

Philosophical Logic

Phil 577-01

Times and Locations:

T, Th: 9:25-10:40
Paccar 103

Instructor info:

Dr. Charles Lassiter
Office in Robinson 104
Office hours: M 2:15-3:15; T: 2-3; F: 2-4; and by appointment; and by appointment
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Course Description

We're going to learn about and discuss issues with first-order logic. We will explore extensions into mathematical logic as well as some of the philosophical analyses underpinning logic.

Course Outcomes

By the end of this course, students will be able to

1. Demonstrate competence in first-order logic.
2. Demonstrate competence in some metatheory of first-order logic.
3. Demonstrate competence in philosophical issues related to first-order logic.

Texts

1. *Formal Logic: Its Scope and Limits*, Richard Jeffrey
2. *A Philosophical Companion to First-Order Logic*, ed RIG Hughes

Plus some other readings I'll make available on Canvas

Work

Students must complete the first two problem sets. For the next two, students can choose between either (a) completing problem sets or (b) writing a paper. The paper for the 3rd problem set is to be 2000 words long. The paper for the 4th problem set is to be 4000 words long. Assignments are weighted equally. Late work will receive a penalty of 10% per day.

Expectations

1. I expect all students to participate. This is a graduate seminar.
 - a. Participation includes: asking clarifying questions, offering insights, asking challenging questions, offering answers. If you're not comfortable speaking in class, you can also email or talk to me during office hours.
2. Logic can be hard. Each of us will develop at different paces. We'll respect each other's progress. Sometimes, though, I'll need to forge ahead. When this happens, I'll ask that we continue the discussion in office hours.

Schedule

NB: We'll go as fast or as slow as we need to. Here's the list of everything we'll be talking about. If we end up finishing this list before the end of the semester, we'll add some more.

- ~~1. Hughes: Quine, "Introduction"~~
- ~~2. Jeffrey: Chapter 1~~
- ~~3. from [Metalogic: an Introduction to the Metatheory of Standard First Order Logic](#), p. 46-60~~
- ~~4. Jeffrey: Chapter 2 (propositional logic)~~
- ~~5. Hughes: Grandy, "What Do 'Q' and 'R' Stand for Anyway?"~~
- ~~6. Hughes: Horwich, "Theories of truth"; Haack, "The Justification of Deduction"~~
- ~~7. Hughes: Tarski, "Truth and proof"~~
 - a. ~~[Problem set 1 is due DUE: Feb 11](#)~~
- ~~8. [Donald Davidson, "In Defense of Convention T"](#) (essay #5)~~
- ~~9. Jeffrey: Chapter 3 (monadic logic with quantifiers)~~
 - a. ~~[Practice problems for chapter 3](#)~~
- ~~10. Jeffrey: Chapter 4 (first order logic, *in toto*)~~
 - a. ~~[Problem set 2 is due DUE: March 13](#)~~
- ~~11. Hughes: Bennett, "Kant, Malcolm, and the Ontological Argument"~~
- ~~12. Hughes: Quine, "Existence and Quantification"~~
- ~~13. Jeffrey: Chapter 5 (identity, definite descriptions)~~
- ~~14. Russell, "[Descriptions](#)" chapter 9 in *Introduction to Mathematical Philosophy*~~
- ~~15. Frege, "[On Sense and Reference](#)"~~
- ~~16. Hylton, "The Significance of 'On Denoting'"~~
- ~~17. Jeffrey: Chapter 6 (introducing functions, Robinson arithmetic) — 4/1 & 4/3~~
 - a. ~~[Problem set 3 is due/short paper due \(April 10\)](#)~~
- ~~18. Jeffrey: Chapter 7 (register machines, unsolvability of the halting problem); Pullum, "[The Webpage that cannot exist](#)" — 4/8 & 4/10~~
- ~~19. Jeffrey: Chapter 8 (undecidability of first order logic) — 4/17~~
- ~~20. Kripke, *Naming Necessity* (4/17 - 5/1)~~
 - a. ~~[Final problem set/final paper due \(May 6\)](#)~~

Notable dates:

February 20: Lassiter at a workshop—no meeting

April 15: Guest lecture by Dr. Richard Atkins, Boston College

April 17: Begin *Naming and Necessity*

University Policies

There are a number of important GU policies. Rather than put them all here, below is a table to all the relevant policies. Each of these policies is important. Please read them!

Religious Accommodations for Students In compliance with Washington State law, Gonzaga University will reasonably accommodate students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of their academic course or program. Gonzaga University prohibits discrimination, harassment, and retaliation on the basis of religion. The Religious Accommodations for Students policy as well as the process by which students can request accommodations, can be [found here](#).

University and Academic Policy Statements	Associated Links
Diversity, Equity and Inclusion	Office of Diversity, Equity and Inclusion Bias Incident Assessment and Support (BIAS) Team
Harassment, Discrimination And Sexual Misconduct Policies	Harassment and Non-Discrimination Policy Title IX
Academic Integrity Policy	Academic Integrity Policy
Students With Disabilities/Medical Conditions and Accessible Documents (EITA)	Disability Access and Resources Office Electronic Information Technology Accessibility (EITA)
FERPA and Privacy	FERPA

Class Attendance Policy	Class Attendance Policy Amended Class Attendance Policy
Notice to Students of COVID-19 Expectations	Student Arrival & Return to Gonzaga Guides
Notice to Students about Class Recordings (audio, video and photos)	Zoom sessions might be recorded Gonzaga University's Student Code of Conduct
Course Evaluations	Course Evaluations