

Fall 2015

## PHIL 1101

Robert Stufflebeam  
*University of New Orleans*

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Syllabus  
The University of New Orleans  
Dept. of Philosophy

## PHIL 1101: Introduction to Logic (3 credits)

SECTION 001: LA 236, Tue/Thur, 09:30 - 10:45

### Contact Information

**Instructor:** Dr. Robert Stufflebeam  
**Office:** UNO: LA 385  
**Office Hours:** M-T-W-Th, 1:00 – 2:30 (and by appointment)  
**Office Phone:** (504) 280-7473  
**Email:** [rstuffle@uno.edu](mailto:rstuffle@uno.edu) (add 'PHIL 1101' to subject line)  
**Course Webpage:** [Moodle](#) login page

### Required Text

[1] Stufflebeam, R. (forthcoming). **Logic for the real world: An introduction to logic.**

### Course Description

**CATALOG DESCRIPTION:** An introduction to informal logic, classical logic, and sentential logic.

**COURSE OVERVIEW:** Logic is the study of the principles and methods used to distinguish "good" reasoning from "bad" reasoning. As it is through good reasoning that we plan, explain, persuade, convince, solve, and prove things successfully through language, good reasoning matters. So too do arguments, for they are the main medium through which we reason. Through the study of informal logic, not only will you learn that a good argument is cogent and a bad argument is fallacious, you will learn how to tell whether any argument is cogent or fallacious. But just as English is not always the best language through which to do mathematics, English is not always the best language through which to do logic. For this reason, in addition to informal (nonsymbolic) logic, you will learn both classical symbolic logic and modern sentential symbolic logic. When our attention turns to classical logic, our focus will be on evaluating syllogisms composed of general statements. When our attention shifts to sentential logic, the emphasis will be on deducing claims from their evidence via natural deduction (proofs). The central question in this course is *"Does this (a claim) follow from that (its evidence)?"* By the end of this course, you will have learned a host of formal methods for settling that question and others that bear upon the construction and evaluation of arguments.

Student Learning Outcomes

Upon successfully completing this course, students will be able to do the following:

- to understand the nature of logic and formal systems
- to understand and to apply the principles of “good” deductive reasoning (both in English and symbolically)
- to understand the following distinctions:
  - object language vs. metalanguage
  - informal logic vs. formal logic
  - deductive logic vs. inductive logic
  - sentences vs. statements
  - statements vs. statement forms
  - arguments vs. argument forms
  - cogency vs. validity
  - assumptions vs. presumptions
- to know the different types of statements (atomic and compound), their anatomy, and the conditions according to which any given statement is true or false
- to recognize arguments expressed in prose and to reconstruct them in standard form
- to understand the RIFUT Rule and all of the fallacies associated with violating it
- to evaluate the cogency of an argument fully
- to determine whether a claim follows from its evidence (i.e., whether an argument is valid) using truth-tables and proofs
- to translate statements from English into the formal languages of **C-logic** and/or **S-logic** (and vice versa)
- to demonstrate whether a statement is logically true, logically false, or contingent
- to know the logical relations among statements (e.g., validity, invalidity, consistency, etc.)
- to know the rules of natural deduction and to be able to use them both symbolically and in English
- to read, to understand, and to construct formal proofs
- to prove that a statement (or statement form) is a theorem
- to construct cogent arguments and proofs in English

Course Requirements

Grades will be based on a cumulative 100 point scale distributed as follows:

Requirement		Final grade	
<b>Quizzes</b>	(20%) 20 points	<b>A</b>	100 – 89.5 points
<b>Exam 1</b>	(20%) 20 points	<b>B</b>	89.4 – 79.5 points
<b>Exam 2</b>	(20%) 20 points	<b>C</b>	79.4 – 69.5 points
<b>Exam 3</b>	(40%) 40 points	<b>D</b>	69.4 – 59.5 points
		<b>F</b>	59.4 — 0 points

**QUIZZES:** There will be a series of quizzes on Moodle and in class. The quizzes are worth **20%** of your final grade.

**EXAMS:** There will be **3** exams. *You **MAY** use your text and notes, but you may **NOT** use any other resources.* **Exam 1** covers **informal logic**, **Exam 2** covers **classical logic**, **Exam 3** covers **sentential logic**. The exams are not weighted evenly. Each exam (like each quiz) is composed of conceptual questions as well as those that correspond to the exercises for that portion of the course. Everything you will see on the exams (and quizzes) corresponds to what you will see in the exercises. The exams are worth 80% of your final grade.

**EXTRA CREDIT:** **10** points extra credit is available by completing a fallacy recognition / evaluation assignment. Each submission is worth **1** percentage point. Extra credit must be completed and submitted in accordance with the guidelines that are on Moodle.

## Course Policies

What follows are my class policies. If for any reason you are unable to abide by these policies, you should withdraw from my course.

**ACADEMIC DISHONESTY:**

Academic honesty is fundamental to the process of learning and to evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, disseminating any part of an exam, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available on Moodle and online at <http://www.studentaffairs.uno.edu>. Each student is required to pledge that all completed work will be submitting according to the principles of academic integrity as defined in the statement on Academic Dishonesty in the UNO Student Code of Conduct

**ATTENDANCE:**

Your attendance is required. Classes begin on time. Do NOT stroll in late. And if you know that you must leave class early, let me know.

**AUDITS:**

Whether an audit is successful will depend only on your class participation performance.

**COMPUTERS/PADS:**

You may use a computer or pad in class, but you may NOT check email, Facebook, etc. during class. If you do, you will lose the privilege of using your device.

**DISABILITIES:**

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to <http://www.ods.uno.edu>.

**INCOMPLETES:**

Incompletes are STRONGLY discouraged. Should you need to take an incomplete, arrangements must be made with me well before the last class meeting.

**LANGUAGE:**

Feel free to say anything to me or to your peers, but tailor your remarks so: as not to be uncivil, abusive, or inappropriate. I will not tolerate ANY abusive, so do not engage in any personal attacks or name calling. (See my 'warning' below.)

**LATE-STARTS:**

There are no special dispensations for late-start students.

**LATE WORK:**

Online quizzes will disappear the day of the exam. Online exams must be submitted by **11:55 p.m.** on the day of the exam (see Game Plan), otherwise it will be impossible to submit an exam for grading. Late exams will not be accepted.

**MAKE-UPS:**

There will be no make-up quizzes. If you miss an in class exam, it is YOUR responsibility to tell me promptly (via phone, email, or in person) what *extreme* circumstances prevented your presence in class. Failing to do so will result in your receiving a '0' on the exam. Regardless of the reason for the make-up, if I give one, it will be harder than the original. Make-up exams are bad, bad things. Don't be tempted by them.

**PHONES:**

Distracting interruptions are inconsiderate, disrespectful, and time-wasting. Phones should be turned off before class begins. Do NOT text during class.

**WITHDRAWALS:**

You may withdraw from this course for any reason. Withdrawal is strictly up to you and none of my business. Look in the last page for the last day to withdraw without a penalty — a 'W' appearing on your transcript.

**WARNING!** Doing logic requires a willingness to think critically. Critical thinking does not consist in merely making claims. Rather, it requires offering reasons/evidence in support of your claims. It also requires your willingness to entertain criticism from others who do not share your assumptions. You will be required to do logic in this class. Doing logic can be hazardous to your cherished beliefs. Consequently, if you are unwilling to participate, to subject your views to critical analysis, to explore issues that cannot be resolved empirically, or to use computers, then my course is not for you.

# PHIL 1101 Game Plan

(subject to revision)

WEEK	TOPIC	READ	LECTURE
(1) Th Aug. 20	<b>Welcome</b>		<b>01</b>
(2) T Aug. 25	<b>Introduction to logic</b> <ul style="list-style-type: none"> <li>• good reasoning matters</li> <li>• the nature of logic and types of logic</li> <li>• the nature of arguments</li> <li>• deductive arguments vs. inductive arguments</li> <li>• the problem of induction</li> </ul>	<b>Ch. 1</b>	<b>02</b>
(3) Th Aug. 27	<b>INFORMAL LOGIC</b> <b>What is a statement?</b> <ul style="list-style-type: none"> <li>• functions of language</li> <li>• sentences vs. statements</li> <li>• types of statements and their truth-conditions</li> </ul>	<b>Ch. 2</b>	<b>03</b>
(4) T Sep. 01	<ul style="list-style-type: none"> <li>• 3 types of conditions</li> <li>• conceptual analysis</li> </ul>		<b>04</b>
(5) Th Sep. 03	<b>Recognizing arguments</b> <ul style="list-style-type: none"> <li>• premise = assumption = evidence</li> <li>• conclusion = inference = deduction = claim</li> <li>• evidence + claim = argument</li> <li>• indicators</li> <li>• useful generalizations</li> <li>• writing arguments in standard form</li> </ul>	<b>Ch. 3</b>	<b>05</b>
(6) T Sep. 08	<b>Evaluating arguments informally</b> <ul style="list-style-type: none"> <li>• What does it mean for a claim to follow from its evidence?</li> <li>• deduction vs. induction, valid vs. strong, invalid vs. weak</li> <li>• the principles of good reasoning</li> </ul>	<b>Ch. 4</b>	<b>06</b>
(7) Th Sep. 10	<ul style="list-style-type: none"> <li>• <b>The RIFUT Rule:</b> the evidence must be <b>R</b>elevant to the claim logically, <b>I</b>ndependent of the claim, <b>F</b>ree of dubious assumptions, <b>U</b>nambiguous, and <b>T</b>rue</li> </ul>		<b>07</b>
(8) T Sep. 15	<ul style="list-style-type: none"> <li>• fallacies of relevance, independence, presumption, and ambiguity</li> </ul>		<b>08</b>
(9) Th Sep. 17	<b>Exam 1</b>		
(10) T Sep. 22	<b>CLASSICAL LOGIC (C-logic)</b> <b>Statements</b> <ul style="list-style-type: none"> <li>• <b>A, E, I, and O</b> standard general statement forms</li> <li>• translation</li> <li>• Venn diagrams</li> </ul>	<b>Ch. 5</b>	<b>09</b>
(11) Th Sep. 24	<ul style="list-style-type: none"> <li>• the logical relations between standard general statements captured in the traditional square of opposition</li> <li>• immediate inferences</li> <li>• obversion, conversion, and contraposition</li> <li>• complements</li> </ul>		<b>10</b>
(12) T Sep. 29	<b>Evaluating standard from categorical syllogisms (SFCS's)</b> <ul style="list-style-type: none"> <li>• syllogisms, categorical syllogisms, SFCS's</li> <li>• construct counterexample method</li> </ul>	<b>Ch. 6</b>	<b>11</b>
(13) Th Oct. 01	<ul style="list-style-type: none"> <li>• rule method</li> <li>• distribution</li> </ul>		<b>12</b>
(14) T Oct. 06	<ul style="list-style-type: none"> <li>• Venn diagram method</li> <li>• match syntax method</li> </ul>		<b>13</b>

(15) Th Oct. 08	Exam 2 must be submitted by 11:55 p.m.			
(16) T Oct. 13 Th Oct. 15	<b>SENTENTIAL LOGIC (S-logic)</b> <b>Statements and statement forms</b> <ul style="list-style-type: none"><li>• <b>S-logic</b> alphabet and translation</li><li>• statement forms and substitution instance</li><li>• negations, conjunctions, disjunctions, conditionals, and biconditionals</li><li>• logical equivalence</li><li>• logical properties of statements</li></ul>		Ch. 7	14
(17) T Oct. 20				15
(18) Th Oct. 22	<b>Truth-table methods</b> <ul style="list-style-type: none"><li>• anatomy of truth-tables</li><li>• Is this statement logically true, logically, false or contingent?</li><li>• Are these two statements logically equivalent?</li><li>• Is this set of statements consistent?</li><li>• Is this argument valid?</li><li>◦ construct counter-example method</li><li>◦ "long" seek counter-example method</li><li>◦ "short" seek counter-example method</li></ul>		Ch. 8	16
(19) T Oct. 27				17
(20) Th Oct. 29				18
(21) T Nov. 03	<b>Proof method</b> <ul style="list-style-type: none"><li>• What is required to prove something?</li><li>• natural deduction</li><li>• rules of inference</li><li>• formal proofs</li><li>• rules of replacement</li><li>• strategy hints</li><li>• practice proofs in class</li></ul>		Ch. 9	19
(22) Th Nov. 05				20
(23) T Nov. 10				21
(24) Th Nov. 12				22
(25) T Nov. 17				
(26) Th Nov. 19	<ul style="list-style-type: none"><li>• conditional proof rule</li><li>• <b>S-logic</b> is complete</li><li>• indirect proof rule</li><li>• practice proofs using <b>CP &amp; IP</b> in class</li><li>• proving theorems</li></ul>		Ch. 10	23
(27) T Nov. 24				24
(28) T Dec. 01				
(29) Th Dec. 03				25
Th Dec. 10	Exam 3 (10:00-12:00); EC due			

#### Important Dates\*

Last day to adjust schedule w/out fee.....08/18/2015  
 Semester Classes Begin .....08/19/2015  
 Last day to adjust schedule w/fee,  
 or withdraw with 100% refund.....08/25/2015  
 Last day to apply for December commencement  
 .....09/25/2015  
 Final day to drop a course or resign ..... 10/14/2015  
 Mid-semester examinations ..... 10/05-10/09/2015  
 Final examinations ..... 12/07-12/11/2015  
 Commencement ..... 12/18/2015  
*\*Note: check Registrar's website for Saturday and A/B  
 sessions, and for items not listed here:  
<http://www.registrar.uno.edu>*

#### Fall Semester Holidays

Labor Day .....09/07/2015  
 Mid-semester break ..... 10/15-10/16/2015  
 Thanksgiving ..... 11/26-11/27/2015

#### Withdrawal Policy – Undergraduate only

Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates on the Registrar's website, <http://www.registrar.uno.edu>. Please consult The Bulletin for charges associated with dropping and adding courses.

#### Incomplete Policy – Undergraduate only

The grade of I means *incomplete* and is given for work of passing quality but which, because of circumstances beyond the student's control, is not complete. The issuance of the grade of I is at the discretion of the faculty member teaching the course. For all graduate and undergraduate students, a grade of I becomes a grade of F if it is not converted before the deadline for adding courses for credit (as printed in the Important Dates Calendar) of the next regular semester including summer semester.

#### Repeat Policy

When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student's Dean gives prior approval for documented extenuating circumstances.

#### Graduate Policies

Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook: <http://www.uno.edu/grad/documents/GraduateStudentHandbook2014.pdf>

#### Academic Dishonesty Policy

<http://www.uno.edu/student-affairs-enrollment-management/documents/academic-dishonesty-policy-rev2014.pdf>

#### Safety Awareness Facts and Education

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: <http://www.uno.edu/student-affairs-enrollment-management/>

#### UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at <http://www.uno.edu/counseling-services/>. First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through <http://www.uno.edu/fye/uno-cares.aspx>.

#### Emergency Procedures

Sign up for emergency notifications via text and/or email at E2Campus Notification: <http://www.uno.edu/ehso/emergency-communications/index.aspx>. All emergency and safety procedures are explained at the Emergency Health and Safety Office: <http://www.uno.edu/ehso/>.

#### Diversity at UNO

As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university's efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities. <http://diversity.uno.edu/index.cfm>

#### Learning and Support Services

Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at <http://www.uno.edu/lrc/>.

#### Affirmative Action and Equal Opportunity

UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO's compliance with federal and state regulations regarding EEOC in its Policies and Resources website: <http://www.uno.edu/human-resource-management/policies.aspx>