

## **Philosophy 201: Introduction to Logic**

Instructor: Evan Kalkus  
Contact: evan.kalkus@rutgers.edu

### **I. Class Times**

-The class will meet two times a week:

-Monday, 7th period (6:40 p.m. - 8:00 p.m.)

-Wednesday, 7th period (6:40 p.m. - 8:00 p.m.)

-Office hours will be held on Mondays and Wednesdays by arrangement. Please email ahead of time.

### **II. Course Description**

-This course is an introduction to symbolic logic. Logic is the study of correct reasoning and symbolic

logic studies reasoning using formal languages. We will begin with propositional logic.

Propositional

logic will enable us to represent various connective terms that will allow us to evaluate various inferences. We will focus on determining the validity of arguments and the processes involved in derivations. Then, we will turn to predicate logic. Predicate logic subsumes propositional logic, but affords us additional tools to both represent terms such as “something” and “everything” and evaluate inferences.

### **III. Course Materials**

-Paul Teller, *A Modern Formal Logic Primer*, Prentice Hall, 1989

-Accessible at <http://tellerprimer.ucdavis.edu/pdf/>

-I will be uploading or sharing with you the relevant documents, including the textbook.

-If you would like to have a hard copy of the book for use, you can purchase one through Amazon (though there may be limited copies, given its free accessibility).

#### IV. Tentative Schedule

-The plan is to cover the material in an effective and timely manner, so this schedule may be adjusted to account for difficult subjects or unpredicted circumstances (weather, alien invasions, etc.), thus flexibility is key.

-Readings will be done for the first class of the week (usually Monday, but be prepared to have the readings done if our class only meets on the Wednesday of that week).

-Assignments should be attempted for class on Wednesday.

-Graded group assignment will be problems selected from the weekly assignments and completed in groups during class

-**BOLD** indicates group assignment

-UNDERLINE indicates quiz

-*ITALICS* indicates exam

<u>SCHEDULE</u>	Subject	Reading	Assignments
<b>Week 1</b>	Introduction to Arguments	(Vol. I) Chpt. 1-1, 1-2	None
<b>Week 2</b>	Connectives and Transcription	(Vol. I) Chpt. 1-3, 1-4. 1-5, 1-6, 4-4, 4-5	Ex. 1-4, 1-5, 1-6, 4-6
<b>Week 3</b>	Connectives and Transcription	(Vol. I) Chpt. 2-1, 2-2, 2-3	<b><u>Ex. 2-2, 4-8</u></b>
<b>Week 4</b>	Truth Tables and Validity	(Vol. I) Chpt. 4-1, 4-2	<b><u>Ex. 4-2, 4-5</u></b>
<b>Week 5</b>	Truth Trees for Propositional Logic	(Vol. I) Chpt. 8-1, 8-2, 8-3, 8-4, 8-5,	<b><u>Ex. 8-1, 8-3, 8-4</u></b>
<b>Week 6</b>	Truth Trees for Propositional Logic	(Vol. I) Chpt. 9-1, 9-2	<b><u>Ex. 9-2</u></b>
<b>Week 7</b>	Natural Deduction for Propositional	(Vol. I) Chpt. 5-1, 5-2, 5-3	<b><u>Ex. 5-1, 5-2, 5-4</u></b>
<b>Week 8</b>	Natural Deduction for Propositional	(Vol. 1) Chpt. 6-1, 7-1, 7-2, 7-3, 7-4	<b><u>Ex. 6-1, 6-3, 7-1, 7-4</u></b>
<b>Week 9</b>	Exam I	Review	<i>Review</i>
<b>Week 10</b>	Predicate Syntax and Transcription	(Vol. 2) Chpt. 1-1, 1-2, 1-3, 4-2, 4-3	<b><u>Ex. 1-4, 1-5, 4-4, 4-7</u></b>
<b>Week 11</b>	Truth Trees for Predicate	(Vol. 2) Chpt. 7-1, 7-2, 7-3, 7-4, 8-1, 8-2	<b><u>Ex. 7-1, 7-3, 7-4, 8-8</u></b>
<b>Week 12</b>	Natural Deduction for Predicate	(Vol. 2) Chpt. 5-2, 5-3, 5-4, 5-5, 5-6	<b><u>Ex. 5-1, 5-2, 5-5, 5-7</u></b>
<b>Week 13</b>	Review	Review	<u>Review</u>
<b>Week 14</b>	Natural Deduction for Predicate	(Vol. 2) Chpt. 6-1, 6-2	<b><u>Ex. 6-2, 6-7</u></b>

Week 15	Exam II	Review	Review
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## V. Assessments

### *-Class Participation (20%)*

#### *-Assignments*

-Assignments should be attempted outside of class. There are many, many problems assigned, and I do not expect all to be completed. I do not expect your answers to all be correct. I do expect a thorough attempt at working through the material, as it will be detrimental to your success in this course if you do not put forth a solid effort on the assignments. If you are putting in considerable effort both in class and out of class on the assignments, but feel as though you are falling behind, please come see me during office hours, or at the very least, let me know via email or after class.

-You will be asked to submit a problem from the assignments with a group for the second class of each week (with the exception of Week 1, Week 8, Week 9, Week 14, and Week 15), and in this case, you will be graded on correctness. You will have an opportunity to submit an alternate assignment at the beginning of the next class only if you have an excused absence from that class.

#### *-Attendance*

-As a prerequisite of any participation credit, attendance is a must. I will note when you do not show up to class.

-If you need to miss a class (illness, family emergency, etc.) use the correct procedures through Rutgers so that your bases are covered, and send me an email as well. Be prepared for class.

-Your grade will be reduced by 3 points for every unexcused absence.

-Bring all relevant materials, including the textbook (either printed or electronic), a notebook, and a pencil.

### *-Quizzes (30%)*

-Quizzes will occur weekly, starting in Week 3, on the second class of the week, and they will cover the material from the readings, first class of the week, the assignments from the week and, to a lesser degree, previous readings and assignments. Your lowest quiz grade will be dropped at the end of the course. You may make up a quiz during office hours before the next quiz only if you have an excused absence from that class.

### *-Exams (50%)*

-Exams will occur during the 9<sup>th</sup> and 15<sup>th</sup> week of the semester. The first will cover all material from the first eight weeks, and the second will be cumulative, covering all of the relevant course material. Exceptional circumstances that lead to missing an exam must be documented and emailed prior to missing the exam. You will then have one

week to schedule a time during office hours to take the exam. If an exam is missed for nonexceptional circumstances, you will forfeit said exam grade.

**-Grade Calculation**

-Class Participation (20%)

-Attendance

-Every unexcused absence is -3 points

-Assignments

-Total of 10 problems graded

-10 points each

-Quizzes (30%)

-Total of 11 quizzes taken, top are 10 graded

-15 Points each

-Exams (50%)

-Total of 2 exams taken

-First exam is worth 100 points

-Second exam is worth 150 points

-Total (100%)

-500 Points

Your grade will be determined by the following grading scale (no rounding):

<b>Grade</b>	<b><u>A</u></b>	<b><u>B+</u></b>	<b><u>B</u></b>	<b><u>C+</u></b>	<b><u>C</u></b>	<b><u>D</u></b>	<b><u>F</u></b>
<b><u>Percentage</u></b>	100% - 90%	89% - 87%	86% - 80%	79% - 77%	76% - 70%	69% - 60%	59% - 0%
<b><u>Points</u></b>	450-500	435-449	400-435	385-399	350-384	300-349	0-299

**VI. Sakai Site**

-The course will have a Sakai site. I will post all relevant documents and you will also be able to keep track of your grade. Additionally, I will post announcements and updates on this page. You can check the Sakai site for this information, but an email will also be sent to you when any information is added to the site. I will not be posting lecture notes. You will be required to take notes of the material, or in case of missed classes, review the notes of a classmate.

**VII. Class Structure**

-The course will have two distinct styles of class: first class of the week (generally Monday) and second class of the week (generally Wednesday).

-First class of the week

- Quizzes will be returned and discussed
- Questions will be asked and answered
- The weekly reading is due for this class
- The reading material will be covered by a lecture
- If time permits, weekly assignments will be worked on
- Second class of the week
  - The weekly assignments will be completed in this class
  - Questions will be asked and answered
  - Quizzes will be taken
- Class will be divided into groups or partners for assignments during class. You are permitted, and encouraged, to work with each other outside of class time as well. Each group will complete and present a problem from the weekly assignment.

### **VIII. Final Note**

- I understand what it is like to be a busy student. However, that does not entitle you to any unwarranted excuses or poor effort. Your education is costing someone a significant amount of money, so this is your opportunity to make it count. Show up to class, put in the work, and learn.
- Do not hesitate to contact me about anything related to the course. I will do what I can to help.