### PHI 2100: INTRODUCTION TO LOGIC

#### **SUMMER 2021 SYLLABUS**

#### **Instructor Information:**

James Simpson. Contact: simpson.james@ufl.edu

#### Office Hours:

Scheduled Zoom Office Hours: M, 9:00am-10:30am, W, 9:00am-10:30am, OBA.

### **Course Time and Location:**

Online. Synchronous Lecture. Recordings will NOT be posted. Attendance is required. Meeting Time: M-F, 12:30pm – 1:45pm.

## **COURSE DESCRIPTION:**

Content. This course will introduce to students to formal logic and its applications to reasoning. In the first part of the course, students will be introduced to the syntax and semantics of propositional logic and to formal proofs in propositional logic. In the latter part of the course, students will be introduced to some informal fallacies (e.g., the gambler's fallacy, begging the question, and the fallacy of false cause) and the use of analogies, best explanations, and counterexamples in argumentation.

*Method.* This course has goals in building skills in formal reasoning, critical thinking, and critical reasoning.

CONTENT: students demonstrate competence in formal reasoning and argumentation.

COMMUNICATION: students communicate concepts and reasoning clearly and effectively.

CRITICAL THINKING: students analyze information and arguments carefully and logically.

# **Required Materials:**

Available in the UF Bookstore: *The Logic Book*, 6<sup>th</sup> Edition. Merrie Bergmann, James Moor, and Jack Nelson. ISBN: 9780078038419

Note: Some required readings will also be made available on our course Canvas site, under "Files."

#### **Assessment:**

Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at:

https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

NOTE: To do well in this course you must be prepared to come to class, take notes, do the assigned reading, and complete the homework problems.

#### **Points:**

- 1. Attendance: 10 points.
- 2. 1: 250-word take home writing assignment on validity and soundness: 10 points.
- 3. 2: Take home Exams: Midterm and Final (20 points each): 40 points.
- 4. 5: Weekly Homework: 20 points total (4 points each).
- 5. 5: Discussion posts on the weekly readings: 10 points total (2 points each). (Submit under Discussion on Canvas.)
- 6. 5: Weekly in-class quizzes: 10 points total (2 points each).
  - o Total: 100 points.

Points for all assignments will be posted on Canvas as soon as they are graded.

Late work will be accepted but penalized unless legitimate documentation is provided to me within the appropriate amount of time (see below). For more information about late penalties, contact me via email or visit me during office hours.

Excused absence(s) require documentation be provided to me within a week of the absence(s).

NOTE: Some assignments must be submitted by uploading a pdf, doc, or jpg on Canvas.

#### **Attendance:**

To get full credit for attendance, you must attend at least 80% of the classes.

## **Discussion Posts:**

These are short posts that will require you to ask a question about the readings from the week the posts are due. There are no formatting or style requirements for these assignments. The instructions are simple: You will post a question about the readings that you would like to have answered in class. These discussions posts are intended to be fairly straightforward, so there's no reason everyone shouldn't get full credit so long as they satisfy the requirements of the assignment.

## **250-word Writing Assignment:**

There'll be one 250-word take home writing assignment where you'll discuss validity and soundness by explaining what they are and, then, providing an example of a valid

argument, an invalid argument, a sound argument, and an unsound argument. This assignment will be due by the end of the second week of the course.

## **Exams:**

There will be two take home exams in this class. Both will be taken on Canvas. The first exam will be on the material covered in the first half of the course. The exam will be available for completion an three days before it's due on May 28<sup>th</sup>. The second will be on material covered in the second half of the course. The exam will be available for completion three days before it's due on June 18<sup>th</sup>.

## Homework:

There will be six homework assignments. The homework assignments will be assigned problems on the material discussed that week or the prior week. Each week, a homework assignment will be posted on Wednesday at 3pm and it will be due by Friday of that week at 11:59pm.

## **In-class Quizzes:**

There will be five in-class quizzes. Each quiz will consist of two True/False questions on material discussed in the previous class. Quizzes will be unannounced and they could take place any day of the week. So, make sure you don't miss class often.

## **Grading Scale is as follows:**

$$68-66 = D+ = 1.33$$
 $65-62 = D = 1.00$ 
 $61-60 = D- = 0.67$ 
 $59-0 = E E = 0.00$ 

#### **Classroom Conduct:**

Do not be disruptive or disrespectful. All conversations should be civil. Virtual backgrounds should be appropriate.

# **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.

Plagiarism will result, at the very least, in failure of the course, if not suspension or expulsion from the University. So, don't do it.

## **Students with Disabilities, Student Counseling Services:**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) 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.

Counseling services: http://www.counseling.ufl.edu/cwc/Default.aspx; 392-1575

## **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/.

## **Tentative Schedule (could change depending on the pace of the course):**

Part 1: Arguments, Validity and Soundness, and Induction

May 10<sup>th</sup>: Review Syllabus. Arguments and Validity and Soundness. (Discussion post available)

May 11th: Chap. 1 of The Logic Book. Deductive Logic.

May 12<sup>th</sup>: Chap. 1. Deductive Logic. (HW posts) (Discussion post due)

May 13<sup>th</sup>: Induction. Pdf on Canvas under Files.

Part 2: Sentence/Propositional Logic (and Three Days on First-Order/Predicate Logic)

May 14<sup>th</sup>: Chap. 2. Syntax and Symbolization. (HW due)

May 17th: Chap. 2. Translations. (Discussion post available)

May 18th: Chap. 2. Translations.

May 19<sup>th</sup>: Chap. 2. Translations. (HW posts) (Discussion post due)

May 20<sup>th</sup>: Chap. 3. Truth tables.

May 21<sup>st</sup>: Chap. 3. Truth tables. (HW due) (250 word essay due)

May 24<sup>th</sup>: Chap. 3. Truth tables. (Discussion post available)

May 25<sup>th</sup>: Chap. 3. Truth tables. (Midterm available)

May 26<sup>th</sup>: Chap. 5. Derivations. (HW posts) (Discussion post due)

May 27<sup>th</sup>: Chap. 5. Derivations.

May 28th: Chap. 5. Derivations. (HW due) (Last day to complete midterm exam)

June 1<sup>st</sup>: Chap. 5. Derivations.

June 2<sup>nd</sup>: Chap. 5. Derivations. (HW posts)

June 3<sup>rd</sup>: Chap. 7. Introduction to Quantifiers.

June 4th: Chap. 7. Derivations in FOL. (HW due)

June 7th: Chap. 7. Semantics in FOL. (Discussion post available)

Part 3: Informal Fallacies

June 8th: Pdf on Canvas. Informal Fallacies.

June 9th: Pdf on Canvas. Informal Fallacies. (HW posts) (Discussion post due)

June 10th: Pdf on Canvas. Informal Fallacies.

Part 4: Analogies, Best Explanations, and Counterexamples

June 11th: Pdf on Canvas. Arguments by Analogy. (HW due)

June 14<sup>th</sup>: Arguments by Analogy. (Discussion post available)

June 15<sup>th</sup>: Pdf on Canvas. Inference to the Best Explanation. (Final Exam available)

June 16<sup>th</sup>: Inference to the Best Explanation. (HW posts) (Discussion post due)

June 17<sup>th</sup>: Pdf on Canvas. Counterexamples.

June 18th: Counterexamples. (HW due) (Last day to complete the final exam)