

Course Syllabus

Instructor :Dr. Kiriake Xerohemona

Course : PHI 2100 - Introduction to Logic -Spring 2012

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Course Description:

Logic is an important tool of philosophy, mathematics, computer science, and linguistics. This course will provide students with a general introduction to logic. The aim of the course is to introduce students to a system of methods and principles that can be used to recognize arguments and evaluate them. It deals with traditional logic, with concepts and techniques of modern logic, and also it considers philosophical issues related to logic.

Course Requirements:

It is expected that students be self-disciplined, keep up with the readings, study the movie-lectures regularly, and complete the homework exercises to succeed in the course. More particular, students are expected to:

- (1) study the **Cinemath Lessons on Logic** movies regularly,
- (2) study the particular sections from the textbook,
- (3) participate whenever possible in chat discussions, and discussion forums
- (4) complete reading assignments, and examinations on time.
- (5) complete the homework assignments.
- (6) **Attendance is required on exam dates. Students who cannot be on campus during test days must email me asap to make alternative arrangements.**

Course Prerequisites:

There are no prerequisites for this course.

Course Objectives:

- (1) To stimulate understanding about basic logical concepts such as validity, truth, equivalence, counterexample, and proof.
- (2) to learn how to effectively evaluate, analyze, and criticize arguments.
- (3) To present the basic differences between inductive and deductive thought.
- (4) To introduce students to informal fallacies.
- (5) To familiarize students with the differences between Aristotelian logic and modern logic.
- (6) To present students the method of truth tables and/or truth trees to identify validity in arguments.
- (7) To introduce students to the concept of natural deduction proof and translation.
- (8) To satisfy the Quantitative component of the University's Core Curriculum.

Learning Objectives:

Students will be able to:

- (1) Differentiate between deductive and inductive reasoning. Identify valid, invalid, sound, unsound, weak, strong, cogent, and uncogent arguments.
- (2) Identify common valid reasoning forms, and identify common formal and informal fallacies.
- (3) Identify Categorical Syllogisms, and evaluate their validity through the use of Venn Diagrams.
- (4) Demonstrate competence in the propositional calculus. Translate English arguments into propositional logic. Use truth tables to show the validity of arguments.
- (5) Identify tautologies, contradictions, contingencies.
- (6) Use the natural deduction proof method to show the validity of arguments.

Course, Prerequisites:

This online section requires on-campus exams. If you are unable to come to FIU for the required on-site session, contact me for approved alternatives. To locate a proctoring facility in the US and your area find a participating testing center of National College Testing Association.

Expectations of this course:

Students are expected do:

- (1) Review the "How to Get Started" folder located in the course content.
- (2) Review the Policies Page as is important to the quality of your education.
- (3) Introduce yourself to the class during the first week by posting a self introduction in the appropriate discussion forum under the "Start Here" folder.
- (4) Study weekly the "CineMath" Movie Lectures in Logic. They will be released weekly. You must study the movie lectures before you study the textbook!
- (5) Review the "Assignments" folder located in the course content.
- (6) Review and follow the course calendar.
- (7) Complete reading assignments, homework assignments, and examinations on time.
- (8) Participate whenever possible in chat discussions, and discussion forums.
- (9) Interact online with instructor and peers and keep up with all assignments.
- (10) Attendance is required on exam dates. If you are unable to come to FIU for the required on-site session, contact me for approved alternatives. For detailed instructions please visit our Proctored Exam Resources page on the FIU Online website.

Course Communication: Communication in this course will take place via email.

Discussion:

Keep in mind that forum discussions are public, and care should be taken when determining what to post. If you need to send a private message to me or a student, please use email. I will review discussion forums and reply to students as needed. **Students are required to review the CineMath Movie Lectures before they study the textbook. Students are required to read the CineMath Movie Lectures before they print the pdf format of the Movie Lectures.** The students are expected to participate by posting a question, responding to a forum, sending a question to the instructor, at least once a week. The approximate length of a question and a response should not be more than 20 lines. Students are expected to complete the homework weekly. However, they are required to turn in the homework by the day of the exam. Students are expected to read the movie

lecture first, attempt to do the homework, and then ask, or post questions. The dates for the Exams are posted in the syllabus, and in the calendar. Grades for the exams will be posted within one week of taking the exam. Grades for the homeworks will be posted within two weeks of taking the exam.

Textbook – Required:

- (1) **CineMath Lessons on Introduction to Logic** (QuickTime Movies) by Kiriake Xerohemona accessible through *Blackboard Learn*.
- and**
- (2) **The Power of Logic** by Frances Howard-Snyder, Daniel Howard-Snyder, Ryan Wasserman, 4th edition, 2008, McGraw-Hill,

Grading:

- (1) Exam #1 (20%)
- (2) Exam #2 (20%)
- (3) Final Exam #3 (25%)
- (4) Discussion, Participation(10%)
- (5) Homework (30%)

Grading Scale :

92-100A, 88-91 A^- , 84-87 B^+ , 80-83 B, 76-79 B^- , 72-75 C^+ , 68-71 C, 64-67 C^- , 60-63 D^+ , 56-59 D, 52-55 D^- , 0-51 F.

Policy on Assignments and Exams :

- It is imperative that students study regularly and do all the assigned exercises on time. Homework will be assigned on a regular basis, i.e, weekly. Students are expected to complete the homework on the sections covered during the week. Students must return the homework to get full credit prior to or at test time.
- On test days attendance is required. If attendance is impossible, please email me to make alternative arrangements.
- Cell phones, Smart phones, etc: Cell phones must be turned off during tests. The vibrate mode is not considered turned off. They must not be visible to you or me. If they are, for instance, in your book bag or pocket, they are not. Violations of this policy will result in the invalidation of the test.

- Students are required to fulfill all assignments and exams to receive a passing grade.

Exams and Homework Schedule : The exams will consist of short response questions ,multiple choice questions, and true/false questions.

There will be 3 examinations:

- (1) Exam #1: Friday, February 10, 2012, at 6.00 pm. Homework due on the sections covered in the first test. Location: MMC, Classroom TBA. (Usually tests are given around 6.00 pm- 8.00 pm)
- (2) Exam #2: Friday, March 9th, 2012. Location: MMC, Time: 6.00 pm, Classroom TBA. Homework due on the sections covered in the second test. (Usually tests are given around 6.00 pm- 8.00 pm)
- (3) Final Exam #3: Friday, April 27, 2012. Location: MMC, Time: 6.00 pm , Classroom TBA. Homework due on the sections covered in the final test.
- (4) Homework: Needs to be completed weekly. It will be collected during exam time.

Policy on Make – Up Exams, Plagiarism and Incompletes :

- Make-Up exams are permitted **only** under unusual circumstances and **only** if the instructor is contacted before the scheduled test (unless circumstances render this impossible). The make-up exam is **different** from the regular exam.
- Students who resort to any form of academic dishonesty such as cheating or plagiarizing will receive an **“F” for the course**, and will be brought before the appropriate disciplinary body. Includes (but is not limited to) giving or receiving assistance on a test, quiz, or homework assignment for which such assistance is not permitted, falsifying a document to obtain an excusal from a test, and using unauthorized notes on a test or quiz. A more complete definition of Academic Misconduct is given on pp.120-121 of the Student Handbook.
- An incomplete will not be assigned simply because work is late, or because the student has not performed well in the assignments.

Course Outline (Tentative) :

Chapters 1, 2,4, 5,6,7,8,9.

Course Calendar [Tentative] : Chapters : 1, 4, 5, 6, 7, 8, 9.

- (1) Week 1, Movie-Lecture 1 and Chapter 1- *Topics: Basic Logical Concepts, 1.1*
- (2) Week 1, Movie-Lecture 2, and Chapter 1- *Validity and Invalidity, 1.2-1.3*
- (3) Week 2, Movie Lecture 3, and Chapter 1- *Inductive and Deductive Arguments, 1.4*
- (4) Week 3, Movie Lecture 4, and Chapter 4-*Formal and Informal Fallacies, 4.1*
- (5) Week 4, Movie Lecture 5, and Chapter 4- *More Informal Fallacies, 4.2-4.3*
- (6) Week 5, Movie Lecture 6- *Aristotelian Logic-Traditional Square of Opposition- 5.1-5.2*
 - **First Exam- February 10, Location: MMC, Time: 6:00 pm, a Classroom TBA**
- (7) Week 6, Movie Lecture 7- *Aristotelian Logic- Relations among Categorical Propositions-Chapter 5.3*
- (8) Week 7, Lecture 8- *Venn Diagrams- Determining Validity using Venn Diagrams-Chapter 6.2-6.4*
- (9) Week 8, Movie Lecture 9- *Propositional Logic- The language of Propositional Logic- 7.1*
- (10) Week 9, Movie Lecture 10- *Propositional Logic- Full and Abbreviated Truth Tables- 7.2-7.5*
- (11) Week 10, Lecture 11-*The Truth Tree Method- Movie Lectures-Textbook does not contain any information on the subject*
- (12) Week 11, Lecture 12-*Using Truth Trees to show the validity of arguments- Movie Lectures-Textbook does not contain any information on the subject*
 - **Second Exam- Friday, March 9th, 2012, Location: MMC, Time: 6:00 pm, and Classroom TBA**
- (13) Week 12, Movie Lecture 13-*Rules of Inference - Chapter 8.1-8.2*
- (14) Week 13, Movie Lecture 13-*Rules of Inference - Chapter 8.3*
- (15) Week 14, Movie Lecture 14-*Using Natural Deduction proofs to show validity of arguments- Chapter 8.4-8.6*
- (16) Week 15, Review of chapters 7 and 8.
 - **Final Exam- Location: MMC, Friday, April 27, 2012, Time: 6:00 pm, Classroom TBA**