Professor Jeremy Heis
Dept of Logic and Philosophy of Science

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LPS/PHIL 29: CRITICAL REASONING
Course Policy Statement
Summer Session II, 2016

A. **Course Organization**

This course is divided into 5 units. Each unit is divided into a large number of topics. Each topic has an accompanying short video and lecture slides. Most topics also involve a reading assignment from the course textbook.

Your job is to work your way through the topics in the course. For each topic, watch the video, do the reading, take notes, and practice the exercises. The videos are designed in order for you to take notes while you are viewing them. In particular, the lecture slides contain many blanks and unsolved example problems that we fill in together as the video proceeds. I suggest that you print the accompanying slides out ahead of time and fill in the blanks, complete the examples, and take additional notes on the slides as you view the video.

The units and the topics must be completed in order. (A detailed calendar below lists the units and topics.) You may complete the topics at the rate you prefer. However, there are set due dates for the homework assignments, quizzes, and finals. Please plan accordingly so that you are able to complete your homework on time and are prepared for your quizzes and exam. (Dates are given on the calendar below.)

B. **Text and Assignments**.

Required Text:

- Nolt, Rohatyn, and Varzi, *Schaum's Outline of Theory and Problems of Logic*, McGraw Hill (2nd Ed.).

You will be responsible for all the reading in the text. All of the exercises that need to be turned in are in *Schaum's Outline*, along with answers to many assigned exercises. Separate handouts will show you which exercises you are to do, and the calendar below lists the dates when the exercises are due.

This cannot be overemphasized: it is absolutely essential that you do all of the required exercises. Until you can do the exercises with ease, you are not prepared for the exams. If you consistently work hard at your exercises, you are likely to get an A or B in the course; if you do not do them, or do them inconsistently, you will almost certainly fail. Luckily, logic exercises are much like puzzles, and many find them interesting or even entertaining.

C. **Office Hours**: **Thursday 1:00-2:00 pm and Friday 9:00 am -10:00 am**

There are two hours per week when I will be online and can be contacted through Scribblar, which is an online whiteboard that will allow us to communicate in real time via voice and text. The address for the course's Scribblar page is: http://scribblar.com/wd4ynnwp.

Outside of those office hours, I can also respond to student questions sent through the course webpage or via email.

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D. **Exercises.**

There will be nine HWs due. These assigned exercises are due on Sunday, by 11:59 pm, and must be submitted through the CANVAS webpage. HWs can be typed and submitted via CANVAS as pdf files, or you can scan or take a picture of your HW and submit via the CANVAS page. The assigned exercises that are due will be posted on the course webpage.

The exercises you hand in will be graded on the basis of effort and completeness, not correctness. We will go over them together in the discussion sections.

I will accept a late HW *only if* you tell me *ahead of time*, *and* you have a note, e.g. from a doctor, validating your justification for missing. If you do not meet these criteria, please do not turn in your HW late. Also, your note should include the name and contact information of the doctor (or employer, etc.) whom I can contact for confirmation.

E. **Discussion Sections: Monday 6:00-6:50 pm and Tuesday 9:00-9:50 am**

I will hold twice weekly "discussion sections." In the first week of the term, you must commit to attending one of these two sections, and you will be required to attend that section for the remainder of the term. (If you cannot attend either discussion section, please contact me and we can set up an alternative way – say, during office hours, for you to receive feedback on your HW.)

The goal of these discussion sections is to go over the HW assignment that students have turned in the previous day. These discussion sections will be held online using the platform Scribblar. Using the online whiteboard (visible to every student), I'll give real time feedback on students' homework via microphone and audio. In short, there will be weekly online "class periods" that closely mimic what is done in the classroom in a traditional course.

The first discussion sections will meet in **Week 2**, on Monday August 8 (6:00-6:50 pm) and Tuesday August 9 (9:00-9:50 am).

The Scribblar page for this course is available at: http://scribblar.com/wd4ynnwp. To be prepared for your discussion section:

1. please be online and logged in via Scribblar by the starting time.
2. you will need a good internet connection and headphones or speakers.
3. students will have the ability to ask questions aloud, so please have a microphone ready and enabled.
4. Scribblar requires Adobe Flash, so please make sure that your device is compatible with Flash and has it installed.
5. you will need to have a large screen to view the online whiteboard, so please use a computer or tablet (no smartphones, please).
6. Since we will be going over your homework, please have your homework in front of you so that you can participate in the discussion and make any necessary corrections to your own HW.

F. **Quizzes and Exam**.

This course has two quizzes and a final exam. The quizzes and exam will be administered through the CANVAS page (use the Quizzes tab, visible on the left of the CANVAS page).

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To take a quiz or exam, you will need access to a scanner and a computer with a keyboard. The quiz or exam will be completed partially online (with answers typed into CANVAS), and partly on paper. After the exam or quiz is complete, students will then have one hour to scan the exam paper and upload it through CANVAS.

There will be one 50 minute quiz on Wednesday July 8. It will cover Units 1 and 2 (Chs. 1 and 3). The quiz will be proctored using the online proctoring service, Proctor U. Information about Proctor U is available on the course webpage in the "Getting Started" Module. Students may schedule the exam for anytime on Wednesday, August 17 (from 12:00 am to 11:59 pm). Each student needs to personally schedule an exam time with Proctor U. Please schedule your exam time at least 72 hours ahead of time to avoid paying a late fee.

There will be one 25 minute quiz on Wednesday August 19. It will cover Unit 3 (Ch.4). Students may take the exam anytime on Wednesday, August 19 (from 12:00 am to 11:59 pm). This quiz will not be proctored by ProctorU.

There will be a final exam Tuesday September 6, 8:00 am-12:00 pm. The final exam will be cumulative. The final exam will be proctored using Proctor U. Information about Proctor U is available on the course webpage in the "Getting Started" Module. Please schedule your exam time with Proctor U at least 72 hours ahead of time to avoid paying a late fee.

Neither the quizzes nor the exam will be "open note." There will be no makeup exams. You must inform me, by the beginning of the second week, if you are unable to take an exam or quiz at the scheduled time.

G. **Academic Integrity.**

Any violation of academic integrity (including cheating on an exam or quiz) will result in an F for the course and letters sent to the appropriate deans. This course will follow the UCI policy on academic integrity. A link to that policy is on the course website, at EEE.

H. **Course Website: [[fill in web address once assigned]]**

There is a course website. using the CANVAS platform. On the CAVAS webpage,

- All lecture slides, videos, assignments, and handouts are posted.
- Students will submit assignments
- Exams and quizzes will be posted at the assigned exam and quiz times.
- The course gradebook will be available.
- You can also post discussion questions for the class, and pose questions to me.

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COMPUTING YOUR GRADE

Course Grades will be on a strictly numerical basis, without rounding up:

90.0-92.9 = A-	93.0-96.9 = A	97.0-up = A+
80.0-82.9 = B-	83.0-86.9 = B	87.0-up = B+
70.0-72.9 = C-	73.0-76.9 = C	77.0-up = C+
60.0-62.9 = D-	63.0-66.9 = D	67.0-up = D
	0-59.9 = F	

HW 1: _____/12 pts
HW 2: _____/12 pts
HW 3: _____/12 pts
Quiz 1: _____/80 pts
HW 4: _____/12 pts
HW 5: _____/12 pts
Quiz 2: _____/40 pts
HW 6: _____/12 pts
HW 7: _____/12 pts
HW 8: _____/12 pts
HW 9: _____/12 pts
Final Exam: _____/200 pts

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COURSE CALENDAR

Unit	Topics	Reading Assignment	Lecture Slides	Assignment
Unit 1: Argument Structure	*How to Take This Course*			
	What is Critical Reasoning?		Intro	
	What is an Argument?	S: 1.1-1.2	Ch.1, #1	
	Sentences in an argument		Ch.1, #1	
	Putting an argument into standard form	S: 1.2-1.3, 1.6	Ch.1, #2	
	Examples: putting an argument into standard form		Ch.1, #2	
	Analyzing Argument Structure in 4 steps		Ch.1, #3	HW1 due, by August 7
Discussion Sections: Monday August 8 (6:00-6:50 pm) and Tuesday August 9 (9:00-9:50 am)				
Unit 2: Propositional Logic	*Deductive Validity*		Ch.3, #1	
	Argument Forms	S: 1.8, 3.1	Ch.3, #1	
	Truth-Functional Operators	S: 3.2	Ch.3, #2	
	Sentences with Truth-functional operators		Ch.3, #2	
	Translating Can Be Tricky!	S: 3.3	Ch.3, #3	
	Translating Multiply Compound Sentences		Ch.3, #4-5	HW 2 due, by August 14
	Introducing Truth Tables		Ch.3, #4-5	
	Truth Tables for our 5 Operators	S: 3.4	Ch.3, #4-5	
	Truth Tables for Multiply Compound Formulas	S: 3.5	Ch.3, #4-5	
	Examples: Truth Tables for Multiply Compound Formulas			
	Testing for Validity using Truth Tables	S: 3.6	Ch.3, #6	
	Examples: Testing for Validity using		Ch.3, #6	HW 3 due, by August 14

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	Truth Tables			
	The Partial Truth Table Method		Ch.3, #7	
	Tautology, Contradiction, and Contingency	S: 3.5	Ch.3, #7	
	Six Facts to Remember about Statement Forms		Ch.3, #7	
	Logical Equivalence		Ch.3, #7	
Discussion Sections: Monday August 15 (6:00-6:50 pm) and Tuesday August 16 (9:00-9:50 am)				
				Quiz 1: Units 1 and 2, Wednesday August 17
Unit 3: Propositional Calculus, part 1	*Introducing the Method of Proofs*	S: 4.1	Ch.4, #1	
	Four Basic Rules of Inference	S: 4.2	Ch.4, #1	
	Four more Basic Rules of Inference		Ch.4, #2	
	Examples: Proof with 8 Basic Rules		Ch.4, #2	HW 4 due, by August 21
	Conditional Introduction	S: 4.3	Ch.4, #3	
	Negation Introduction		Ch.4, #3	
	Examples: Proofs with ~I and →I		Ch.4, #3	
	3 Derived Rules	S: 4.4	Ch.4, #4	
	A Proof of Disjunctive Syllogism		Ch.4, #4	
	Examples: Proofs with 3 Derived Rules		Ch.4, #4	HW 5 due, by August 21
Discussion Sections: Monday August 22 (6:00-6:50 pm) and Tuesday August 23 (9:00-9:50 am)				
				Quiz 2: Unit 3, Wednesday August 24
Unit 4: Propositional Calculus, part 2	*Theorems*	S: 4.5	Ch.4, #5	
	Examples: Proofs of Theorems		Ch.4, #5	
	Equivalence Rules	S: 4.6	Ch.4, #6	
	Our 5 Equivalence Rules		Ch.4, #6	
	Examples: Proofs of Equivalence Rules		Ch.4, #6	
	Examples: Proofs Using Equivalence Rules		Ch.4, #6	HW 6 due, by July 19

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	Proofs "Using Some Good Proof Strategies"		Ch.4, #7	
	Examples: Proofs Using All of Our Rules		Ch.4, #7	
	Proofs and Arguments in Standard Form		Ch.4, #8	
	Why Aren't We Done?		Ch.4, #8	HW 7 due, by August 28
Discussion Sections: Monday August 29 (6:00-6:50 pm) and Tuesday August 30 (9:00-9:50 am)				
Unit 5: Evaluating Informal Arguments	*4 Independent Problems with an Argument*	S: 2.1-2.2	Ch.2, #1	
	Deductive and Inductive Arguments	S: 2.3	Ch.2, #1	
	Deductive Validity, Inductive Probability	S: 2.3	Ch.2, #1	
	Deductive Validity: Special Cases	S: 2.3	Ch.2, #2	
	3rd Kind of Problem: Relevance	S: 2.4	Ch.2, #2	
	4th Kind of Problem: Vulnerability to New Evidence	S: 2.5	Ch.2, #2	
	Example: Vulnerability to New Evidence		Ch.2, #2	HW 8 due, by September 4
	Four Kinds of Fallacies	S: 8.1	Ch.8, #1	
	Fallacies of Relevance: Ad Hominem Arguments	S: 8.2	Ch.8, #1	
	Other Fallacies of Relevance	S: 8.2	Ch.8, #1	
	Semantic Fallacies	S: 8.4	Ch.8, #1	
	Deductive Fallacies	S: 8.6, 8.3	Ch.8, #2	
	Inductive Fallacies	S: 8.5	Ch.8, #2	
	Examples: Informal Fallacies		Ch.8, #3	HW 9 due, by September 4
Cumulative Final Exam, Tuesday September 6, 8:00 am-12:00 pm				