Elementary Formal Logic

T 7:00 - 9:30
CS-115

http://philosophy.tamucc.edu

Professor:

Don Berkich, Ph.D.

Office: FC-283
Hours: TR 11:00 – Noon, W 12:00 – 4:00, and by appointment.
Office#: 3976 (do not leave a message, send email instead)
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Course Description:

The course for this independent study consists of the study of basic technical methods and results in philosophical and mathematical logic including the following:

Syntax and semantics of the Propositional and Lower Predicate Calculi (PC and LPC).

Proof and model theory for PC and LPC.

Metatheory results including consistency and completeness for PC and LPC.

Zermelo-Fraenkel Set Theory (without the Axiom of Choice.)

Incompleteness.
**Student Learning Outcomes:** (as determined by portfolio and class work, and recognizing that SLO’s make Socrates puke in his grave, once for each SLO.)

Students will gain

1. The ability to construct object language proofs using both natural deduction and axiomatic techniques.

2. The ability to prove basic metatheory results for PC and LPC.

3. The ability to construct LPC proofs of theorems in ZF-Set Theory and other axiomatic theories.

4. The ability to employ formal techniques to clarify and solve informal problems.

**Texts:**

All readings, notes, and supplies are provided by the professor.

**Requirements:**

*Portfolio:*

A portfolio of work including notes and seven completed problem sets worth 500 points is due Wednesday, 5/15.

*Exams:*

Approximately every other week beginning the fourth week of class we will begin with a short (30-40 minute) examination. There will be a total of six examinations, but only the best five will count towards your grade for the semester. Each examination is worth 100 points.

**Grading Formula:**

Total points = portfolio + sum of the best five examinations.
Grading Scale:

Course Grade is determined by the following scale:

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<tr>
<th>Grade</th>
<th>Score Range</th>
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<tr>
<td>A</td>
<td>900-1000</td>
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<tr>
<td>B</td>
<td>800 - 899</td>
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<td>C</td>
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<td>D</td>
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<td>F</td>
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Policies:

The professor assumes that students enrolled in this course are sincere student-scholars. That is, the professor shall treat them with the respect due scholars, and, as scholars, they shall do their best to live up to the standards of scholars. To wit,

Preparation:

Scholars carefully read assignments in advance of class, take notes on their reading, explore specific issues in discussion with fellow scholars, and follow-up class by re-reading portions of the required readings and exploring suggested readings.

Participation:

Scholars are eager to respectfully, openly, and critically discuss arguments and issues raised by the readings. Scholars are adept at following a line of reasoning wherever it may lead. Most importantly, scholars welcome the insights and criticisms of their peers: A scholar understands that it is possible to entertain a proposition without believing it, just as it is possible to present an argument without personally endorsing the argument. Scholars enjoy vigorous deliberations and are always careful to treat fellow scholars with patience and good humor.

Assignments:
Scholars fully immerse themselves in assignments and never assume that an assignment is only legitimate if it will be covered on a test. Scholars are naturally curious and see every assignment as an opportunity to explore new issues, see old issues in new light, and hone their growing skills.

Cheating:

Scholars are very careful to give proper credit and maintain the highest standards of scholarly conduct. Thus, subject to university guidelines, any instance of cheating (including plagiarism) will be vigorously prosecuted.

Attendance:

Scholars always attend class barring serious injury, illness, or disaster. Scholars view class-time as rare and valuable for the thought it evokes and the opportunities it presents. Scholars arrive early for class and never leave class early without obtaining prior approval from the professor.

Additional Notes:

Any change in the above will be announced in class. No change will be made which would be detrimental to the student's grade.

This syllabus is not authoritative. That is, the syllabus on the course website supersedes this syllabus wherever they differ. The professor and the students are only responsible for the syllabus as it appears in its entirety on the course website, including the schedule of topics and readings.

Any student missing a due date must provide a documented, acceptable reason according to university guidelines. Students with a proper excuse for missing a due date will be given a reasonable extension. Students without a proper excuse for missing a due date will lose 20 points per day after the due date.

Required University Note to Students with Disabilities: Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office, located in Driftwood 101, at 825-5816. If you need disability accommodations in this class, please see me as soon as possible.
Required College of Liberal Arts Note on Academic Advising: The College of Liberal Arts requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College's Academic Advising Center is located in Driftwood 203E, and can be reached at 825-3466.

Required University Note on the Grade Appeal Process: As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

By accepting this syllabus the student indicates that the syllabus has been read, all requirements are understood, and all policies are acknowledged.