introduction to Symbolic Logic

University of Nevada, Las Vegas, Department for Philosophy

Spring Term 2021

Instructor: Jasmin Özel, M.A.

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Office Hours:

- Every **Monday 11:00-12:00 PM** on WebEx (recordings will be posted)
- Regular additional office hours by announcement (especially before the exams), usually on Tuesday from 11:00-12:00 PM.
- **by appointment:** email me under jasmin.ozel@unlv.edu to set up a meeting.

Course Description:

This course will introduce the basic concepts of logic: principles of correct reasoning, using the symbolic techniques of propositional calculus (“Sentential or First-Order Logic”) and of simple quantification (“Quantificational or Second-Order Logic”). You will learn how to translate arguments in colloquial English into formal notation in first-order logic, and how to then evaluate their logical properties (such as validity, soundness, and implication). You will then learn how to construct formal proofs both in propositional logic and predicate logic. We will also discuss some applications of logic and metatheory.

Textbook

We will be using Logic and Proofs by the Open Learning Initiative, which costs \$80 and which you can access here:

<https://oli.cmu.edu/courses/logic-proofs/>

Course Key: kant-2021

You will need to be registered by the end of the first week of classes to continue participating in this class. So don't miss to **register by January 24**.

Assignments: There will be weekly assignments, both one lab and a quiz per chapter, that will be due once a week. Start early so that you can ask questions in my office hours.

There will also be four exams, three midterm exams and one final exam.

Grading:

Your final grade will be constituted as follows:

12% Quiz grades

12% Lab grades

17% Midterm exam #1

17% Midterm exam #2

17% Midterm exam #3

25% Final exam

Lectures: Every Monday and Wednesday morning (during the weeks of Martin Luther King Day and President's Day, I will post a lecture on Tuesday), you will find a new Course Module on Canvas.

Please proceed as follows:

- Every week, please watch the lecture on the chapter material before you go into the lab and quiz. Then watch any additional videos I may post. (Once the labs get more difficult, I will give you additional instructions.)
- **Start early and bring your questions to office hours!** You will always have at least one week to complete the assignments on OLI.
- You can also always send me questions by email. If you send a screenshot from the lab showing that you tried to solve the problem, I will get back to you with help.

Schedule

<u>Date</u>	<u>Lecture-Topic</u>	<u>Assignment</u>
Jan. 19	Chapter 1: <u>Statements and Arguments</u>	
Jan. 20	Chapter 1: <u>Statements and Arguments</u> continued	<ul style="list-style-type: none"> • Chapter 1 Lab: Statements and Arguments • Chapter 1 Quiz: Statements and Arguments • due Jan. 26
Jan. 25	Chapter 2: <u>Syntax and Symbolization</u>	
Jan. 27	Syntax, Symbolization continued	<ul style="list-style-type: none"> • Chapter 2 Lab: Syntax and Symbolization • Chapter 2 Quiz: Syntax and Symbolization • due Feb. 2
Feb. 1	Chapter 3: <u>Semantics</u>	
Feb. 3	Semantics continued	<ul style="list-style-type: none"> • Chapter 3 Lab: Semantics • Chapter 3 Quiz: Semantics • due Feb. 9
Feb. 8	Midterm #1 Review	
Feb. 10	Midterm Exam #1 due	**Midterm 1** due at midnight
Feb. 10	Chapter 4: <u>Derivations</u>	

<u>Date</u>	<u>Lecture-Topic</u>	<u>Assignment</u>
Feb. 16	Derivations continued	<ul style="list-style-type: none"> • Chapter 4 Lab: Derivations • Chapter 4 Quiz: Derivations • due Feb. 23
Feb. 17	Chapter 5: <u>Indirect Rules</u>	
Feb. 22	Indirect Rules continued	<ul style="list-style-type: none"> • Chapter 5 Lab: Indirect Rules • Chapter 5 Quiz: Indirect Rules • due March 2
Feb. 24	Chapter 6: <u>Strategies and Derived Rules.</u>	
Marc h 1	Strategies and Derived Rules continued	<ul style="list-style-type: none"> • Chapter 6 Lab: Strategies and Derived Rules • Chapter 6 Quiz: Strategies and Derived Rules • due: March 9
Marc h 3	Chapter 7: <u>Elementary Metamathematics</u>	
Marc h 8	Elementary Metamathematics continued	<ul style="list-style-type: none"> • Chapter 7 Lab: Elementary Metamathematics • Chapter 7 Quiz: Elementary Metamathematics • due March 12
Marc h 10	Midterm #2 Review	
Marc h 12	Midterm Exam #2 due	**Midterm 2** due at Midnight

Date	Lecture-Topic	Assignment
March 22	Predicate Logic Chapter 8: <u>Syntax and Semantics I</u>	
March 24	Chapter 8 continued	<ul style="list-style-type: none"> • Chapter 8 Lab: Syntax and Semantics I • Chapter 8 Quiz: Syntax and Semantics II • due March 30
March 29	Chapter 9: <u>Syntax and Semantics II</u>	
March 31	Chapter 9 continued	<ul style="list-style-type: none"> • Chapter 9 Lab: Syntax and Semantics I • Chapter 9 Quiz: Syntax and Semantics II • due April 6
April 5	Midterm #3 Review	
April 7	Midterm Exam #3 Due	**Midterm 3** due at Midnight
April 7	Chapter 10: <u>Derivations</u>	
April 12	Chapter 10 continued	<ul style="list-style-type: none"> • Chapter 10 Lab: Derivations • Chapter 10 Quiz: Derivations • due April 20
April 19	Chapter 11: <u>Strategies and Derived Rules</u>	

<u>Date</u>	<u>Lecture-Topic</u>	<u>Assignment</u>
April 21	Chapter 11 continued	<ul style="list-style-type: none"> • Chapter 11 Lab: Strategies and Derived Rules • Chapter 11 Quiz: Strategies and Derived Rules • due April 27
April 26	Chapter 12: <u>Identity</u>	
April 28	Chapter 12 continued	<ul style="list-style-type: none"> • Chapter 12 Lab: Identity • Chapter 12 Quiz: Identity • due May 4
May 3	Study Week: Final Review	
May 12	Final Exam Due	**Final Exam**

UNIVERSITY POLICIES

Academic Misconduct: Academic integrity is a legitimate concern for every member of the Campus community; we all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the sources. See the Student Conduct Code, <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing Classes: Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct: Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or potentially disruptive devices or activities, are only permitted with the prior explicit consent of the instructor. The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative drop of the student from the course.

Copyright The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional copyright policy information is available at <http://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC): The UNLV Disability Resource Center (SSC-A, Room 143, <https://www.unlv.edu/drc>, 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours, so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Final Examinations: The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The general schedule is typically

available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule, <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses: All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, <https://www.unlv.edu/studentconduct/misconduct/policy>, which defines, “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” as a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades: The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources: Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries’ Research Consultation website: <http://guides.library.unlv.edu/appointments/librarian>. You can also ask the library staff questions via chat and text message at: <http://ask.library.unlv.edu/>.

Missed Classwork: Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Policy for Missed Work, under Registration Policies, on the Academic Policies webpage, <https://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could reasonably have been avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/Unit Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: fine arts activities, competitive intercollegiate athletics, science and engineering competitions, liberal arts competitions, academic recruitment activities, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost. **Rebelmail:** Rebelmail is UNLV’s official email system for students, and by University policy, instructors and staff should only send emails to students’ Rebelmail accounts. Rebelmail is one of the primary ways students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Emailing within WebCampus is also acceptable. **Tutoring and Coaching:** The Academic Success Center (ASC) provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the ASC website, <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center: One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3 301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Disclaimer: I reserve the sole right to alter this syllabus. If it is altered, the alterations will be posted on WebCam- pus.