PHIL 2310 **LOGIC** **SUMMER 2015**

INSTRUCTOR	OFFICE	E-MAIL	LAB HOURS
Joel Velasco	Eng/Phil 265G	joel.velasco@ttu.edu	2-3 MTh in MCOM 363
Jack Byers		jack.byers@ttu.edu	2-3 Tu in MCOM 363

Lecture 1 MTWRF 12:00-1:50 MCOM 363 (lab open until 6pm)

MAIN COURSE OBJECTIVES
1. To help you focus on *arguments* rather than *conclusions*, on reasons rather than opinions. 2. To teach you standards for *evaluating* arguments, for finding out whether they are good or bad. 3. To help you apply the standards to the evaluation of real-life arguments proposed by others. 4. To help you apply the standards to the construction of your own real-life arguments. 5. To fight superficiality by emphasizing quality rather than quantity. 6. To help you develop valuable skills by emphasizing rigorous thinking, clarity, and precision.

This class partially fulfills the university's Core Curriculum requirement in Mathematics.

Students graduating from Texas Tech University should demonstrate the ability to apply quantitative and logical skills to solve problems.

Text:

Logic Primer, 2nd edition, by Colin Allen and Michael Hand (available at the University Bookstore).

Logic Primer Companion by Chase Wrenn *AVAILABLE ONLY AT* The Copy Outlet (on Broadway near University)

Exams and Assignments

All exams are high pass/low pass/fail. There is no partial credit for incorrect answers, and the standards for correctness are highly exacting (for example, an answer will be graded as incorrect even if it would have been correct but for a single typographical error). Exams will be taken in Blackboard during class time. You have 50 minutes for any given exam. You may take a test during class time whenever you feel ready for it. Unless Joel or Jack has lab hours immediately after class, all tests end at the end of class. With permission, you may take tests during lab hours though you should not expect that this will be possible. The quizmaster (**http://logic.tamu.edu**) has practice problems exactly like those that you will find on your exams. If you do not pass an exam or you earn a low-

pass, you may retake the test to try to earn a better score. But be aware that every test attempt you make counts in the calculation of your course grade--even attempts on tests that you never pass and on tests that you only low pass.

Grading Policy

Tests can be failed (below 60% correct answers), low passed (at least 60% but less than 80% correct answers), or high passed (at least 80% correct answers).
You get 2 passing points for a high pass, 1 passing point for a low pass, and 0 passing points for a fail. Only your highest scoring attempt on each test counts for passing points, but all attempts affect your course grade.

Your course grade depends on how many passing points you accumulate and how many total test attempts you make by the end of the semester, according to the chart below. The numbers across the top of the chart represent your passing point total, and the numbers down the side represent the total number of test attempts you made. See page four of this syllabus for the grading chart and several examples of how to read it.

Test Descriptions

The book is divided into four chapters which here is split up into seven chunks or "modules". Students are not expected to complete the seventh module though it is here for those who want to challenge themselves (and you can use it to earn extra points). So for example, it is possible to get an A without ever taking the seventh exam.

Here is what can be expected on each exam:

Module 1 Test
This test covers chapter 1 sections 1.1, 1.2, and 1.3. You will have ten (10) symbolizations, similar to the ones covered in Quizmaster Ex. 1.3. You will also have ten (10) Multiple Choice and True/False questions, similar to the ones covered in Quizmaster Ex. 1.1, 1.2.1, 1.2.2, and 1.2.3. **Low pass requires at least 12/20; high pass requires at least 16/20**

Module 2 Test
This test covers chapter 2 sections 2.1-2.3 and chapter 2 sections 2.4 & 2.5. You will have five (5) True/False questions, similar to the ones in Quizmaster "Supplementary Quiz on Semantics." You will also have five (5) sequents to assess for invalidity and give invalidating assignments, similar to the ones in Quizmaster Ex. 2.4.2 and 2.5.2. Lastly you will have five (5) Sequents from chapter 2 to assess for validity and give English counterexamples if appropriate. **Low pass requires at least 9/15; high pass requires at least 12/15**

Module 3 Test
This test covers chapter 1 section 1.4, 1.5, and 1.6 online. You will have 5 proofs like Quizmaster 1.4.2 and 1.5.1. You will also have 5 proofs like Quizmaster 1.5.2, 1.5.4, and 1.6.1 **Low pass requires at least 6/10; high pass requires at least 8/10**

Module 4 Test
This test covers chapter 3 sections 3.1 and 3.2. You will have three (3) items similar to the ones covered in Quizmaster Ex. 3.1.1, judging whether an expression is a wff and, if so, what kind. You will also have five (5) sentences to symbolize in the language of predicate logic, similar to the ones covered in Quizmaster 3.2s. Lastly, you will have seven (7) sentences to symbolize, similar to the ones covered in Quizmaster 3.2. **Low pass requires at least 9/15; high pass requires at least 12/15**

Module 5 Test
This test covers chapter 4 section 4.1 and chapter 4 sections 4.2 and 4.3. You will have five (5) quantified sentences to expand over a give universe, similar to the ones covered in Quizmaster Ex. 4.1.1 and 4.1.1s. You will also have five (5) sequents for which to provide finite counter models, similar to the ones covered in Quizmaster Ex. 4.2 and 4.3.1. Low Pass: 6/10. High Pass: 8/10.

Module 6 Test
This test covers chapter 3 Section 3.3. You will have five (5) proofs, similar to the ones covered in Quizmaster Ex. 3.3.2 and 3.4.1. **Low pass requires at least 3/5; high pass requires at least 4/5**

Module 7 Test
This test covers proofs of theorems and proofs of sequents involving identity in predicate logic. You will have five (5) proofs, similar to the ones covered in Quizmaster Ex. 3.4.2 and S121-S130 in Logic Primer. **Low pass requires at least 3/5; high pass requires at least 4/5**

Pacing yourself
In most cases you should not take a test until you are ready (you will know if you are ready by taking quizzes in the Quizmaster). But you will want to know what a good pace during the class is. There are 22 lectures in total and you should aim to complete 5 or 6 different modules. You will also want to build in extra days to allow yourself to retake exams.

I have taught this class using this text before without any flexibility in timing. If you want to finish all six modules, I would suggest that good days for tests might be days 3, 6, 10, 14, 18, and 22. That gives you time to study between each exam. Later exams will typically be harder and require more study time though many students will find that they especially need extra time for natural deduction proofs (modules 3 and 6). If you are aiming for a B or better in the class, you should have earned a high pass on each of the first three modules before the half-way mark of the class.

	points	3	4	5	6	7	8	9	10	11	12	13	14
attempts													
	4	F	F	D+	C-	C	C+						
	5	F	F	D	C-	C	C+	B	B+				
	6	F	F	D	C-	C	C+	B-	B+	A-	A		
	7	F	F	D	D+	C	C+	B-	B	A-	A	A+	A+
	8	F	F	D-	D+	C	C+	B-	B	B+	A	A+	A+
	9	F	F	D-	D+	C-	C+	B-	B	B+	A-	A+	A+
	10	F	F	D-	D+	C-	C+	B-	B	B+	A-	A	A+
	11	F	F	F	D	C-	C	B-	B	B+	A-	A	A+
	12	F	F	F	D	C-	C	B-	B	B+	A-	A	A+
	13	F	F	F	D	C-	C	C+	B	B+	A-	A	A+
	14	F	F	F	D	D+	C	C+	B	B+	A-	A	A+
	15	F	F	F	D-	D+	C	C+	B-	B+	A-	A	A+
	16	F	F	F	D-	D+	C	C+	B-	B+	A-	A	A+
	17	F	F	F	D-	D+	C-	C+	B-	B	A-	A	A+
	18	F	F	F	D-	D+	C-	C+	B-	B	A-	A	A+
	* if you have more than 18 attempts, see instructor for grade												

Examples:
--You take six exams and earn a low pass on each one. You will have taken 6 attempts and earned 6 points and will receive a C- in the class.
--You earn a low pass on six exams, but then take each of them a second time to try to do better. On three of these exams, you do improve your score to a high pass. For three of them, you don't improve your score. You now have taken 12 attempts and earned 9 points which is a B-.
-- You have taken the first 5 exams and high-passed 2 of them and low passed three of them for a total of 7 points. If you stop now, you will earn a C in the class. You really want a B-. You notice that you need two more points to do this. You can achieve this by taking a new test and high passing it, by low passing it and retaking an old test, or by retaking two old tests.

Notes:
--If you want to pass the class, you will need a minimum of 5 points. The minimum C- is 6 points, the minimum B- is 9 points, the minimum A- is 11 points.

--Notice that no matter where you are in the class, if you take an extra test attempt and earn an extra point, you will improve your final grade in the class. In fact, if it takes you two attempts to earn one extra point it is still always worth it.

Other Matters:

Academic Integrity: Cheating and plagiarism are, of course, prohibited in this class just as they are in all university classes. They will be taken particularly seriously in this class, and any cases that may arise will be treated in a manner consistent with University policy. These two violations of academic integrity are each defined in the section of the Texas Tech online official publications titled "Academic Integrity." Plagiarism is there described as follows:

"'Plagiarism' includes, but is not limited to, the appropriation of, buying, receiving as a gift, or obtaining by any means material that is attributable in whole or in part to another source, including words, ideas, illustrations, structure, computer code, other expression and media, and presenting that material as one's own academic work being offered for credit." http://www.depts.ttu.edu/studentconduct/academicinteg.php

You can find excellent explanations of what specifically constitutes plagiarism as opposed to proper citation, and also tutorials on how to avoid plagiarism at the following websites: http://www.dartmouth.edu/~writing/sources/

http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml

Classroom Civility: It should go without saying that disruptive behavior is not considered acceptable in the classroom. In addition, the study of philosophy, like any other substantial subject, requires a certain level of concentration. And everyone's attention and concentration is facilitated by an absence of unnecessary distractions within classroom. In concrete terms, this means you should turn off phone ringers before class starts; keep them in your bag or pocket. We also have the special problem in our class that each of you will have a computer right in front of you with access to the internet and your email, etc. Do not use these computers for non-class work during class time. 1) We will see immediately and ask you to stop. 2) Despite what you might think, repeated empirical studies validate the obvious truth that people are bad at multi-tasking and trying to do multiple things at once (like read an email while paying attention to lecture) just doesn't work very well.

Students with Disabilities: Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office in 335 West Hall or 806-742-2405.

Religious holy days: a student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent for the observance of a religious holy day shall be allowed to take an exam or complete an assignment scheduled for that day within a reasonable time after the absence.