

Graduate Logic

PHI 5135 Spring 2025

Prof. Ray

PHI 5135 - Syllabus

Logic is foundational for all theoretical endeavors, but especially for work in philosophy where complex and careful reasoning is crucial. Moreover, explicit appeal to elements of first-order logic, model-theoretic semantics, and modal logic are common in much philosophical work. They are part of the lingua franca of contemporary philosophy.

This course is designed to provide a solid foundation — philosophical and practical — in formal logic. For those without prior training, the course embeds a complete course in elementary logic, though approached from an advanced standpoint. Content varies, but with standard inclusions: classical first-order and modal logics with identity, formal semantics, and classic metatheorems. We will also formulate the philosophical underpinnings of our subject with special care, beginning with the concept of truth.

In addition to its great utility, logic is a subject of philosophical study in its own right.

Course Work:

Regular homework and two exams.

Course Materials:

All course materials will be made available either via Canvas or companion web site (if applicable). Some course materials may be posted as password protected pdf. In order to open them you need to know a password — which will be given to you in class...

Support material provided will be essential for skill development through practice problems and homework.

Some interactive course materials, like online practice problems and sample derivation demonstrations, will be made available to you. You are strongly urged to make use of these helpers throughout the course.

Rules of Engagement:

1) The materials on the Canvas site or companion site (as applicable) do not belong to

you. You may not give access to or share them with anyone outside the class. 2) The use in class of any digital device for any unsanctioned or non-class-related purpose (e.g. messaging, surfing, social media, searching the internet for info on a topic) is strictly prohibited. Thank you.

Nota bene:

Academic honesty violations are not tolerated and will result in i) immediate failure in the course and ii) referral to the Dean of Students for further action. All assignments are to be completed on your own. It is your responsibility to know and understand the UF Student Honor Code (<http://www.dso.ufl.edu/judicial/honorcode.php>).

Note for Students with Disabilities:

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

UF General Policy:

Course Evaluation:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations (<https://ufl.bluera.com/ufl/>). Evaluations are typically open during the last two or three weeks of the semester. UF emails students with specific times when they are open. Summary results (<https://gatorevals.aa.ufl.edu/public-results/>) of these assessments are made available to students. UF has specific guidance (<https://gatorevals.aa.ufl.edu/students/>) on how to give professional (and respectful) feedback.

Conformality:

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with prevailing university policy (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>).

Grade Points:

Information on how UF calculates grade points from grades can be found here (<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>).

Minimum Requirement:

Please note that a minimum course grade of C is required to get general education credit for taking it (if this course is a listed Gen Ed class).

Useful Disclaimer:

Our schedule of topics/readings/assignments are subject to change. So, stay informed as we go along.

Personnel & Contact

- Prof. Greg Ray, 300 FLO
Class Professor
gregray.ufl.edu 352-392-2084

Office Hours

- Tues 11:00-1:00, but for you, anytime
- And by appt

Topical Schedule:

- 01/14- Formal Languages
- 01/21- Truth & Logical Truth
- 01/28- Model-theoretic Semantics
- 02/04- Proof Systems
- 02/11- Derivation
- 02/25- Midterm
- 03/04- Metalogic I
- 03/11- Extensions
- 04/01- Modal Logic
- 04/08- Metalogic II
- 04/22- Endterm