

Symbolic Logic (Phil. 219): Spring 2014

Instructor: Dr. Arash Naraghi

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Office Hours: Tuesday 10:30-11:30am, Wednesday 4pm-5pm, and by appointment.

Lectures: MW 2:35 PM- 3:45PM, Main Street Campus, Comenius Hall 201.

Course Description:

Course Description: This is a course on logic and critical thinking. Logic and critical thinking is the key to knowledge and responsible citizenship. In this course, we discuss different types of arguments, and the skill we need to present good arguments, and distinguish between good and bad pieces of reasoning. More specifically, we discuss two major types of reasoning: Deductive and Inductive reasoning. This mainly includes Categorical logic, Propositional logic, Probability, and Informal Fallacies.

Course Objectives:

- To learn the criteria and methods for distinguishing between good and bad reasoning.
- To develop the basic reasoning skills that can be applied both within a broad range of academic disciplines and outside the academic environment.
- To develop the skills in recognizing the logical structure of statements and arguments.
- To develop the ability to distinguish between rational and non-rational means of persuasion.
- To develop the skill in applying the principles of sound reasoning in the construction and evaluation of arguments.
- To cultivate an appreciation for the value of critical reasoning in the pursuit of knowledge.
- To develop a substantial understanding of major principle of categorical and propositional logic.
- To learn the major types of informal fallacies.
- To learn how to analyze and evaluate the pieces of reasoning in the context of everyday life.

Required Texts:

- *A Concise Introduction to Logic*, Patrick Hurley, Cengage Learning, 12th ed., 2014. ISBN: 10-1-285-19668-6.

Note 1: This book is available at Moravian College Book Store.

Note 2: You will find that you get the most out of the course if you read each assignment before lecture and then re-read the assignment after the lecture.

Lecture attendance:

It is not possible to perform well in the course without attending lecture regularly. We will cover substantial amounts of material in lecture not included anywhere in the readings. It is highly unlikely that you will learn this material adequately by, e.g., borrowing your friend's lecture notes. You have two class sessions you can miss with no questions asked. Beyond those two

class sessions, any further missed classes without a really good excuse (involving a note from your doctor, psychiatrist, parole officer, etc.) will cost you 2% of your final grade.

Important Note: Please turn off your cell phones before walking into class! If you are having an emergency that requires you to have your cell phone on, please tell me at the beginning of class. No text messaging is allowed during the class, and the use of computers should be strictly restricted to the things directly related to the class.

Academic honesty:

Students are required to honor academic integrity. The course imposes the application of Moravian College's Academic Honesty Policy. The policy is to be found at Moravian College's *Student Handbook*.

Course requirements:

- (1) A regular final exam, scheduled for **Monday April 28, 2014, at 8:30AM**, plus a midterm (tentatively scheduled for **Wednesday, February 26, 2014**). You will receive a Study Guide for the Midterm and Final Exams prior to the exams to know what kind of questions you should expect on the Midterm and Final Exams. Make up final exam will be administered only under the most extraordinary of circumstances, and only in light of appropriate supporting documents.
- (2) One project (700words). This project is a practical application of the logical principles you learn in the class. On March 12 you will receive more details about the topic of your project on Blackboard. The project due is **March 24**. If the project is turned in late without prior permission, the grade will be adjusted downwards by a third of a grade for each day the paper is late (e.g., A to A-, A- to B+, B+ to B, etc.).
- (3) You will be required to do weekly assignments. Throughout the semester I am going to assign you 12 weekly assignments, and you are required to complete 10 out of 12 assignments by the end of the semester, that is, you are allowed to skip two assignments. If you decide to do more than 10 assignments, your final grade for assignments would be calculated based on the first ten highest grades you receive on your assignments. The assignments will be posted on the Blackboard every Wednesday, and you are required to submit your answers the next Wednesday on Blackboard by midnight, unless I specify otherwise. (There would be no assignment for the first week.)

Grading:

Final Exam: 30% - Midterm Exam: 30%- Project: 15% - Weekly assignments: 25%.

The grading scale is as follows:

Points	Grade	4-point conversion
95-100	A	4
90-95	A-	3.7
87-90	B+	3.3
84-87	B	3
80-84	B-	2.7
77-80	C+	2.3
74-77	C	2
70-74	C-	1.7
67-70	D+	1.3
64-67	D	1
60-64	D-	0.7
0-60	F	0

Tentative Lecture Schedule:

Jan. 13, 15: **Informal Logic**

Readings:

Ch. 1 (1.1, 1.2, 1.3, 1.4, 1.5)

Jan. 20, 22: **Categorical Propositions**

Readings:

Ch. 4 (4.1, 4.3, 4.4, 4.7)

Jan. 27, 29, Feb. 3, 5: **Categorical Syllogism**

Readings:

Ch. 5 (5.1, 5.2, 5.4, 5.7)

Feb. 10, 12: **Informal Fallacies**

Readings:

Ch. 3 (3.1, 3.3, 3.4)

Feb. 17, 19: **Propositional Logic**

Readings:

Ch. 6 (6.1, 6.2, 6.3, 6.4)

Feb. 24: **Review for the Midterm Exam**

Feb. 26: **Midterm Exam**

Mar. 10: **Propositional Logic (Continued)**

Readings:

Ch. 6 (6.5)

Mar. 12, 17, 19, 24, 26, 31, Apr. 2.: **Natural Deduction in Propositional Logic**

Readings:

Ch. 7 (7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7)

Mar. 24: The Project Due Date

Apr. 7, 9: **Causality and Mill's Methods**

Readings:

Ch. 10 (10.1, 10.2, 10.3)

Apr. 14, 16: **Hypothetical/Scientific Reasoning**

Readings:

Ch. 13 (13.1, 13.2, 13.3, 13.4)

Apr. 23: **Review**

The Final Exam will be held on Tuesday April 28, 2014, at 8:30AM Main Street Campus, Comenius Hall, 201.

Important Notes:

- Students who wish to request accommodations in this class for a disability should contact Elaine Mara, Assistant Director of Learning Services for Academic and Disability Support, 1307 Main Street, or by calling 610-861-1510. Accommodations cannot be provided until authorization is received from the Academic Support Center.
- The Writing Center is located in a building that is not accessible to persons with mobility impairments. If you need the services of the Writing Center, please call 610-861-1392. The Writing Center tutors will make arrangements with the student who needs tutoring services to meet in an accessible location, such as the library or a study/conference room in PPHAC.