Syllabus Preview
Deductive Logic
PHIL 3200: class # 1250
Designation: QB/QI
Credit: 3 Units

Instructor: Dr. Chapman Waters
Office: CTIH 441
Office Hours: TBD
Email (preferred method of communication): chapman.waters@utah.edu
Class Location: CTIB 459
Class Time: T/TH: 9:10am - 10:30am
Prerequisites: none

Teaching Assistant: Dan Molter
Email: dan.molter@utah.edu

Course Description and Objectives
This is a course in deductive logic. Our two main tasks will be to figure out how to represent natural language arguments in symbolic notation, and to develop techniques for determining whether those arguments are “good” or “bad.” (Our first task will be to find a better way of talking about arguments than calling them “good” or “bad.”) We’ll start with arguments involving ‘and,’ ‘or,’ ‘not,’ if...then,’ and ‘if and only if,’ developing two different, but equivalent, methods for dealing with such arguments. Later in the semester, we’ll move on to arguments involving quantifiers – words such as ‘all’ and ‘some’ – including those with multiple quantifiers, relations, and identity. While we’ll have occasion to look at some of the interesting properties of the systems that we study, our primary concern will be learning to work within those systems.

Objectives include being able to translate English sentences and arguments into symbolic notation, being able to evaluate those formal sentences and arguments using the techniques developed during the semester, and being able to recognize the logically important features of the systems developed. This is primarily a skills course: emphasis will be on the first two of those.

Required Text


Grading

Final grades will be determined by (1) your turning in homework assignments on Thursdays when there are no quizzes or exams, (2) your performance on three 20 minute
in-class quizzes, and (3) your performance on three 80 minute in-class exams. A course schedule is given at the end of this syllabus.

- **Homework Assignments** (32%): While homework problems will be assigned for almost every class meeting, only those due on Thursdays will be turned in for credit. They are due at the beginning of class. You will receive credit if you turn these in and lose credit if you do not, as follows. There are eight such assignments, worth 25 points each, for a total of 200 points. Penalties begin to be assessed if you fail to turn in two assignments — you will lose 50 points for that. If you fail to turn in three assignments, you will lose 75 points; if you fail to turn in four assignments, you will lose 100 points, and so on. Homework assignments will not be evaluated for correctness, that is to say, you will not lose points for turning in incorrect answers. However, if the instructor finds that an assignment does not reflect a serious attempt to answer the questions asked, it will not count as submitted. The purpose of these exercises is for you to practice the techniques on which you will be tested, and you will need to practice them to do well in the time allotted for the quizzes and exams. Solutions to all exercises gone over in class will be posted on CANVAS after the relevant class.

  *Note about homework assignments:* Given the number of students in this class, you should not expect to have homework assignments returned to you. We simply don’t have enough class time to pass back so many assignments every week! In light of that, it would be in your best interest to write out two drafts of your homework assignments – one that you turn in for credit, the other for you to have when we go over the answers to homework questions in class.

- **Quizzes and Exams** (68%): Quizzes and exams will require you to work problems or answer questions of the sort found in your readings, discussed in class, and given as homework. Although all exams and quizzes are open book, you may not consult your notes, or any other additional information source, when taking them. Quizzes and exams, after the first ones, will only concern material covered since the previous exam or quiz. However, as a word of caution, it is important for students to recognize that the material is itself cumulative, that is, in the sense that mastery of the later topics we will cover presupposes the mastery of earlier covered topics. Prepare accordingly. Each of the three quizzes will be worth 40 points, for a total of 120 points. Each of the three exams will be worth 100 points, for a total of 300 points.

Thus, the total number of points for the homework assignments (200 points), quizzes (120 points), and exams (300 points) is 620. Course grades will be assigned using the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>A+</td>
<td>614-620</td>
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<tr>
<td>A</td>
<td>574-583</td>
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<tr>
<td>A-</td>
<td>549-558</td>
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<tr>
<td>B+</td>
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<td>C-</td>
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<tr>
<td>D</td>
<td>372-381</td>
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<tr>
<td>F</td>
<td>&lt;372</td>
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Other Information

• **Attendance:** I do not take attendance, but students are responsible for everything covered in class.

• **Excused Absences:** In the absence of justifiable prior arrangements or cases of serious, unexpected and documented medical emergencies or bereavement, quizzes and exams must be taken as scheduled. Failure to do so results in a grade of “F” for the course. For circumstances that are not emergencies, students must send the instructor or TA a request to take the exam or quiz at another time; this request should be sent a sufficient amount of time before the officially scheduled exam or quiz for the student to learn whether the excuse is acceptable.

• **Electronic Devices:** Please put all electronic devices (cell phones, pagers, etc.) on silent or vibrate when class is in session. If you are having trouble keeping your electronic devices from going off during lecture, you will have to ask the class for help. You do not want to ask the class for help! The use of computers, cell phones, and other communication devices during class is permitted only for approved course-related purposes, and is not permitted at all during quizzes or exams.

Course Schedule:

This is a tentative schedule. I reserve the right to make changes to the schedule as I see fit.

**Week 1**
- Tuesday 1/8
- Thursday 1/10 ➔ NO HOMEWORK FIRST THURSDAY

**Week 2**
- Tuesday 1/15
- Thursday 1/17 ➔ Homework 1

**Week 3**
- Tuesday 1/22
- Thursday 1/24 ➔ Quiz 1

**Week 4**
- Tuesday 1/29
- Thursday 1/31 ➔ Homework 2

**Week 5**
- Tuesday 2/5
- Thursday 2/7 ➔ Homework 3

**Week 6**
- Tuesday 2/12
Thursday 2/14 ← Exam I

Week 7
Tuesday 2/19
Thursday 2/21 ← Homework 4

Week 8
Tuesday 2/26
Thursday 2/28 ← Quiz 2

Week 9
Tuesday 3/5
Thursday 3/7 ← Homework 5

Week 10 SPRING BREAK
Tuesday 3/12 NO CLASS
Thursday 3/14 NO CLASS

Week 11
Tuesday 3/19
Thursday 3/21 ← Homework 6

Week 12
Tuesday 3/26
Thursday 3/28 ← Homework 7

Week 13
Tuesday 4/2
Thursday 4/4 ← Quiz 3

Week 14
Tuesday 4/9
Thursday 4/11 ← Homework 8

Week 15
Tuesday 4/16
Thursday 4/18 ← NO HOMEWORK FINAL THURSDAY

Week 16
Tuesday 4/23 ← Last day of class!

Finals Week: Thursday 4/25 – Wednesday 5/1
Final Exam ← Monday, April 29th, 8:00 – 10:00am