

Formal Logic II

Syllabus

Spring 2017

Instructor Contact

- Instructor: William Butchard, Ph.D.
- Office: PSY 235
- Office Hours: Tuesdays, 1:30-2:30
- E-mail: Please contact me through the course messaging system. If you cannot contact me in the way on a given day, my regular email address is William.Butchard@ucf.edu

Course Information

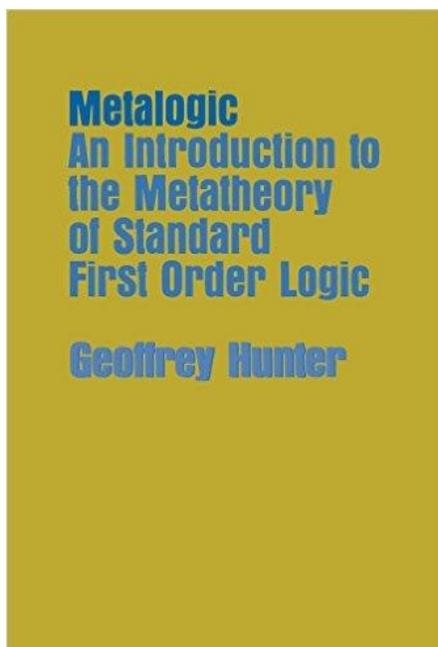
- Course Name: Formal Logic II
- Course ID: PHI 3131
- Credit Hours: 3
- Semester/Year: Spring 2016
- Location and Meeting Times: 209 Business Administration; T/H 10:30-11:45

Course Description

This course is an introduction to metalogic. A logical system is an artificial language coupled with a set of inference rules. The purpose of a logical system is to represent arguments as they occur in natural language. Translating arguments into constructions within a logical system enables us to represent the arguments' form clearly. Metalogic is to study of logical systems themselves. It asks to what extent a given logical system is complete, i.e., it asks, roughly, to what extent does the system capture all of the truths of logic? This involves distinguishing various senses of 'complete' and attempting to construct a proof that shows a logical system to be complete given a certain definition of completeness. Metalogic also asks whether a given logical system is consistent, and again, this involves defining various senses of 'consistent' and attempting to construct a proof that shows a logical system to be consistent given a certain definition if 'consistent'. In this course, we will discuss such features as soundness, completeness, decidability—and, finally, the infamous Gödel's Theorem, a theorem to the effect that no system capable of expressing arithmetic can be both complete and consistent. We will also cover some of the uses to which logical analysis has been put: Russell's theory of descriptions to solve certain puzzles about existence, Tarski's definition of truth for a formal system, Davidson's truth-theory of meaning, and Quine's views on quantifiers and propositional attitudes.

Required Texts and Course Materials

1. Geoffrey Hunter. *Metalogic: An Introduction to the Metatheory of Standard First-Order Logic*. University of California Press (1996)



2. Supplementary readings I will supply electronically.

3. Six raspberry scantron sheets

Course Requirements

- 6 exams--5 regular exams and one cumulative final exam. Each exam consists of 30 questions. The questions are true false and multiple-choice.
- Online small-group discussions.
- Online quizzes.

Missed Assignments/Make-Ups

Missing a deadline is not something that can be taken lightly because of fairness and assignment security. **You should consider it very unlikely that you will be able to make up a missed assignment.** I can allow such make-up work only if your circumstances are truly extraordinary and you provide proper documentation in a reasonable amount of time. Excusable failures to meet deadlines include documented medical emergencies, deaths in the family, and some university sponsored activities. Telling me that you were sick or having a roommate write a note will not count as documentation. A conflict with prior travel plans, etc. or other personal commitments does not constitute an excuse.

Please note that you may not take an exam after someone completes the exam and leaves the room, and you may not make it up.

Grade Determination

There are 100 possible percentage points for the course. This percentage will be displayed in the course grade book throughout semester as you complete the assignments. The grade scale is as follows:

Letter Grade	Points
A	90 – 100%
B+	87 – 89%
B	80 – 86%
C+	77 – 79%
C	70 – 76%
D+	67 – 69%
D	60 – 66%
F	59% and below

Each category of assignment is worth a percentage of your final grade:

Assignment Group	Percentage of Grade
Online Quizzes	15%
Small-Group Discussions	15%
Exams	70%

The Online quizzes can be found under "Modules". You will have unlimited attempts. Once a quiz opens, it will remain open until the end of the semester. The quizzes are designed to test your understanding of the lecture notes. Those can be found under "Files".

Your lowest exam score will be dropped. The final exam score can be your drop. Please note that if you skip the final exam with the intention of having that score dropped, it will be dropped, but (of course) a regular exam that was your drop before the final will be counted after the final. In other words, the number of points you have before the final does not tell you what you will have after skipping the final.

Participation and Classroom Etiquette

I strongly encourage you to be a full participant in class discussions. Don't worry about getting something wrong. If something we are discussing is unclear to you, chances are a lot of other people are confused by the same thing, and your input may well help us focus in on the difficulty. Voicing your opinion, putting an idea on the table for examination, or just asking a question can be very helpful in a class discussion.

Remember that there are several other students in the course and that it is important not to distract them. Please make an effort not to interrupt class by arriving late, talking while someone else has the floor, or using your laptop for something other than taking notes. Also, please keep your cell phones off and away during lecture.

Class attendance should be viewed as a responsibility. I will take attendance every class period, and I consider attendance mandatory, but it will not affect your grade directly. In other words, you will not earn an attendance score. If you come to class, you will get a much better handle on the readings and the issues we discuss. Also, when you miss class on a day when there is an exam, you miss the exam, which will hurt your grade.

Finally, always remember to be civil towards people who have different beliefs from yours.

Course Scheduling

The exam dates are schedule for the following dates:

- Exam 1: Tuesday, January 31st
- Exam 2: Tuesday, February 21st
- Exam 3: Tuesday, March 7th
- Exam 4: Tuesday, April 11th
- Exam 5: Thursday, April 20th
- Final: Thursday, May 2nd

Exam dates are subject to change at the instructor's discretion. Every student is bound by the exam dates. A study guide will be posted for each exam as it approaches (under Files). If an exam date has been changed, the new date will be identified on the study guide. It is the responsibility of the student to check the study guides for exam dates.

Academic Honesty

Plagiarism and cheating of any kind on an examination, quiz, or assignment will result at least in an "F" for that assignment (and may, depending on the severity of the case, lead to an "F" for the entire course) and may be subject to appropriate referral to the [Office of Student Conduct](#) for further action. See the [UCF Golden Rule](#) for further information. I will assume for this course that you will adhere to the academic creed of this University and will maintain the highest standards of academic integrity. In other words, don't cheat by giving answers to others or taking them from anyone else. I will also adhere to the highest standards of academic integrity, so please do not ask me to change (or expect me to change) your grade illegitimately or to bend or break rules for one person that will not apply to everyone.

Diversity and Inclusion

This class is an educational safe zone. It welcomes and respects the viewpoints of students of all sexual orientations and gender identities as well as all races, ethnicities, religions and abilities. All members of the learning community are expected to treat each other with respect and dignity.

Students with Disabilities

The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with [Student Disability Services](#), Ferrell Commons, 7F, Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Important Notice for Financial Aid Recipients

As of Fall 2014, all faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the academic activity below by the end of the first week of classes, or as soon as possible after adding the course, but no later than August 27. Failure to do so will result in a delay in the disbursement of your financial aid.

Activity: Complete the Syllabus Quiz.

Copyright

This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.

Third-Party Software and FERPA

During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these could be required assignments, you need **not** make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identity-sensitive information. If you have any concerns about this, please contact your instructor.

Topics and Readings

Introductory Material

- Arguments
- Formulas

- Validity
- Logical Form
- The Purpose of Formal Logic

Propositional Logic

- Syntax and Semantics
- Truth Tables
- Truth-Table Tests for Validity
- Formal Semantics
- Semantic Consequence
- The Adequacy of Sets of Connectives
- Syntactic Consequence and Proof

- Metatheorems
- Consistency
- Completeness

First Order Predicate Logic

- Quantifiers
- Interpretations
- Truth and Truth for an Interpretation
- Satisfaction
- Consistency
- Completeness

Additional Material

- Gödel's Theorems
- Paul Grice on truth-functional terms

- Davidson on the Logical Form of Action Sentences
- Ludwig and Lepore on Logical Form
- Russell's theory of descriptions

- Tarski's semantic conception of truth
- Davidson's truth theory of meaning

- Quine on existence and propositional attitudes