New Jersey Institute of Technology

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Fall 2023

PHIL-310 (HM1): Logic (Honors)

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PHIL 310 – Logic

Fall 2023
MW 1:00 PM – 2:20 PM
Faculty Memorial 108

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Office: Cullimore 418

Office Hours: MW 10:20 AM – 11:20 AM

Generic Course Description
Logic. Teaches students how to reason critically, identify issues, construct and evaluate arguments. Improves students' ability to communicate effectively, both orally and in writing. Examines topics such as meaning and definition; explanations and arguments; informal logic and fallacies; and formal logic, including modern symbolic logic, truth tables, formal fallacies, proofs, and quantification.

Prerequisites
HUM 102 with a grade of C or higher, and one History and Humanities GER 200 level course with a grade of C or higher.

Specific Course Goals
By the end of this course, students should be able to:

- Recognize arguments and distinguish them from explanations.
- Identify the premises and conclusions of arguments.
- Define validity and invalidity.
- Determine argument strength or soundness.
- Translate English sentences into propositional form.
- Use truth tables to determine the validity of arguments.
- Use rules of inference correctly and identify formal fallacies.
- Construct proofs of arguments.

Classes
Classes will revolve around discussion of the readings and other homework assignments. I will talk; however, I expect questions and contributions from students. I also expect you to have done assignments *before* class. I encourage you to go back and re-work assignments after class.

Learning logic is largely about acquiring certain thinking skills. For those skills to become habits requires practice. Although I will not take attendance formally, I expect you to come to class regularly. Past experience shows that students who come to class more often tend to do much better in terms of final course grades.

Attendance Policy and Participation

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I <u>expect</u> you to attend all classes and to have legitimate excuses for any classes missed. The official path to secure a legitimate excuse is via the office of the Dean of Students. I also <u>expect</u> you to catch up on whatever you miss if you are absent for any reason.

You will receive a **homework grade**, described in greater detail below. Failure to attend class or participate actively in discussion will negatively affect your grade for the course.

Makeup Policy
In the event of an unexcused absence, you will *not* have the opportunity to make up any graded assignments. If you show up late for an exam, you will *not* be given more time to complete the exam.

Other Course Policies
I <u>expect</u> you to arrive on time to class and keep disruptions during class to a minimum. Do *not* use phones, tablets, and other similar devices to chat/text/or talk with family and friends during class.

Phone/tablet/laptop use is permitted in class only for class purposes (taking notes, Googling something I said, carrying out a writing assignment, etc.). If you choose to use your device for purposes other than those related to the class, it is your loss. If you distract other students in doing so, it is their loss, as well. I <u>expect</u> you to respect your fellow classmates and your instructor enough not to distract yourselves and others. With this policy, I am attempting to treat you as an adult. As with all other policies, I reserve the right to change my mind or make exceptions for specific individuals.

The best way to contact me is via email. I check email less frequently on the weekends. You are, of course, encouraged to visit my office hours or ask questions before, during, or after class.

NJIT Statement on Academic Integrity
Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf.

*Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu"*

In the context of this course, although you are allowed to work together on homework assignments, you will find that doing them yourself (rather than letting someone else do the work for you) is waaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaay more effective for learning the material. If you don't know how to do the work, you won't pass the tests.

For any questions involving these or any other Academic Integrity issues, please consult me.

Students with Disabilities

<div align="center">PHIL 310 – LOGIC</div>

NJIT offers accommodations to students with disabilities. If you need some sort of academic accommodation, please provide me with the appropriate paperwork.

Basic Needs Security
Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable doing so.

Requirements and Grading
Grades are calculated according to the requirements specified and weighted below.

Homework (20%): You will be responsible for completing the exercises assigned before each class. Failure to complete the assigned exercises on time will count against your homework grade.

Honors project (20%): Find your assignment on Canvas. The project will be due on the last day of class.

Three tests (20% each): We will have one test about a third of the way into the semester, followed by another about two-thirds of the way through the semester. The third and final test will take place on the last day of class.

Letter and numerical grades are translatable on the following scale:

A = 90%+
B+ = 87-89.99%
B = 80-86.99%
C+ = 77-79.99%
C = 70-76.99%
D = 60-69.99%
F = 0-59.99%

Respondus LockDown Browser and Monitor
In this course, unless you take tests in class or with some other NJIT-sanctioned proctor, you will be required to use the following proctoring method to ensure academic integrity for exams. Please see NJIT's response to questions about online proctoring here (Links to an external site.). See below for more information about how exams will be proctored in this course.

Respondus LockDown Browser is a locked browser for taking assessments or quizzes in Canvas. It prevents students from printing, copying, going to another URL, or accessing other applications during a quiz. If a Canvas quiz requires that LockDown Browser be used, students will not be able to take the assessment or quiz with a standard web browser. Students may be required to use LockDown Browser with a webcam (Respondus Monitor), which will record students during an online exam.

The webcam can be built into your computer or can be the type that plugs in with a USB cable. Watch this short video (Links to an external site.) to get a basic understanding of LockDown Browser and the webcam feature. A student Quick Start Guide (PDF) (Links to an external site.) is also available.

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Respondus Lockdown Browser and Monitor does not work with Linux and Chromebooks at this time. Please visit the Respondus Knowledge Base article on computer requirements (Links to an external site.) for additional information.

For "Classic" Quizzes in Canvas:
We will be using "classic" quizzes in Canvas. The LockDown Browser integration with *Classic Quizzes* still requires students to (1) manually start LockDown Browser, (2) log into Canvas, and (3) navigate to the quiz that requires LockDown Browser.

1. Download and install LockDown Browser from this link: http://www.respondus.com/lockdown/download.php?id=264548414 (Links to an external site.)
2. (Links to an external site.)Once your download and installation has finished, locate the "LockDown Browser" shortcut on your desktop and double-click it. (For Mac users, launch "LockDown Browser" from the Applications folder.)
3. You will be brought to the Webauth Authentication Service page, where you can log in with your NJIT UCID and password.
4. From your Dashboard or under "Courses", click on the course in which you have to take the exam that requires LockDown Browser.
5. After you enter the course, find the exam and click on it.
6. Click the "Take the Quiz" button. Once a quiz has been started with LockDown Browser, you cannot exit until the "Submit Quiz" button is clicked.
7. If you are required to use a webcam (Respondus Monitor), you will be prompted to complete a Webcam Check and other Startup Sequence steps.

Questions or problems can be submitted via web form by going to: **https://servicedesk.njit.edu** (Links to an external site.) and clicking on the "Report your issue online" link. You may also call the IST Service Desk with any questions at 973-596-2900.

More information and Tips for Ensuring a Smooth Experience

Required Texts
Option 1: MindTapV2.0 and e-book for Hurley/Watson's A Concise Introduction Logic, 13th edition, 9780357419397

Option 2: Cengage Unlimited Subscription, $119.99 / one term or semester, 9780357700006

The materials required for this course (MindTap and e-book) are included in a Cengage Unlimited subscription (think Netflix or Apple Music) that gives you access to all your Cengage access codes, online textbooks, study guides, and an optional print rental for one price (+$7.99 for shipping the print rental). Please look to see what other courses you are taking use Cengage or if you want a print rental instead of an e-book.

You should **NOT** purchase BOTH the Course Materials AND a Cengage Unlimited subscription; only ONE purchase is required.

If you have any technical or registration issues, please contact Cengage Support https://cengage.force.com/s/contact-us (Live chat, Twitter, Phone, Online) and call (800) 354-9706. Even if you create a ticket online you will still need to call in to expedite your solution. Provide as much detail as you can in your case (screen shots of your issue, what course you are in, what you are having issues with and what you have done like clearing cache and

cookies). *After you call a case ID is needed to follow up or to report issues, so please keep your case ID.*

Class Schedule
Wk 1: (Sept 6)
W: Class intro and expectations

Wk 2: (Sept 11/13)
M: Arguments, Premises, and Conclusion. Read and complete exercises for Section 1.1.
W: Recognizing Arguments. Read and complete exercises for Section 1.2.

Wk 3: (Sept 18/20)
M: Deduction and Induction. Read and complete exercises for Section 1.3.
W: Validity, Truth, Soundness, Strength, Cogency. Read and complete exercises for Section 1.4.

Wk 4: (Sept 25/27)
M: Argument Forms: Proving Invalidity. Read and complete exercises for Section 1.5.
W: Extended Arguments. Read and complete exercises for Section 1.6.

Wk 5: (Oct 2/4)
M: Symbols and Translation. Read and complete exercises for Section 6.1.
W: Truth Functions. Read and complete exercises for Section 6.2.

Wk 6: (Oct 9/11)
M: Truth Tables for Propositions. Read and complete exercises for Section 6.3.
W: Truth Tables for Arguments. Read and complete exercises for Section 6.4.

Wk 7: (Oct 16/18)
M: Indirect Truth Tables. Read and complete exercises for Section 6.5.
W: Argument Forms and Fallacies. Read and complete exercises for Section 6.6.

Wk 8: (Oct 23/25)
M: TEST #1
W: Rules of Implication I. Read and complete exercises for Section 7.1.

Wk 9: (Oct 30/Nov 1)
M: Rules of Implication II. Read and complete exercises for Section 7.2.
W: Rules of Replacement I. Read and complete exercises for Section 7.3.

Wk 10: (Nov 6/8)
M: Rules of Replacement II. Read and complete exercises for Section 7.4.
W: Finish exercises from 7.1-7.4

Wk 11: (Nov 13/15)
M: TEST #2 & LAST DAY TO WITHDRAW
W: Conditional Proof. Read and complete exercises for Section 7.5.

Wk 12: (Nov 20/22)
M: Indirect Proof. Read and complete exercises for Sections 7.6.
W: FRIDAY CLASSES MEET

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Wk 13: (Nov 27/29)
M: Symbols and Translation. Read and complete exercises for Section 8.1.
W: Using the Rules of Inference. Read and complete exercises for Section 8.2.

Wk 14: (Dec 4/6)
M: Quantifier Negation Rule. Read and complete exercises for Section 8.3
W: Conditional and Indirect Proof. Read and complete exercises for Section 8.4.

Wk 15: (Dec 11/13)
M: Proving Invalidity. Read and complete exercises for Section 8.5.
W: TEST #3 in class, Final Project Due

N.B. – Everything on the syllabus is subject to change. When changes are made, a new version or corresponding changes will be posted on the course Canvas site.