

Instructor: Kevin Patton
Course: PHIL 110
Time: M-F 1030 - 1205
Location: Burn 232
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UNL Philosophy
My Office Hours: M/W 1230-1330

Introduction to Logic and Critical Thinking

“My desire and wish is that the things I start with should be so obvious that you wonder why I spend my time stating them. This is what I aim at because the point of philosophy is to start with something so simple as not to seem worth stating, and to end with something so paradoxical that no one will believe it.”
Bertrand Russell from *The Philosophy of Logical Atomism* 1918.

Course Overview

An introduction to the principles of formal reasoning and their application, with an emphasis on improving skills of critical thinking, analyzing and evaluating arguments objectively, and constructing arguments based on relevant evidence.

Required Materials

An Open Introduction to Logic, **version 0.1**, by Magnus, Woods, and Loftis.

Course Information

Preparation: This course may be very challenging for you if you are not accustomed to reasoning in a rigorous fashion. If this is true of you, then you will only do well in this class if you dedicate much of your outside-of-class-time to practicing and mastering the relevant topics covered. Also, the only dumb questions are the ones you don't ask. If you are confused about something, then there is a high likelihood that someone else is too!

Attendance: Attendance is required. There are no make-ups for problem sets or exams unless your absence is due to a **documented** illness or an emergency.

Website: All course material, apart from the textbook, will be available exclusively on my website. I do **not** use BlackBoard except for the posting of grades. The site URL is:

<https://kevinjpatton.github.io/>

ACE: Outcome 3: Use of mathematical, statistical, or formal reasoning (including reasoning based on principles of logic) to solve problems, draw inferences, and determine reasonableness.

Evaluation

Grading Scale

| | | | |
|----------------|--------------|----|--------------|
| A+ | 96.7 - 100% | C+ | 76.7 - 79.9% |
| A | 93.3 - 96.6% | C | 73.3 - 76.6% |
| A- | 90 - 93.2% | C- | 70 - 73.2% |
| B+ | 86.7 - 89.9 | D+ | 66.7 - 69.9 |
| B | 83.3 - 86.6% | D | 63.3 - 66.6% |
| B- | 80 - 83.2% | D- | 60 - 63.2% |
| F Below 60% | | | |

Homework: 15%

Problem Sets: 25%

Exam 1: 25%

Exam 2: 35%

Daily homework and spot checks: After each class, you will be assigned some homework, consisting of reading and/or written exercises, to consolidate your understanding of the material. Five times over the course of the semester, the homework exercises will be collected at the beginning of the next class, without advance notice. If you are absent on such a day, then you will receive a zero for that spot check unless you have documentation, in which case your spot check will be postponed until another day, also unannounced. Homework will not be accepted

late. Collaboration on daily homework assignments **is not forbidden**, but you are strongly urged **not** to merely copy others' work, as this will leave you ill-prepared for the problem sets and exams. Your lowest homework grade will be dropped, and your highest homework grade will be counted twice.

Problem sets: On the days listed below, a problem set will be due at the beginning of class. Collaboration on problem sets **is forbidden**. Late problem sets (without documentation) will be assessed a penalty of ten percentage points per calendar school day, starting at 1:30 p.m. on the due date. (E.g.: Monday after 1:30 p.m.: -10%. Any time Tuesday: -20%. Friday: -50%. Saturday through Monday: -60%.) Problem sets will not be accepted after a week's lateness has amassed.

Exams: The use of books and notes **will not** be permitted. However, certain kinds of information will be provided on an exam should you need it, and you will be told ahead of time what you are and what you are not required to memorize. Exams may not be rescheduled unless you have documentation of a serious illness or an emergency. A make-up exam is not guaranteed to be exactly the same level of difficulty as the original exam.

Policies

- **Academic Integrity:** The penalty for academic dishonesty (e.g., collaborating on problem sets, cheating on exams) will be failure of the course and the case's being forwarded to Student Judicial Affairs for possible disciplinary action. Make yourself familiar with UNL's Student Code of Conduct and Academic Integrity Code, available [online](#). **In this course, the normal penalty for any violation of the code is an "F" for the semester.** Violations may have additional consequences including expulsion from the university. Don't plagiarize – it just isn't worth it.

- **University Policies:** I respect and uphold University policies and regulations pertaining to the observation of religious holidays; assistance available to physically handicapped, visually and/or hearing impaired students; plagiarism; sexual harassment; and racial or ethnic discrimination. All students are advised to become familiar with the respective University regulations and are encouraged to bring any questions or concerns to the attention of the instructor.

- **ADA:** In compliance with University policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Students are encouraged to register with Student Disability Services to verify their eligibility for appropriate accommodations.

- **Misc.:** Please turn off cell phones, beeping watches, and other gadgets that make noise before entering our classroom. Absolutely no texting is permitted during class. I will subtract up

to five points from your participation grade each and every time your phone rings or I see you texting during class.

Further Resources

- Jargon: It's important to be on top of the technical terms used by philosophers. Please ask for clarification of terms in class. You can also consult Jim Pryor's online "[Philosophical Terms and Methods](#)." This is less important in this class than in more 'normal' philosophy classes, but it may help.
- Reference: The [Stanford Encyclopedia of Philosophy](#) is an excellent online resource, though entries can be lengthy. The [Internet Encyclopedia of Philosophy](#) has shorter entries, but it is not as scholarly.
- I may post some additional readings on my website if the Hurley reading does not explain something with sufficient clarity.

Assignment Calendar

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|-----------------|----------------------------------|------------------|------------------------|
| Part 1: | Thinking Logically | August 2 | Review Rules |
| July 10 | Introduction | August 3 | Rules of Replacement 1 |
| July 11 | Arguments | August 4 | Rules of Replacement 2 |
| July 12 | Deduction / Induction | August 7 | Review Rules |
| July 13 | Argument Properties | August 8 | Conditional Proof |
| Part 2: | Categorical Logic | August 9 | Indirect Proof |
| July 14 | Categorical Propositions | August 10 | Exam 2 |
| July 17 | Conversion, Obversion, Contra | | |
| July 18 | Traditional Square 1 | | |
| July 19 | Traditional Square 2 | | |
| July 20 | Venn Diagrams | | |
| July 21 | Exam 1 | | |
| Part 3 | Propositional Logic | | |
| July 24 | Symbols / Translation | | |
| July 25 | Truth Functions | | |
| July 26 | Truth Tables for Propositions | | |
| July 27 | Truth Tables for Arguments | | |
| July 28 | Indirect Truth Tables | | |
| July 31 | Implication Rules 1 | | |
| August 1 | Implication Rules 2 | | |