PHIL 1000: Logic
Fall 2017, Section 101: MWF 9:00–9:50
Instructor: D.J. Hobbs, Ph.D.

Office: Marquette Hall #452
Office Hours: Mondays and Wednesdays 10:30-11:30; Tuesdays 11:00-12:00; or by appointment
Email: dale.hobbs@marquette.edu

Course Description: This course will serve as a general introduction to various forms of logical reasoning. Topics to be considered include the basic structure of arguments, informal fallacies, Aristotelian and Boolean syllogistic logic, propositional logic, and inductive reasoning. The main focus of the course will be to assist students in developing skill in recognizing and evaluating the arguments that they encounter throughout their daily lives.

Course Objectives:
By the end of the course,

1. The student will be able to identify and evaluate the validity of arguments encountered in ordinary language. *Means of Assessing*: Quizzes, Exams
2. The student will be able to recognize a variety of informal fallacies in the context of everyday speech. *Means of Assessing*: Quizzes, Exams
3. The student will be able to understand and employ the tools of symbolic logic, including both syllogistic and propositional varieties. *Means of Assessing*: Quizzes, Exams
4. The student will be able to distinguish between deductive and inductive reasoning, as well as to understand the essential characteristics of each. *Means of Assessing*: Quizzes, Exams

Course Texts:
Irving Copi, Carl Cohen, and Daniel Flage, *Essentials of Logic* (2nd ed.)
Additional readings will be provided by the instructor.

Course Requirements: Students are expected to complete ten short quizzes and four examinations, as well as to solve homework problems as indicated in the course schedule. Students are expected to provide their own paper and writing implements in class.

Quizzes: Twelve brief quizzes will be given at the beginning of class at various times throughout the semester, as indicated in the course schedule. These quizzes will cover the material addressed in (approximately speaking) the week before they are given. At the end of the semester, I will drop each student's two lowest quiz grades from my grading calculations.

Examinations: Four more extensive examinations will be given throughout the semester, as indicated in the course schedule. Each exam will cover all the material taught in the preceding section of the course; other than concerning certain major concepts of logic in general, the exams are not cumulative. There will be an in-class review session during the class period preceding each exam.

Homework Assignments: On most days, as indicated in the course schedule, students are expected to have completed on their own a certain set of problems from the course textbook. Work through all the *even* numbered problems from the listed pages for each class meeting and bring your work to class that day. At times, I will call upon students to demonstrate some of these problems on the board. Failure to do so when called upon will result in your grade for this section of the course being lowered.

Grading Policy: The breakdown of the final grade for the course is as follows:
Quizzes: 40% of total grade, taken as a whole

Exams: 10% of total grade each, for a total of 40% for all four exams
Homework Assignments: 20% of total grade

The grading scale is as follows:
A: 100% – 94%
A-: 93% – 90%
B+: 89% – 87%
B: 86% – 83%
B-: 82% – 80%
C+: 79% – 77%
C: 76% – 73%
C-: 72% – 70%
D+: 69% – 67%
D: 66% – 63%
F: 62% or below

Course Policies:
Attendance: Students are responsible for attending all class meetings for courses in which they are registered. If you are not present when called upon to demonstrate a problem from one of the homework assignments, that section of your course grade will be lowered accordingly.

Missed Exams: Students will only be permitted to make up missed examinations with good reason; see instructor for details. If you know ahead of time that you will not be present at the scheduled time for an examination, inform the instructor as soon as possible. Similarly, if you miss an examination due to an unforeseen difficulty, inform the instructor of the reason for your absence as soon as possible. Missed quizzes may not be made up (though they may be dropped as your lowest grade; see section on quizzes for details).

Students with Disabilities: Any student with a relevant disability should contact the office of disability services as soon as possible so that they can make the proper academic accommodations for you. They are located in the 707 Building, Room #503, and they can be reached by phone at 414.288.1645. They are here to help any student with a disability succeed in the classroom, but they must be notified of your disability before they can help. Once a student has contacted the office of disability services, I will be glad to work with you to ensure that you receive the proper accommodations.

Policy on Electronic Devices: Electronic devices used to take lecture notes or access course materials are permitted in class. Use of electronic devices for other purposes (e.g., entertainment or communication) is not permitted. Cell phones, etc., are to be turned off for the duration of class.

Statement on Academic Dishonesty: Academic dishonesty of any kind will be reported to the Academic Integrity Council. Examples include, but are not limited to: cheating (copying answers or using unauthorized electronic devices during an examination, presenting another person's work as one's own, etc.), plagiarism (unethical use of unauthorized sources, using another's ideas or words without proper attribution, etc.), and academic fraud (submitting substantial portions of the same work for more than one course without receiving permission from all instructors involved, etc.). If you have questions about whether something counts as academic dishonesty, feel free to ask.

Course Schedule:

Section I: Introduction to Logical Reasoning

DATE:	TOPIC:	READING:	ASSIGNMENT:
8/28	Introduction to the Course	None	None
8/30	What is Logic?	None	None
9/1	Logic and Arguments	Pages 1-11	Pages 6-7
9/4	Labor Day: No Class	None	None
9/6	Recognizing Arguments	Pages 12-23	Pages 20-23
9/8	Validity and Soundness	Pages 24-35	Quiz #1
9/11	Informal Fallacies, Part I	Pages 46-67	Pages 63-67
9/13	Informal Fallacies, Part II	Pages 67-79	Pages 77-79
9/15	Informal Fallacies, Part III	Pages 79-89	Pages 87-89; Quiz #2
9/18	Review for First Exam	None	Pages 89-93
9/20	First Exam	None	Exam #1

Section II: Syllogistic Logic

9/22	Categorical Propositions	Pages 100-112	Pages 109-110
9/25	The Square of Opposition	Pages 113-122	Pages 121-122
9/27	Categorical Propositions and Inference	Pages 122-133	Pages 132-133 Quiz #3
9/29	Review of Categorical Propositions	None	Handout
10/2	Categorical Syllogisms	Pages 136-141	Pages 136 -141
10/4	Testing Syllogisms	Pages 141-152	Pages 142-143
10/6	Syllogisms and Venn Diagrams	Review pages 143-152	Pages 151-152 Quiz #4
10/9	Rules for Syllogisms	Pages 152-161	160-161
10/11	Review for Second Exam	None	None
10/13	Second Exam	None	Exam #2

Section III: Propositional Logic

10/16	Symbolic Logic	Pages 191-208	Pages 203-205
10/18	Truth Tables	Pages 208-214	Pages 213-214 Quiz #5
10/20	Midterm Break: No Class	None	None
10/23	Tautologies and Contradictions	Pages 215-221	Pages 220-221
10/25	Truth Tables and Arguments	Pages 221-233	Pages 232-233
10/27	Review of Truth Tables	Pages 233-241	Page 240

			Quiz #6
10/30	Formal Proofs, Part I	Pages 244-257	Pages 251-253
11/1	Practicing Proofs, Part I	Review pages 244-257	Pages 253-257
11/3	Formal Proofs, Part II	Pages 257-265	Pages 261-263 Quiz #7
11/6	Practicing Proofs, Part II	Review pages 257-265	Pages 263-265
11/8	Formal Proofs, Part III	Pages 265-280	Pages 273-276 Quiz #8
11/10	Practicing Proofs, Part III	Review pages 265-280	Pages 276-280
11/13	Conditional Proof	Pages 280-285	Pages 284-285 Quiz #9
11/15	Indirect Proof	Pages 285-293	Pages 289-290
11/17	Review for Third Exam	None	Pages 291-292 Quiz #10
11/20	Third Exam	None	Exam #3
11/22	Thanksgiving: No Class	None	None
11/24	Thanksgiving: No Class	None	None

Section IV: Inductive Reasoning

11/27	Inductive Arguments	Pages 330-338	Pages 337-338
11/29	The Logic of Inductive Reasoning	Pages 339-347	Pages 345-347
12/1	Induction and Explanation	Pages 347-367	Pages 361-367 Quiz #11
12/4	Bayes' Theorem	"An Intuitive Explanation" (link on d2l)	None
12/6	Practicing Bayes	Review "An Intuitive Explanation"	Handout
12/8	Bayes and Everyday Life	Review "An Intuitive Explanation"	Handout Quiz #12
12/14	Course Final	None	Exam #4: 1:00-3:00 PM

This schedule is subject to revision as needed. The exact pace of the course will depend on how quickly we are able to cover the essential points of each section.