Spring 2026 Syllabus

Figure 1: 'Holmes wears a top hat'

Focus: The focus of this course is . . .

- Informal Logic
- Classical Propositional Logic syntax and semantics
- Natural Deduction Proofs for Propositional Logic
- Formalization Rules and General Propositions
- Predicate (Quantification Rules) Logic Semantics and Inference

In this course, we will systematically look at arguments. We look at arguments for several reasons. One is to analyze the statements that people make. For instance, considering the photo above, what does it mean when someone says: "Holmes wears a top hat."

For one, the statement usually does not refer to an actually existent entity, thing, or person. Perhaps there really was someone alive at one time, whose name was 'Holmes', and it is conceivable that this person wore a top hat. But the statement 'Holmes wears a top hat' usually does not refer to *that* person, but rather to the fictional character from the Author Conan Doyle novels.

Even though the statement refers to a fictional character however, it is still a true statement, but how?

We will focus on these kinds of questions in two ways. Consider the following:

1. Cups of coffee from GreatBeanz that looked and tasted just fine haven't killed anyone in the past.
2. My present cup of GreatBeanz coffee looks and tastes just fine.

Taking sentences 1 and 2 above, it will be likely that you might conclude 3 following below.

3. This present cup of GreatBeanz coffee won't kill me

While we do this kind of reasoning and argumentation all the time, it is not the kind of reasoning and argumentation that we will focus on. Why?

Consider the following slight change:

3. My arch nemesis has poisoned this cup of coffee with an invisible and tastless poison.

By systematically looking at arguments, we will hope to avoid these kinds of outcomes. We do this by focusing on what is called internal cogency or logical validity. This is merely a fancy way of saying that if one accepts sentences 1 and 2, then they must accept 3.

Compare the argument above with the following one:

1. All Republican voters support capital punishment.
2. Jo is a Republican voter.

Therefore

3. Jo supports capital punishment.

Unlike the first argument, if someone accepts 1 and 2, then they must accept 3. What this means is that if they will reject 3, than it is either because they've rejected 1 or 2 or 1 and 2 are not relevant, but they cannot *logically* accept 1 and 2 while rejecting 3.

In this course, we will look at how critical thinking and reasoning will help us to evaluate the truth of statements, whether they are about fictional characters, or coffee.

Office Hours:

- When:
    - Tuesday: 1:00–3:00 PM
    - Thursday: 1:00–3:00 PM
- Where: Elizabeth Hall 104
- How to book: Drop in, email, or book via Microsoft Bookings

PLOs

Every course within a given department is expected to satisfy one (or more) of that program's Learning Outcomes (PLOs), as articulated in that department's Curriculum Map. Students who take a philosophy course will develop their capacity to (I.) understand and interpret philosophical texts, (II.) identify arguments, (III.) critically assess arguments, (IV.) identify philosophical traditions and methods, (IV.) and/or communicate clearly and effectively. The philosophy department's five Learning Outcomes are arranged hierarchically, so that the later Learning Outcomes presuppose some familiarity with the lower-order skills. The assignments and work within a given course are expected to develop the skills associated with that course's PLO, while strengthening the lower- order skills and setting the stage for the development of the higher- order skills. The PLO associated with this course is:

II. Argumentation: Students can identify and evaluate argument structures effectively.

Information about the philosophy department's PLOs can be found at:

http://www.stetson.edu/artsci/philosophy/curriculummap.php

Grading:

Assignments:

Weekly Exercise	8%
Exam 1	23%
Exam 2	23%
Exam 3	23%
Final Exam	23%

Required Text: Smith, Peter. 2021. An Introduction to Formal Logic. Second edition, Reprinted with corrections. Logic Matters:

Available Here: https://www.logicmatters.net/resources/pdfs/IFL2_LM.pdf

For grading I use the following scale:

A	93-96
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	23-76

Course Schedule

Week	Unit	Topic	Pages
Week 1	1-3	What is deductive logic, validity and soundness?	1-8
Week 2	4-6	Proofs and counter examples, and logical validity	28
Week 3	7-8	Propositions, forms, and some syntax	52
Week 4	9-11	More syntax, some semantics, and form	72
Week 5	12-14	Truth functions, adequacy and tautologies	104
Week 6	15-17	Entailing tautologies, and absurdity	127
Week 7	18-19	The truth-functional conditionals and natural deduction	148
Week 8	20-22	Predicate proofs: conjunction, negation, disjunction and conditionals	174

Week	Unit	Topic	Pages
Week 9	23-24	PL proofs: theorems, and metatheory	211
Week 10	25-27	Names, predicates, quantifiers, and variables	230
Week 11	28-31	QL languages, simple translations, and QL argumentation	258
Week 12		Interlude: Arguing in QL, informal QL rules, QL proofs	290
Week 13	33-35	More QL Proofs, empty domains, Q-Valuations	315
Week 14	36	Q-Validity	346
	37	QL Proofs, metatheory	354
Week 15	38	Identity	361
	39	QL=Languages	367
	40	Definite Descriptions	375
	41	QL=Proofs	382

Academic Accommodation

If you anticipate barriers related to the format or requirements of a course, you should meet with the course instructor to discuss ways to ensure full participation. If disability-related accommodations are necessary, you must register with Academic Success through the Accessibility Services Center located at 209 E. Bert Fish Dr. (386-822- 7127; http://www.stetson.edu/administration/academic-success/) and notify the course instructor of your eligibility for reasonable accommodations. The student, course instructor and Academic Success will plan how best to coordinate accommodations. Academic Integrity - DO NOT CHEAT. As a member of Stetson University, I agree to uphold the highest standards of integrity in my academic work. I promise that I will neither give nor receive unauthorized aid of any kind on my tests, papers, and assignments. When using the ideas, thoughts, or words of another in my work, I will always provide clear acknowledgement of the individuals and sources on which I am relying. I will avoid using fraudulent, falsified, or fabricated evidence and/or material. I will

refrain from resubmitting without authorization work for one class that was obtained from work previously submitted for academic credit in another class. I will not destroy, steal, or make inaccessible any academic resource material. By my actions and my example, I will strive to promote the ideals of honesty, responsibility, trust, fairness, and respect that are at the heart of Stetson's Honor System. Cheating violates university regulations and is a reportable offense that may result in academic suspension or dismissal from Stetson University. Every violation of the Honor System will be promptly reported to the Honor System Council for further investigation. In addition to these academic integrity standards, I expect students to treat everyone in the classroom—the instructor, fellow students, and guests—with common courtesy and respect.

Counseling Center Statement

College can be extremely stressful for students, especially if this is the first time you've been away from home for an extended period of time or if there are other pressures that you are facing. For this reason, you may find it helpful to consult the University Counseling Center. Here is their contact information: Phone number: 386-822-8900 Location: The office is located in the gray house behind the Hollis Center pool, at the corner of University Avenue and Bert Fish Drive. Office hours: Weekdays from 8:00 a.m. to 4:30 p.m If you experience a mental health emergency after hours, you can simply call Public Safety (386-822-7300) and ask to speak with the on-call counselor. We are staffed with qualified professional counselors who are trained to support and guide students through difficult transitions, experiences, and feelings. Counseling is confidential and free of charge for all currently enrolled Stetson University students.