PHIL 122: Elementary Logic

Fall 2019
Prof. Tony Reeves

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Office: LT 1217

Office Hours: Wednesday 1:30 – 3:30 PM

I will be in my office and available during office hours, but you can make appointments to see me at other times. My preference is that we make appointments by email, and have substantive discussions face-to-face.

Teaching Assistants: Cullin Brown (cbrown77@binghamton.edu)
Andrew Towers (atowers2@binghamton.edu)

Course Description

We will learn several systems of formal logic and examine some core concerns of logical theory. Much of the course will concern problem solving and proofs, and students will be expected to conduct sophisticated proofs by the semester's end. However, the course does not presuppose prior familiarity with formal logic, and any mathematical concepts necessary will be explained as we go along. To succeed, it is crucial that students keep up to date on the assignments, make extensive use of the practice problems, attend carefully to the proceedings of the lectures and discussion sections, and ask questions and seek assistance when needed. In general, students are responsible for learning material presented in ***both*** the assigned readings and the lecture. Some material in the assigned reading may not be explicitly covered in the lecture. Also, some material presented in lecture will not be in the reading. It will be important to get detailed notes from a classmate in case of a missed class.

Objectives

The student will:

- Understand the basic ideas of formal deductive logic and be able to explain what a logical system is
- Be able to address some of the central issues in logical theory
- Understand the basic concepts of sentential, predicate, and modal logic
- Be able to prove both validity and invalidity in sentential and predicate logic, and operationalize the basic elements of systems of modal logic
- Improve ability to reason deductively and identify problematic lines of reasoning

Required Text (Available at the university bookstore, among other places):
Virginia Klenk, *Understanding Symbolic Logic* (5th Ed.)

Requirements

Statement from the Binghamton Faculty Senate Executive Committee on expectations for a four credit course: "This course is a 4-credit course, which means that in addition to the scheduled meeting times, students are expected to do at least 9.5 hours of course-related work outside of class each week during the semester. This includes time spent completing assigned readings, participating in lab sessions, studying for tests and examinations, preparing written assignments, and other course-related tasks."

Again, students are responsible for all material that is in the assigned reading and given in lecture.

Grade Breakdown:

Exam I	25%
Exam II	25%
Final Exam	40%
Participation	10%

Exams: There will be three exams in this course. The first two will be written during regular class meetings. The third will be scheduled during the university's Final Exam period. Students will *not* be permitted to use texts or notes during any of the exams. All exams will be effectively cumulative, as later material builds on earlier material. Most students find the later exams to be significantly more challenging than the first.

Participation: Students will be assessed on their contributions in class, particularly in discussion sections. The grade will be based on the frequency with which the students provide valuable verbal contributions in class. Such contributions include informed participation in classroom discussions, assisting with the solution of problems before the class, and asking relevant and cogent questions.

Extra-Credit: There will be no extra-credit assignments. Assessment will be exclusively based on the criteria listed above.

Schedule of Readings

We will cover a little more than one chapter per week from the Klenk textbook (taking us through chapter 16). Additional readings will be assigned on Course Reserves. *This is an approximation*. Reading assignments will be given during class and on the course's Blackboard site. Any readings from sources other than the Klenk textbook will be available on Electronic Reserves on Blackboard.

Exam Dates:
Except for the final exam, the exam schedule is subject to revision (below are my initial projections). A definite date will be provided at least one week in advance of the exam. I'll give you plenty of notice of any changes.

- Week of Sept. 23: Exam I
- Week of Oct. 21: Exam II
- Finals Week: Final Exam, administered at university-designated time and place

How to Pass this Class

For many students, this class is quite challenging. To do well, you should:

(1) Keep up with the reading, having gone through the assigned reading at least once before lecture
(2) Take good notes during lecture, making note of key concepts and the solution to problems
(3) ***Work through all of the problems in the assigned reading***
(4) Ask questions when you do not understand an aspect of the material or the solution to a problem

It will be tempting not to do (3) since I will not be collecting homework. However, for most students, it is absolutely necessary to do the practice problems to pass the class in good standing. The best way to become good at logic is to practice. Also, we will go over many of the problems in lecture and discussion section - it will serve you well to have attempted them in advance. *Do not fall behind, it can be very difficult to catch up*.

Course Policies

Attendance: Attendance in class is mandatory. Students should arrive promptly at the beginning of class with the textbook in hand. Students are permitted 3 unexcused absences (absences in both lecture and discussion count towards this total). *Attendance is defined as: present and alert in assigned seat without a computer or other similar electronic device.* Each unexcused absence

beyond this will result in the student's *final grade* being reduced by a third of a letter grade. Excuses will be granted for documented emergencies or university-sanctioned extra-curricular activities only. Note that arriving late to class or leaving before class has ended will be counted as an absence. We will begin taking attendance after the conclusion of the add/drop period.

Exam Makeup: No make-up exams will be given in this class unless the student can produce adequate documentation of very exigent circumstances that preclude her/him from meeting the course requirements. Students are required to inform the instructor of any such circumstances at the earliest possible occasion.

Electronic Devices: All electronic devices, including computers and cell phones, are to be turned off before the beginning of class unless special permission has been granted to use a computer. During exams, use of any such devices will be regarded as academic misconduct (i.e. cheating).

Academic Honesty: Acts of academic dishonesty will be dealt with harshly in accordance with Harpur College and university-wide policies. The **Student Academic Honesty Code** can be found at http://www.binghamton.edu:8080/exist/rest/bulletin/2019-2020/xq/02_acad_policies_procedures_all_students.xq?_xsl=/bulletin/2019-2020/xsl/MasterCompose.xsl. Cheating during an exam, including any use of cell phones or other electronic devices, will result in a zero for that exam, and referral to the Dean's office.

Pass/Fail: If you want to take this class **pass/fail**, register accordingly now. I will not sign pass/fail forms mid-semester for students with a grade of C or better. The University Registrar is adamant about not letting students switch to pass/fail or drop after the deadlines have passed.

Grades: Your grades are your responsibility. Final grades are **final** unless a calculation error has been made. Absent serious exigencies, incompletes are not granted. Asking for special consideration or a grade change for reasons unrelated to performance on the exams and participation in discussion (e.g. grade x is needed to graduate, meet a curricular requirement, or continue with extracurricular activities) is inappropriate. Grades are based strictly on performance.

Grading Scale:

A	=	93% or above
A-	=	90 - 92.99 %
B+	=	88 - 89.99 %
B	=	83 - 87.99 %
B-	=	80 - 82.99 %
C+	=	78 - 79.99 %
C	=	73 - 77.99 %

C- = 70 - 72.99 %
D = 60 - 69.99%
F = 59.99% or below

If you are experiencing undue personal or academic stress at any time during the semester or need to talk with someone about a personal problem or situation, I encourage you to seek support as soon as possible. There is a wide range of campus resources, including:

1. Dean of Students Office: 607-777-2804
2. Decker Student Health Services Center: 607-777-2221
3. University Police: On campus emergency, 911
4. University Counseling Center: 607-777-2772
5. Interpersonal Violence Prevention: 607-777-3062
6. Harpur Advising: 607-777-6305
7. Office of International Student & Scholar Services:607-777-2510