Syllabus
Deductive Logic
PHIL 3200: class # 1241
Designation: QB/QI
Credit: 3 Units

Instructor: Dr. Chapman Waters
Office: CTIHB 441
Office Hours: TBD
Email (preferred method of communication): chapman.waters@utah.edu
Class Location: CTIHB 101
Class Time: Tu/Th: 12:25 - 1:45pm
Prerequisites: none

Teaching Assistant: Alex Barrientos
Email: alex.barrientos@utah.edu
Office Hours: TBD

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

IMPORTANT: You should purchase a NON-ELECTRONIC version of the textbook, as tests/quizzes are open book and you are not allowed to consult electronic devices during tests/quizzes.

Grading
Final grades will be determined by (1) your turning in homework assignments on Tuesdays when there are no quizzes or exams, (2) your performance on three 15 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 Tuesdays will be turned in for credit. They are due at the beginning of class. Only hand-written paper copies of homework assignments will be accepted; NO electronic versions will be accepted. There are eight such assignments, worth 25 points each, for a total of 200 points. You will receive credit if you turn these in and lose credit if you do not, as follows. If you fail to turn in exactly one homework assignment, you will not lose any points (i.e., at the end of the semester, you will be given points for all eight homework assignments) In other words, you get one “My Dog Ate It” excuse for the semester. Penalties only 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 or TA 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 lecture.

  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 weekly assignments. In light of that, it would be in your best interest to bring two drafts of homework assignments that you turn in – one that you turn in for credit, the other for you to look at 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>620-574</td>
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<tr>
<td>A-</td>
<td>573-549</td>
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<tr>
<td>B+</td>
<td>548-537</td>
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<tr>
<td>B</td>
<td>536-512</td>
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<tr>
<td>B-</td>
<td>511-493</td>
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<tr>
<td>C+</td>
<td>492-472</td>
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<tr>
<td>C</td>
<td>471-450</td>
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<td>C-</td>
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<td>D</td>
<td>433-372</td>
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<td>F</td>
<td>&lt;372</td>
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Course Expectations

- **Attendance**: I do not take attendance, but students are responsible for everything covered in class. Fair Warning: this is a challenging course. If you do not show up to lecture regularly — or if you fail to keep up with course topics as we cover them — you should not expect to get a good grade.

- **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 “0” for the relevant quiz or exam. For circumstances that are not emergencies, students must send the instructor 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.

- **Academic Integrity**: You are expected to do your own work on all homework assignments, quizzes, and exams. The minimum penalty for cheating is a failing grade in the course. You will also be reported to the University’s Academic Misconduct Committee. Students are responsible for knowing and understanding the University’s policy on academic misconduct. For further information about this, consult the following website:
  https://regulations.utah.edu/academics/6-400.php.

- **Course Conduct**: Students are expected to be respectful to each other and the instructor. Please do not have non-class related conversations with others during lecture. If you do, I will ask you to stop. If you do not stop, you will be asked to leave. You should arrive on time and you should not start packing up your things before the class has ended.

- **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 be asked to leave. 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.

Teaching and Learning Methods

- **Canvas**: The Canvas course webpage is your contact point for this course. The “homepage” will provide a detailed course schedule that will be updated as we go (dates of exams and quizzes, as well as daily reading assignments, can be found there). I will use Canvas to distribute all other course materials (course schedule, readings, handouts, study guides, etc.) as well.

- **Lecture**: Typically, lectures will proceed on the basis of typed handouts. These will be posted in the Course Schedule, on CANVAS, at least 24 hours before each lecture. IT IS YOUR RESPONSIBILITY TO PRINT OUT HANDOUTS AND BRING THEM TO CLASS. I won’t have extras and you’ll want to have them in front of your during lectures. In addition, it is CRUCIAL that you bring a writing utensil (most logic students prefer to use pencils by the end of the semester) and a notebook to EVERY lecture. We’ll be going over many things not explicitly on the handouts, and working out solutions to exercises, and these are things you’ll want to write down.
• **Logic Lab:** The U of U Philosophy Department recognizes that this is a difficult course. For that reason, the department has provided funding for a “Logic Lab” this semester. Logic Lab will provide tutoring for logic students who would like additional instruction outside of lecture. It will be held twice-a-week. Students may also sign up for individual tutoring if they would like additional support or have scheduling conflicts with the regular lab meetings. I highly encourage students to take advantage of this. More details to come.

**Course Schedule:**

*This syllabus in NOT a binding legal contract.* I reserve the right to revise the course schedule (including dates of exams, quizzes, and homework assignments) as I see fit. If there are any changes regarding exams, quizzes, or homework assignments, I will revise the Course Schedule (on Canvas) and post an announcement. So, be sure and check it regularly.

**Week 1**

  - Tuesday 1/7
  - Thursday 1/9

**Week 2**

  - Tuesday 1/14 ← **Homework 1 Due**
  - Thursday 1/16

**Week 3**

  - Tuesday 1/21 ← **Quiz 1**
  - Thursday 1/23

**Week 4**

  - Tuesday 1/28 ← **Homework 2 Due**
  - Thursday 1/30

**Week 5**

  - Tuesday 2/4 ← **Homework 3 Due**
  - Thursday 2/6

**Week 6**

  - Tuesday 2/11 ← **Exam I**
  - Thursday 2/13

**Week 7**

  - Tuesday 2/18 ← **Homework 4 Due**
  - Thursday 2/20
Week 8

Tuesday 2/25 ← Homework 5 Due
Thursday 2/27

Week 9

Tuesday 3/3 ← Quiz 2
Thursday 3/5

Week 10 SPRING BREAK

Tuesday 3/10 NO CLASS
Thursday 3/12 NO CLASS

Week 11

Tuesday 3/17 ← Homework 6 Due
Thursday 3/19

Week 12

Tuesday 3/24 ← Exam II
Thursday 3/26

Week 13

Tuesday 3/31 ← Homework 7 Due
Thursday 4/2

Week 14

Tuesday 4/7 ← Quiz 3
Thursday 4/9

Week 15

Tuesday 4/14 ← Homework 8 Due
Thursday 4/16

Week 16

Tuesday 4/21 ← Last day of class!

Finals Week: Thursday 4/23 – Wednesday 4/29

Final Exam ← Friday, April 24 from 10:30am - 12:30pm
Other Policies and Resources

Veterans Center
If you are a student veteran, I want you to know that the U of Utah has a Veterans Support Center on campus. They are located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: http://veteranscenter.utah.edu/. Please also let me know if you need any additional support in this class for any reason.

LGBT Resource Center
If you are a member of the LGBTQ community, I want you to know that my classroom is a safe zone*. Additionally, please know that the U of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Oplin Union Building. Hours: M-F 8-5pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: http://lgbt.utah.edu/. Please also let me know if there is any additional support you need in this class.

Learners of English as an Additional/Second Language
If you are an English language learner, please be aware of several resources on campus that will support you with your language development and writing. These resources include: the Department of Linguistics ESL Program (http://linguistics.utah.edu/esl-program/); the Writing Center (http://writingcenter.utah.edu/); the Writing Program (http://writing-program.utah.edu/); the English Language Institute (http://continue.utah.edu/eli/). Please let me know if there is any additional support you would like to discuss for this class.

ADA
The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

Nondiscrimination
The University of Utah does not discriminate on the basis of race, ethnicity, color, religion, national origin, sex, age, disability, sexual orientation, gender identity, gender expression, genetic information or protected veteran’s status, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries concerning perceived discrimination or requests for disability accommodations may be referred to the University’s Title IX/ADA/Section 504 Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066.

Sexual Misconduct/Title XI
Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran’s status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential
consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Wellness Statement
Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student’s ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

University Safety Statement.
The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

Philosophy Resources: (helpful for research and getting a better handle on complex issues)
Stanford Encyclopedia of Philosophy: https://plato.stanford.edu/
Internet Encyclopedia of Philosophy: https://www.iep.utm.edu/