## Syllabus<sup>1</sup> Logic (PHIL 2311-001) The University of Texas at Arlington 27 August 2015

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**Prelude:** "[T]he most valuable thing a student can learn in college is how to think, how to study, how to learn, how to acquire and process new information" (<u>Irving M. Copi</u>, <u>Introduction to Logic</u>, 7th ed. [New York: Macmillan Publishing Company, 1986], viii).

**Description of Course Content:** Reasoning—also known as inference—is the process by which conclusions are drawn from premises. There are two types of reasoning:

- **Theoretical.** When one reasons theoretically, one decides what to believe.
- **Practical.** When one reasons practically, one decides what to do.

There are two types of *study* of reasoning:

- **Empirical.** When one studies reasoning empirically, one seeks to understand the processes by which human beings reason (whether theoretically or practically). This is the province of science.
- **Normative.** When one studies reasoning normatively, one seeks to distinguish, in a principled way, between good and bad reasoning. This is the province of logic, which may, accordingly, be understood as *the normative study of reasoning*.

Logic is either **formal** or **informal**, depending on whether the reasoning being studied is expressed in artificial or natural language. (English, Swahili, and Latin are natural languages; COBOL and Fortran are artificial languages.) This is a course in **formal** logic, so we will study

<sup>&</sup>lt;sup>1</sup> A syllabus is "the program or outline of a course of study, teaching, etc." *The Oxford American Dictionary and Language Guide* (1999).

<sup>&</sup>lt;sup>2</sup> If you can't make it to my office during office hours, don't worry. We can communicate by e-mail. Anything that can be said in my office, face to face, can be said by e-mail, which has the added benefit of being a written medium. (Writing tends to be more thoughtful than speech, and it doesn't require synchronization of schedules.) Please keep all e-mail communications civil and professional. What you say to me (and I to you) will be stored on UTA's server long after the semester is over.

artificial languages, three in particular:

- Categorical logic.
- Propositional logic.
- Predicate logic.

There are no prerequisites. Students who wish to study **informal** logic should take Fundamentals of Reasoning (PHIL 1301). The courses may be taken in any order.

**Student Learning Outcomes:** Students who (1) read the course material carefully (preferably more than once), (2) attend all classes, (3) listen to the lectures attentively, (4) make good notes, (5) participate in classroom discussions, and (6) study properly (preferably with one or more other students) will be able to (1) define important logical terms, such as "argument," "premise," "conclusion," "deduction," "induction," "validity," "truth," and "soundness"; (2) describe the various properties of (and relations between) the four standard-form categorical propositions; (3) use truth tables to classify propositions, compare propositions, and test arguments for validity (in propositional logic); (4) construct and evaluate proofs in propositional logic; and (5) construct and evaluate proofs in predicate logic.

**Required Textbooks and Other Course Materials:** There are no books. All course materials are available free of charge (except for the paper on which to print them) from the course blog, which is accessible from any Internet-connected computer. Each student is responsible for locating and printing these materials. (See the document entitled "Course Outline" for details; it is incorporated herein by reference.) Bring the course materials to class with you, just as you would a textbook.

**Interlude:** "When you come to any passage you don't understand, *read it again:* if you *still* don't understand it, *read it again:* if you fail, even after *three* readings, very likely your brain is getting a little tired. In that case, just put the book away, and take to other occupations, and next day, when you come to it fresh, you will very likely find that it is *quite* easy" (Charles Lutwidge Dodgson, quoted in Morris R. Cohen and Ernest Nagel, <u>An Introduction to Logic</u> [New York and Burlingame: Harcourt, Brace & World, 1962], 121 [italics in original] [first published in 1934]).

## Descriptions of Major Assignments and Examinations: There are four course requirements:

- 1. An in-class examination, which constitutes 30% of your grade. This examination will be given during class on Thursday, 1 October.
- 2. A noncomprehensive in-class examination, which constitutes 30% of your grade. This examination will be given during class on Thursday, 5 November.
- 3. A noncomprehensive in-class examination, which constitutes 30% of your grade. This examination will be given between 8:00 and 9:15 AM on Tuesday, 15 December.
- 4. Classroom attendance, which constitutes 10% of your grade. (See below for details.)

The purpose of the examinations is to test the breadth and depth of your knowledge and skill. You are responsible for all the readings, handouts (if any), blog posts, lectures, and discussions (yes, discussions). I do not duplicate lectures in my office or provide notes to students; nor do I allow audio or video recording of my lectures (unless required by law under the Americans with Disabilities Act). If you miss a class, your only recourse is to ask another student for assistance. I *strongly* recommend that you find a study partner the first week of class and meet regularly with this partner during the semester to go over the course material. I do not give quizzes, assign homework, or permit extra credit.

Attendance Policy:<sup>3</sup> You are allowed to miss two of the 26 classes (I do not count the first day of class on 27 August or the two in-semester examination days) before it begins to cut into your grade. Here is a table of scores:

Classes Attended (of 26)	Attendance Score
24 through 26	100
23	96
22	92
21	88
20	83
19	79
18	75
17	71
16	67
04	17
03	13
02	08
01	04
00	00

Please do not attempt to explain, excuse, or justify an absence. My policy is not that you are allowed two *unexcused* absences; it is that you are allowed two *absences*. If you expect attendance to be a problem, do not take the course. If attendance *becomes* a problem, you may wish to drop the course. (The last drop day of the semester is Wednesday, 4 November.) If you leave the classroom without signing the attendance sheet, you will not be allowed to sign it later, for obvious reasons. Please do not ask me to add up your days of attendance (or, conversely, your absences). I will perform this task only once, at the end of the semester, immediately prior to calculating grades.

**Grading:** The maximum score on each of the three examinations is 100. The maximum attendance score is 100. I will assign grades on the basis of a 10% scale, which means that a

<sup>&</sup>lt;sup>3</sup> At the University of Texas at Arlington, the taking of attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance.

final score of 90 or higher is an A, anything in the 80s a B, and so forth.<sup>4</sup> Here is an example. Suppose a student receives scores of 82, 74, and 84 on the three examinations and a score of 75 for attendance. Here is the calculation:

82 x .3 = 24.6 74 x .3 = 22.2 84 x .3 = 25.2 75 x .1 = 07.5 ----79.5

This student would receive a C in the course. Note that the student's poor attendance (eight absences instead of the allowed two) cost him or her a grade, for the three examination scores average 80.

**Postlude:** "[E]veryone needs to be taught some philosophy (or, better, what philosophy is and how to do it) in school and in higher education. [P]hilosophy is not an option which some people may take up for their own interest or amusement, but a vital piece of equipment for every person—as vital as a mastery of their native language, or elementary mathematics, or anything else. There is no reason to disbelieve, and plenty of reasons to believe, that even quite young children can do philosophy; certainly all should have adequate experience of it before their education is over. Philosophers must fight for their share of the curriculum" (John Wilson, *What Philosophy Can Do* [Totowa, NJ: Barnes & Noble Books, 1986], 152).

## What Follows Is University Boilerplate

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they [sic] do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<u>http://wweb.uta.edu/aao/fao/</u>).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at <u>www.uta.edu/disability</u> or by calling the Office for Students with Disabilities at (817) 272-3364.

**Title IX:** The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit <u>uta.edu/eos</u>. For information regarding Title IX, visit <u>http://www.uta.edu/titleix/</u>.

<sup>&</sup>lt;sup>4</sup> The University of Texas at Arlington describes a grade of A as "Excellent," a grade of B as "Good," a grade of C as "Fair," a grade of D as "Passing, Below Average," and a grade of F as "Failure." See the section entitled "Grades and Grading Policies" in the University Catalog.

Academic Integrity: All students in all courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <a href="http://www.uta.edu/oit/cs/email/mavmail.php">http://www.uta.edu/oit/cs/email/mavmail.php</a>.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <a href="http://www.uta.edu/sfs">http://www.uta.edu/sfs</a>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.