Logic Syllabus

Jack Madock

Summer A 2024

1 Course Information

1. Instructor: Jack Madock
2. Contact: johnmadock@ufl.edu
3. M-F Period 4 (12:30-13:45)
4. Matherly 0114
5. Office Hours T/TR 14:00-15:30 GFH 318

2 Description and Learning Objectives

This course aims to provide students with the instruction and resources necessary to develop skills in logical reasoning and critical thinking. Through the course readings and in-class instruction students will become familiar with the syntax of classical propositional logic, truth tables, derivation systems in propositional logic, and deductive and non-deductive argument forms. This course fulfills the general education requirement for mathematics:

(https://undergrad.aa.ufl.edu/general-education/gen-ed-program/subject-area-objectives/).

These learning objectives will be assessed by graded homework assignments and two exams. A minimum grade of "C" is required for General Education credit.

As a general education requirement in mathematics, this course will employ strategies in fundamental mathematics, including at least one of the following: solving equations and inequalities, logic, statistics, algebra, or trigonometry. Additionally, students will learn to reason in abstract mathematical systems, use mathematical models to solve problem, and apply mathematical concepts effectively to real-world situations. Finally, they will formulate mathematical models and arguments as well as communicate mathematical solutions clearly and effectively.

3 Assessment

Through assessments students will demonstrate the ability to interpret and apply the terminology, concepts, methodologies, and theories used within the subject area; as well as express ideas in a convincing, organized, clear, coherent manner that is nearly error free and uses a style and language appropriate to the subject area..

1. Participation and Attendance 10 %
2. Midterm Exam 25%
3. Homework 30 %
4. Final Exam 35 %

4 Assigned Readings

The Logic Book, 6th Edition. Merrie Bergmann, James Moor, and Jack Nelson. ISBN: 9780078038419.

Available in the UF bookstore. This textbook can be purchased as an eBook through UF All Access at a more affordable price. Any other readings will be made available on canvas in the course files section.

5 Academic Honesty

UF students are bound by The Honor Pledge, which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class. Plagiarism on any assignment will automatically result in a grade of "E" for the course. Plagiarism is defined in the University of Florida's Student Honor Code as follows: "A student shall not represent as the student's own work all or any portion of the work of another. Plagiarism includes (but is not limited to): a. Quoting oral or written materials, whether published or unpublished, without proper attribution. b. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student." Students found guilty of academic misconduct will be prosecuted in accordance with the procedures specified in the UF honesty policy

6 Policies

6.1 Grading Scale

The following grade scale will be used to assign final letter grades for the course.

Grade Scale	Grade Value
100-93=A	4.0
92-90=A-	3.67
89-86=B+	3.33
85-82=B	3.00
81-79=B-	2.67
78-76=C+	2.33
75-72=C	2.00
71-69=C-	1.67
68-66=D+	1.33
65-62=D	1.00
61-60=D-	0.67
59-0=E	0.00

Table 1: Grade Scale and Corresponding Grade Values

6.2 Attendance

Students are expected to attend class and to have completed all assigned reading in advance. Failure to do so will adversely affect the students' ability to perform well in this course.

6.3 Canvas

This course is supplemented by online content in the e- Learning environment known as "Canvas." To log in to the e-Learning site for this course, go to https://lss.at.ufl.edu/, click the e-Learning in Canvas button, and on the next page enter your Gatorlink username and password. You can then access the course e-Learning environment by selecting PHI2100 from the Courses pull-down menu at the top of the page. If you encounter any difficulties logging in or accessing any of the course content, contact the UF Computing Help Desk at (352) 392-4537. Do not contact the course instructor regarding computer issues.

6.4 Online Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be

notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

6.5 Accommodations

Accommodations for Students with Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565 or using the link below) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

1. Counseling and Wellness Center: ://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575
2. University Police Department: 392-1111 or 9-1-1 for emergencies.
3. U Matter, We Care: If you or someone you know is in distress, please contact 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress. umatter@ufl.edu

7 Weekly Schedule (Subject to Changes)

Week 1	
May 13	Introduction
May 14	1.1 Truth values, arguments, validity, soundness
May 15	1.2 Core concepts of deductive logic
May 16	1.3 Special cases, 2.1 Syntax
May 17	2.2 Syntax
Week 2	
May 20	2.3 Syntax and Symbolization
May 21	2.3 Continued
May 22	3.1 Truth value assignments and tables
May 23	3.2 Truth-functional Truth, Falsity, Indeterminacy
May 24	3.3 – 3.4 Truth functional entailment and validity
Week 3	
May 27	Holiday (No Class)
May 28	4 SL Truth Trees
May 29	4.1 Method
May 30	4.2 Rules
May 31	Trees Practice
Week 4	
June 3	Review Session
June 4	Mid-Term Exam
June 5	5.1-5.2 Derivations
June 6	5.3 Strategies
June 7	Derivation practice
Week 5	
June 10	Derivation Practice
June 11	5.4 SD+
June 12	Strategies of SD+
June 13	SD+ Practice
June 14	Practice
Week 6	
June 17	Informal fallacies
June 18	Informal fallacies
June 19	Holiday (No Class)
June 20	Final Exam Review
June 21	Final Exam

Table 2: Class Schedule Overview