Formal Reasoning

PHL 330

Fall 2020

MF 10:20am–12:10, Online

Ted Richards, PhD

rich1079@msu.edu

Office: 519 South Kedzie Hall

Office Hours: Wednesday 10:30am–12:00, by appointment

**Catalog Description**

Formal methods in deductive reasoning. Logic of connectives and quantifiers including identity, functions, and descriptions.

**Overview**

This course is an introduction to formal symbolic logic. We will treat symbolic logic as a language like any other, complete with its own vocabulary, syntax, and grammar. To become proficient in this new language, we will focus on the rules and techniques for translating English into both sentential and first-order predicate logic. We will also explore the methods and strategies for determining the logical status for any argument that can be expressed in formal logic. In the process, we will develop and strengthen language and problem-solving skills, particularly those skills associated with the close reading of texts for both meaning and analysis. In addition, those students who successfully complete this course will be prepared for more advanced logic courses.

**Text**

R. L. Simpson (1999) *Essentials of Symbolic Logic*. 3ed. ISBN: 1551118939

**How the Class Will Run**

An introductory course in formal logic is essentially a skills course. You will be introduced to, and develop new skills common to all languages. Just like all other skills, however, mastery of formal logic requires more than just following along to lectures or readings—true mastery requires practice, practice, and more practice. Thus, there will be homework assignments almost every day. Students are strongly encouraged to do the reading and homework before the next tutorial meeting. While the assignments will not be collected, the tutorials will be devoted to questions from the previously assigned homework. The goal is mastery of these skills before the end of the course, so while there will be three exams and a final exam, a strong final exam will correlate with a good final course grade (see explanation in Course Evaluation).

My main worry in moving this from the classroom to an online modality is “losing” students. It is easier to become “lost” in a 35 person zoom meeting than in a 35 person classroom. Accordingly, I’ve adopted a tutorial format for this course.

In practice, this means that there will be no synchronous lecturing. Material will be delivered in small, pre-recorded videos that will be available on D2L. These videos will cover the same material as the assigned readings, but in my experience, seeing the skills performed live helps.

Our synchronous, online meetings will thus be devoted to tutorials. These will be smaller sessions in which you can ask me anything regarding the days material.

*Tutorial attendance is mandatory*. You need to be there with you camera and mike on during your assigned time. You can attend other tutorials, but please have your camera and mike off.

We’ll begin with bi-weekly, 25 minute, 9 person tutorials. I reserve the right to re-organize the tutorials as the semester goes along. Please see the separate tutorial schedule.

**Evaluation**

There will be three chapter exams and a final comprehensive exam. Exams will be available on D2L. Once you open or download the file you will have a certain amount of time to submit the completed exam. There will be a deadline for submitting completed exams. Details will be provided closer to the first exam.

The grade reported to the registrar will be calculated by one of the following methods:

*Method 1:* Tutorial Attendance 15%

Exams 1, 2, and 3 20% each

Final Exam 25%

*Method 2:* Tutorial Attendance 15%

Final Exam 85%

The highest grade produced by these two methods will be the grade reported to MSU.

All grades are calculated on a 100 point scale. At the end of the term, your final grade will be reported to MSU according to the following scale:

4.0 90% and above

3.5 85–89%

3.0 80–84%

2.5 75–79%

2.0 70–74%

1.5 65–69%

1.0 60–64%

Final grades will be rounded to the nearest ones digit in the standard way, e.g., 59.50 is rounded to a 60 while 59.49 is rounded to a 59.

**Other Stuff**

• Don’t Fall Behind! If you don’t understand something don’t let it slide. There is a lot of material to be covered and the skills build on one another, so if you don’t grasp something early you’ll find yourself in an inescapable hole. Ask questions. Do all the reading. Ask questions. Do all the homework (there is no other way to be sure that you really grasp the skill). Ask questions. Attend tutorials. Ask questions. To do anything else is certain death (not literally, but GPA wise, trust me I’m a professional).

• Class announcements will be made through D2L. Please make sure that you check either the web site associated with the class or your MSU e-mail regularly.

• If you know you won’t be able to meet a scheduled exam deadline, make arrangements with me at least one week before the exam, two weeks before the final exam.

• Grades are non-negotiable. If I have made an arithmetic error, please let me know and I will correct it. If you are dissatisfied with your grade, please make an appointment with me so we can improve your future work.

• **Academic Honesty**: Article 2.3.3 of the Academic Freedom Report states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the Philosophy Department adheres to the policies on academic honesty as specified in General Student Regulations 1.0, *Protection of Scholarship and Grades;* the all-University Policy on *Integrity of Scholarship and Grades*; and Ordinance 17.00, Examinations. (See *Spartan Life: Student Handbook and Resource Guide* and/or the MSU Web site: www.msu.edu.) Therefore, unless authorized by me, you are expected to complete all course assignments, including homework and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in PHL 330. Students who violate MSU academic integrity rules may receive a penalty grade, including a failing grade on the assignment or in the course. Contact me if you are unsure about the appropriateness of your course work. (See also http://www.msu.edu/unit/ombud/dishonestyFAQ.html )

• **Accommodations for Students with Disabilities** (from the Resource Center for Persons with Disabilities (RCPD): Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation ("VISA") form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date will be honored whenever possible.

• Almost all of us are struggling with a unique set of challenges these days, brought about by the COVID-19 pandemic, economic fallout, ongoing efforts for social justice, and other experiences. While I am not a trained mental health professional, I am someone you can reach out to if you’re struggling, whether or not your concerns pertain directly to this course. Our conversations will be confidential, though please remember that all faculty at MSU are mandatory reporters if issues of violence, sexual harm, or harassment are disclosed. I’m a good listener, and I can help connect you to campus and other resources that are here to help you.

I am committed to helping you successfully complete this course, but it’s even more important to me that you experience our virtual classroom as a space that is open, inclusive, and supportive.