Syllabus for __PHIL 12: Introduction to Logic___

Course Information

Semester & Year: Spring 2021
Course ID & Section #: V 2509
Instructor's name: Johnston
Course units: 3

Instructor Contact Information

Office location or *Online:
Office hours: Online hours according to your needs and schedule.
Phone number: 707-476-4375
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Catalog Description

An introduction to the nature of argument with emphasis on deductive logic. Students will practice deductive reasoning and learn to use Venn diagrams, squares of opposition, and truth tables to assess ordinary language arguments encountered in daily life and symbolic arguments. Topics such as justification, validity, language and thought, and formal fallacies will be discussed.

Course Student Learning Outcomes *(from course outline of record)*

1. Evaluate complex arguments for validity and soundness.
2. Translate natural language arguments into symbolic form.

Prerequisites/co-requisites/ recommended preparation

None

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or Disability Services and Programs for Students (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Philosophy 12: Introduction to Logic Fall 2021

Instructor: John Johnston
Email: John-Johnston@redwoods.edu
Office hours: Online according to your needs and schedule
Phone: 707-476-4375

Contacting your instructor: Email is the only way for you to contact me, and you can easily do so from the Canvas course site.

What you need for this course:

- *A Concise Introduction to Logic 12th* edition by Patrick J. Hurley. Cengage Learning. ISBN: 978-1-285-19654-1.
- *PHIL 12 Intro to Logic Course Packet* (available at the CR bookstore for purchase or for free in the PHIL 12 Canvas site)

IMPORTANT NOTE: I assume part of the reason you are in college is that you know that you don't know what you don't know (if you knew what you didn't know, you could just hit up Google to learn). The process of discovering what you don't know you don't know can be scary, especially when this process happens in front of other people. It requires that you take risks, make yourself vulnerable, be prepared to discover you might be wrong about some of your beliefs, and live with the discomfort of uncertainty. My hope is that our class will approach issues with intellectual humility and that we will support one another as we try to figure out what seems true. Ideally, we'll focus on learning ***why*** others and you think the way they and you do and avoid burdening ourselves with the job of proving to someone else that we're right and they're wrong.

Of course, I am aware that classmates (and teachers) who are extremely confident they've got it all figured out and know ***exactly*** what they and you should think about a topic can be a little nerve-wracking and may cause your defenses to kick into gear. And believe me when I say that I am acutely aware of how deeply frustrating and downright scary it can be in our current culture to even raise questions about orthodoxies held by the political far left and far right. Just asking a question earnestly can result in the questioner being shamed and labeled something terrible. Unfortunately, the extremes have managed to get us so wrapped into their power struggle over competing oversimplifications that the very purpose of college is increasingly threatened—that is, the extremes are much, much more concerned that you know ***what*** to think and much less concerned that you know ***how*** to think. This is why our current culture is often called "Shut Up Culture," "Call out Culture," "Culture of Outrage," "Cancel Culture," and so on.

Hopefully, you're getting a sense of how I roll. I detest fundamentalisms, and orthodoxies are extremely dangerous, in my opinion. I find people who are certain about much of anything to be completely boring and obnoxious (and usually not very self-aware). I find that most people who are willing to label someone they know little about anti-American or a Nazi or a fascist or a communist or man-hater or -ist or -phobe or bigot of some sort or close-minded or ignorant or…..well, you get the idea…..I find people who use these labels to demonize people they disagree with to be intellectually weak and uninteresting, bad at engaging in productive discussion but good at intimidation. So that's where I'm coming from. I'm interested in what you think, but I am much, much more interested in the thought processes that lead you to your insights and conclusions, and I love few things more than seeing someone comfortable enough in my class to admit that he or she hadn't thought of something I or a classmate says or to celebrate a moment of changing one's personal beliefs on a topic. After all, I've been seriously thinking about things for 30 years, and I'm less confident I've "got it all figured out" now than I was at 20 (I was embarrassingly certain I knew how the world should be ordered then—you're lucky I didn't get my way then). Now, I find myself profoundly grateful every time a student raises a question or an idea that causes me to see things differently or see different things. All this is to say that if it seems like my personality is going to grate on you or frustrate you so much that you won't be able to focus on the material we're going to study, you should talk with me so we can figure out a path to success for you.

Now, until I see evidence to the contrary, I will regard you as tough, resilient, curious, willing to take risks, willing to admit you're wrong, and willing to allow others to have their stupid thoughts. I am going to think of you as strong, not weak. And just like your immune system gets stronger when exposed to manageable biological challenges, your mind will get stronger by exposing yourself to manageable intellectual challenges. If you don't agree, then you probably don't belong in a philosophy course. In order to think, you have to be willing to risk offending people and you have to risk being offended. My hope is that at least a few times during this class, you walk out unsettled and uncertain (as well as satisfied and inspired). I hope you lie awake some nights thinking about what we've discussed. I hope you feel the discomfort that comes when you realize that something you've always believed is, actually, not worth believing and that an idea you've previously rejected is probably worthy of more consideration.

Now, all that said, I'm not going to tolerate you being a jerk. If you intentionally insult someone or try to make someone feel "less than" for who they are or what they think or what they say or try to shame someone into silence, then we're gonna have a problem. So don't be a jerk. Be cool. Assume that your classmates are trying to figure things out and may not say things exactly as they should. Give them the benefit of the doubt. If someone says something that offends you, assume that the person's intentions were good and that they made a mistake. If it turns out that the person's intentions were not honest or good, then we'll deal with it. It is especially important to be

patient and kind and forgiving of one another this semester because, as you know, communicating in writing or via video can make it very easy to come across in a way you don't intend. So let's be chill with one another until someone makes clear they really are a jerk, and then we'll deal with them (and we'll deal with them in a very medieval fashion, I promise).

Course Description (from the CR Catalog)
An introduction to the nature of argument with emphasis on deductive logic. Students will practice deductive reasoning and learn to use Venn diagrams, squares of opposition, and truth tables to assess ordinary language arguments encountered in daily life and symbolic arguments. Topics such as justification, validity, language and thought, and formal fallacies will be discussed.

Student Learning Outcomes (as described in course outline) :
1. Evaluate complex arguments for validity and soundness.
2. Translate natural language arguments into symbolic form.

A More Detailed Description of our Subject of Study
I go to HealthSport in Arcata a few days a week, and I notice quite a few HSU student athletes do as well. I see them running on the treadmills, climbing Stairmasters, lifting weights, jumping rope, and doing all kinds of goofy looking exercises (does anyone really think it looks cool to do squats?). Why they do these things is not obvious. After all, does a softball player need to be good at climbing stairs? There are no stairs on the ball field, right? And basketball players don't lift anything heavier than a basketball. So why do they spend so much time lifting weights?

In similar way, serious musicians spend hours and hours and hours playing scales. Over and over. But any musician who played a series of scales in a performance wouldn't have an audience. So why spend all that time practicing scales if they're not going to be played in performance?

You know the answers to these questions, right? While these people are not necessarily looking to become better rope jumpers or squatters or scale players, they recognize that doing these things makes them better at *other* things—e.g. stealing bases, evading an attempt to block a basket, improvising a jazz solo on the guitar, etc.

Studying logic follows a similar principle: most people do it not because they want to be good at solving logic problems but because they want to be better at programing computers or better at making arguments or better at evaluating arguments politicians make or better at being an auto mechanic….well….just to be better at thinking. Practicing logic makes us better at thinking about everything. And that's our goal this semester: to become better at thinking, no matter what subject we're thinking about.

How can studying logic make us better at thinking about everything? To answer that, we need first to define what logic is. Logic is very commonly defined along these lines: Logic is the branch of philosophy concerned with the methods and principles for distinguishing correct from incorrect thinking. Yes, some thinking is correct and some is incorrect. Folks often bristle when I say that, interpreting it to mean something like "Some people have a right to think what they think more than other people" or "Some opinions cannot be held" or "I'm denying you 'your truth,'" but that's not what it means at all to say that some thinking is correct while other thinking is incorrect. To say some thinking is "incorrect" is to say that it is thinking that does not adhere to the established rules of logic, and to say that some thinking is "correct" is to say that it does follow these rules. When thinking adheres to the rules, it "makes sense;" when thinking violates the rules, it doesn't—even if it seems like it does.

The study of logic is generally divided into two very broad categories: informal logic and formal logic. Informal logic is often termed "critical thinking" and involves an evaluation of the evidence and justification for a given statement or argument. So if I say something like, "Noah is an untrustworthy person because he told his friend his haircut looks good even though Noah actually thinks it looks awful," you might ask questions like Did Noah really say this? Does he really think the haircut looks awful? If he did say this and if he really does think it looks awful, are those good reasons for believing the statement "Noah is an untrustworthy person" is true? That's how informal logic works (not entirely; that's just a snapshot example).

Our focus will be on formal logic, a kind of logic that looks primarily at the structure of arguments to see if the different thoughts that make up the argument are put together correctly. Formal logic can seem at first to be a bit alien, but it is valuable because it allows us to quickly identify the way in which an argument is structured and to determine with certainty whether the argument is put together in a way that is trustworthy and reliable. An argument that it structured correctly is logical; an argument that is structured incorrectly is illogical. Here's an example. Suppose your friend Jerry tells you that his dad has promised him that he can use the family car for a cross-country road trip if Jerry first eats a maggot sandwich. Suppose, further, that you know it is impossible for Jerry's dad to make a false promise, and the next day, Jerry tells you that his dad has given him permission to use the family car for a cross-country road trip. Is it logical to believe from this that Jerry ate a maggot sandwich? Here's what the argument here would look like:

> If it's true that if Jerry eats a maggot sandwich, then Jerry gets to use the family car.
> And if it is also true that Jerry gets to use the family car.
> Would it, therefore, also ***have*** to be true that Jerry at a maggot sandwich?

Does that thinking make sense? What's your answer? Seriously. Think about it and don't continue reading until you've got an answer.

Now consider this situation: your friend Jerry tells you that his dad has promised him that he can use the family car for a cross-country road trip if Jerry first eats a maggot sandwich. Suppose, further, that you know it is impossible for Jerry's dad to make a false promise, and the next day, you and Jerry's dad watch Jerry eat a maggot sandwich. Is it logical to believe from this that Jerry's dad will give Jerry permission to use the family car for a cross-country road trip? The argument here would look like this:

> If it's true that if Jerry eats a maggot sandwich, then Jerry gets to use the family car.
> And if it is also true that Jerry ate a maggot sandwich.
> Would it, therefore, also have to be true that Jerry gets to use the family car?

Does that thinking make sense? What's your answer? Seriously. Think about it and don't continue reading until you've got an answer.

In one of these cases, the thinking is correct and in one it is incorrect. And to refuse to accept the logical thinking would, itself, be an illogical act. We'll spend most of the semester practicing the techniques that allow us to figure out what is logical and what isn't, and the hope is that we'll be better thinkers about everything because of our efforts.

And you want to know the answers to the Jerry problems, right? We'll discuss these after you finish reading the syllabus.

Course Requirements (the things you need to do in order to succeed in this course)
Thought Primers: Thought Primers are based on exercises from our textbook, and their purpose is twofold: one, to practice applying the skills and concepts we're studying; two, to make sure you're "getting it" each step of the way. Each Thought Primer receives credit as follows: ½ credit (1 point) for problems you have completed and self-corrected, and ½ credit (1 point) for problems I check. When I check these problems, I'll identify any that are incorrect and send them back to you so you can correct them. Once all those problems are corrected, you'll receive the credit. Pay careful attention to the last sentence. You have three NQA slips worth ½ credit for each of any three Thought Primers. See below for more information.

No Questions Asked (NQA): Attached to this syllabus are three "No Questions Asked" slips. 1 slip equals 1 thought primer point. So, for example, let's say we get to the end of the semester and you did all the thought primers but 1. You can use two NQA slips (each worth 1 point) to make up all the points of that missing thought primer. It's that easy. You don't even have to do the Thought Primer. The slips "make up" the missing thought primer points.

Exams: There are three multiple-choice exams of approximately 50 or fewer questions each. All exams are open-book and open-note, and you will have unlimited time and two attempts to complete each multiple-choice exam. After your first attempt, you will be able to see which problems you got correct and incorrect, and you will then be able to attempt the exact same exam one more time. Your highest score for the two attempts will be recorded. We will do extensive review before each exam, and there will be two practice exams available to you for each multiple-choice exam. You may, if you choose to, retake any ONE of the multiple-choice exams. The problems on the "retake" exam will be similar but not identical to the problems on your original exam, and your highest score will be recorded. To retake one of the exams, you simply need to notify me of the exam number you wish to retake. Remember: You can retake only ONE of the exams.

Argument Constructions: Three times during the semester you will be tasked with constructing a number of very short arguments. The first argument construction assignment requires you construct immediate inferences, the second requires you to develop categorical syllogisms, and the third requires you to construct arguments made up of propositions and tested for validity with truth tables (trust me: that'll make way more sense in a couple of weeks).

Each Argument Construction assignment will be scored 1-100 according a rubric in Canvas.

Attendance: I am well aware that we're living in super weird times and that your life may be a difficult one to manage these days, especially if you have kids or work a lot. I'll do everything I can to work around your schedule and extend due dates if necessary. My goal is to do whatever we have to to get you to complete the course successfully. But you have to meet me halfway by staying in contact with me when things get tough. The worst thing you can do is "check out" of the class for weeks at a time, so don't do that. And remember, if you simply stop attending the course, it is your responsibility to protect your transcript and initiate an official withdrawal. Any student who is not withdrawn is still enrolled, and I am required to issue grades for all enrolled students at the end of the semester.

Academic Honesty: "Academic honesty" is a term that refers to your relationship to your college learning. It's pretty simple: don't cheat. What that means is that you should avoid sharing answers on exams, presenting someone else's work as your own….you know, all the stuff you know you're not supposed to do.

Grading: There are three categories of assignments that constitute your course grade, and each category is equally weighted:

- Thought Primers
- Argument Constructions
- Exams

None of your work in this course will receive a traditional letter grade or percentage (i.e. no "A, B, C" etc. or 92%, 77%, etc.). Instead, your work will be judged as "exceeds expectations," "meets expectations," "nearly meets expectations," or "does not meet expectations." Don't freak out about this. It works in your favor if you attend class and do your work.

THOUGHT PRIMERS

Your collection of **Thought Primers** will be judged "exceeds expectations" if

- The average of your Thought Primers is at least 80%.

Your collection of **Thought Primers** will be judged "meets expectations" if

- The average of your Thought Primers is between 70% and 79%.

Your collection of **Thought Primers** will be judged "nearly meets expectations" if

- The average of your Thought Primers is between 65% and 69%.

Your collection of **Thought Primers** will be judged "does not meet expectations" if

- The average of your Thought Primers is less than 65%.

Your collection of **Thought Primers** will be judged "does not meet expectations" if

- You did not more than eight Thought Primers by the posted due dates (NQA slips do not count as missed entries).

Argument Constructions

Your **Argument Constructions** will be judged "exceeds expectations" if

- The average of your three argument constructions is at least 80%.

Your **Argument Constructions** will be judged "meets expectations" if

- The average of your three argument constructions is between 70% and 79%.

Your **Argument Constructions** will be judged "nearly meets expectations" if any of the following apply:

- The average of your three argument constructions is between 65%-69%.

Your **Argument Constructions** will be judged "does not meet expectations" if any of the following apply:

- You did not submit one or more of the argument constructions.
- The average of your three argument constructions is less than 65%.

EXAM

Your **Exam** will be judged "exceeds expectations" if

- Your combined score on the exam parts is 80% or higher.

Your **Exam** will be judged "meets expectations" if

- Your combined score on the exam parts is between 70% and 79%.

Your **Exam** will be judged "nearly meets expectations" if

- Your overall score on the exam parts is between 65%-69%.

Your **Exam** will be judged "does not meet expectations" if

- Your overall score on the exam parts is less than 65%.

Course Grades
Let "exceeds expectations" = E
Let "meets expectations" = M
Let "nearly meets expectations" = N
Let "does not meet expectations"= D

EEE= A
EEM=A-
EMM=B
MMM=C

An "N" in any one area drops your course grade to C as long as one of the other two areas is an "E."

An "N" in two or more areas OR an "N" in combination with two "M's" drops your course grade to D.

A "D" in any one area drops your grade to D.

A "D" in two or more areas drops your course grade to F.

Extra Credit: There is NO extra credit available in this course. But hey, just look at all the opportunity for credit you have available in the required assignments. Work hard not to be that student who emails me during finals week saying something like this: "Please, is there anything I can do to make up for all those thought primers I missed or exams I bombed…..etc. This was my favorite class and you're the absolute greatest person on earth and I know I really screwed up, but PLEASE!!! I'll do anything!!" You look like kind of a tool when you do that.

Special Needs: If you have special needs due to a verifiable physical, psychological, or learning disability, you are legally entitled to appropriate accommodations. The college offers a variety of services to support students with special needs, and you should talk with me as soon as possible if you would like my help with arranging accommodations to ensure your success in this course. I'm eager to help in whatever ways I can.

No Questions Asked #1

Name:

Date:

Apply to thought primers

No Questions Asked #2

Name:

Date:

Apply to thought primers

No Questions Asked #3

Name:

Date:

Apply to thought primers