

Introduction to Logic

Philosophy 170 (Spring 2015)

Instructor: Max Bialek

Lecture: MW 11–11:50am

Location: ARM 0131

Email: mbialek@umd.edu

Office Hours: M 12–2pm

Office Location: SKN 1103B

TA Michael Dascal. Email: mdascal@umd.edu; Office Hours: MW 12–1pm (SKN 1107A).

TA Logan Fletcher. Email: loganf@umd.edu; Office Hours: M 1–3pm (SKN 1110D).

TA Cindy Phillips. Email: cindywoo@umd.edu; Office Hours: F 2–4pm (SKN 1108B).

Course Description. “Development of analytical reasoning skills through study of formal logics, reasoning systems, and fallacious inference patterns.”

This course will introduce students to two logical systems: Propositional Logic and First Order Logic. For each we discuss the syntax (what it means to construct a well formed sentence in the logic), the semantics (how one decides whether or not a sentence in the logic is true), a proof theory (how, if you know some true things, you can figure out what else is true), and how to translate between the logics and natural English.

Course Materials. We will be working mostly out of the course textbook, *Language, Proof, and Logic: 2nd Edition* by Barker-Plummer, Barwise, and Etchemendy. The software package that comes with new copies of the book is not required. Any additional material will be posted on the course ELMS page.

Course Requirements & Grading. The coursework will consist entirely of quizzes and exams. There will be 11 quizzes. The lowest quiz grade will be dropped and the remainder will each count as 2% of the course grade, for a total of 20% of the course grade being based on quizzes. Each unit will end with an exam worth 20% of the course grade, for a total of 60% of the grade being based on exams. A comprehensive final Exam will be worth the remaining 20% of the course grade. There will be suggested homework problems, but they will not be graded. Attendance is ungraded, but highly recommended (especially since there will be regular graded in-class work). In short:

20% — 10 Quizzes at 2% each

60% — 3 Unit-Specific Exams at 20% each

20% — Comprehensive Final Exam

Academic Support. The Academic Achievement Programs offers free tutoring for PHIL170 through the Academic Success and Tutorial Services office. Please contact Christine Duchouquette for more information (by email: cduchou@umd.edu, phone: 301-405-4745, or in person at Marie Mount Hall 2204B).

Accommodations. Students who require special accommodations should inform the instructor at the beginning of the course, and must provide the appropriate documentation from the DSS office (see <http://www.counseling.umd.edu/DSS/>).

Unpleasantries. You should make sure you are familiar with the rules regarding proper academic conduct as outlined at <http://www.shc.umd.edu/>.

Class Cancellations. The University may be closed in the event of an emergency, in which case class will be cancelled. To find out if the University is closed you can check its main site (www.umd.edu), its emergency preparedness site (<http://www.umd.edu/emergencypreparedness/>), or call the “snow phone line” at 301-405-7669 (which covers more than just snow caused closings). If class is cancelled while the University remains open, then there will be an announcement posted on the course ELMS page.

Schedule. Below is the tentative schedule for the course. Any known attendance issues should be brought to the instructor’s attention as soon as possible (e.g. you know now about religious holidays and away games, so if they cause a conflict you should tell me now).

Reading assignments are in Barker-Plummer, Barwise, and Etchemendy (unless otherwise noted) and should be completed before the class for which they are assigned.

Unit 1: Propositional Logic

Jan 26. Introduction, Chapter 2 Intro and §1

Jan 28. Chapter 1 (skip §§5–8)

Feb 2 & 4. Chapter 3 (skip §§4, 8)

Feb 9 & 11. Chapter 4 (skip §4)

Feb 16 & 18. Chapter 7 (read everything)

Feb 23. Review

Feb 25. Exam 1

Unit 2: Proofs

Mar 2 & 4. Chapters 5 and 6

Mar 9 & 11. Chapter 8

Mar 16 & 18. SPRING BREAK (NO CLASS)

Mar 23 & 25. Proof Practice

Mar 30. Review

Apr 1. Exam 2

Unit 3: Quantifiers

Apr 6 & 8. Chapters 9 and 10

Apr 13 & 15. Chapter 11

Apr 20 & 22. Chapters 12 and 13

Apr 27 & 29. Proof Practice

May 4. Review

May 6. Exam 3

May 11. Comprehensive Review

May 16, 8am–11am. FINAL EXAM