Philosophy 201: Introduction to Logic

Instructor: David Rose

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I. Course Location and Meeting Times

The course meets on the College Avenue Campus in Hardenbergh Hall, Room A1. The course will meet two times a week, on Tuesday 2nd period (9:50 a.m.—11:10 a.m.) and Friday 2nd period (9:50 p.m.—11:10 a.m.).

I will also be holding office hours. They will be from 11:30-12:30 on Tuesday and Friday. My office is located in the philosophy department, 106 Somerset St (Gateway Building), 5th Floor, Room 534. Also, if you need to make an appointment, just send me an email.

II. Course Description:

This course is an introduction to symbolic logic. Logic is the study of correct reasoning and symbolic logic studies reasoning using formal languages. We will begin with propositional logic. Propositional logic will enable us to represent terms such as "and" and "not" and will also enable us to evaluate various inferences. Then, we will turn to predicate logic. Predicate logic subsumes propositional logic but affords us additional tools to both represent terms such as "something" and "everything" and evaluate inferences.

III. Course Materials

The only required material for this course is the textbook. We will be using *Symbolic Logic: A First Course (2nd Edition)* by Gary Hardegree. The textbook is available online for *free* at Professor Hardegree's website:

http://courses.umass.edu/phil110-gmh/text.htm

If for some reason, the link above is not working for you, just type "Gary Hardegree Philosophy" into Google search. You should then see "Hardegree—Courses". Click on this and you should be taken to his course webpage. Here you should see "Philosophy 110—Introduction to Logic". Click on this and then "Textbook" at the top.

Finally, though this is *not required*, if you would like to have a hardcopy of the book for use, you can purchase one through Amazon. Be sure, though, to order the 2nd Edition since we will be working from this.

IV. Core Curriculum Information

Philosophy 201 satisfies a Cognitive Skills and Processes: Quantitative and Formal Reasoning requirement of the Permanent Core Curriculum.

Core Curriculum Learning Goal: Philosophy 201 meets Goal (a): "Apply effective and efficient mathematical or other formal processes to reason and to solve problems."

V. Tentative Schedule

Date	Topic	Reading	Assignment
1/21			
1/24	Basic Concepts	1.1-1.9	1A-1C
1/28	Truth Functional Connectives	2.1-2.13	2C
1/31	Validity	3.1-3.5	3A-3D
2/4	Translations in propositional logic	4.1-4.17	4A
2/7	Translations in propositional logic	4.18-4.23	4B
2/11	Translations in propositional logic	4.24	4C-D
2/14	Derivations in propositional logic	5.1-5.5	5A
2/18	Derivations in propositional logic	5.6-5.8	5B-5C
2/21	Derivations in propositional logic	5.9-5.12	5D-5F
2/25	Derivations in propositional logic	5.13-5.14	5G(91-96)
2/28	Translations in monadic predicate logic (and Exam 1 Review)	6.1-6.5	6A
3/4			**Exam 1**
3/7	Translations in monadic predicate logic	6.6-6.10	6B-6C
3/11	Translations in monadic predicate logic	6.11-6.16	6D-6F (91-92, 98-99)
3/14	Translations in monadic predicate logic	6.17-6.18	6F (93-97, 100)-6G
3/25	Translations in monadic predicate logic	6.19-6.20	6H-6I
3/28	Translations in polyadic predicate logic	7.1-7.3	7A-7B
4/1	Translations in polyadic predicate logic	7.4-7.6	7C-7D
4/4	Derivations in predicate logic (and Exam 2 Review)	8.1-8.6	8A
4/8			**Exam 2**
4/11	Derivations in predicate logic	8.7-8.8	8B-8C
4/15	Derivations in predicate logic	8.9-8.10	8D
4/18	**No Class**		
4/22	Derivations in predicate logic	8.11	8E
4/25	Derivations in predicate logic	8.12	8F(51-54, 56, 57,

			59) - 8G(61-64)
4/29	Finish up material		
5/2	Review		

Note: The schedule may be revised depending on how quickly we are moving through the material. I will keep you updated on any changes made in the schedule.

VI. Grading and Assignments

A. Homework

Logic, like mathematics, largely involves acquiring skills rather than merely memorizing facts. To acquire the skills needed in logic, it is important that you practice. And so, each day there will be homework assignments. Homework assignments will make up 20% of your overall grade. Importantly, I will only collect *five* homework assignments.

Important: Collection of assignments will be *unannounced*. So, you should do *all* of the homework assignments, even though only five will be randomly collected throughout the course of the semester. Late homework assignments will *not* be accepted unless accompanied by the appropriate documents (see Section VIII below).

B. Short Quizzes

Doing the homework is an important part of helping you gain the appropriate skills required for this course. The homework is also an important part of helping to prepare you for exams. Another important part of exam prep will be short, in-class quizzes. We will have a total of six quizzes and overall the quizzes will be worth 20% of your overall grade. I will announce the quizzes before you actually take them. Since the material up to the first exam covers a lot of ground the (tentative) plan will be to have three quizzes prior to the first exam. The material up to the second exam is more focused, covering translations in predicate logic. So, the (tentative) plan will be to have two quizzes between the end of the first and beginning of the second exam. Finally, the final section of the course will be focused primarily on derivations in predicate logic. And here, the (again, tentative) plan will be to have our sixth and final quiz. All in all, each quiz will help you prepare for the exams.

Note: If you miss a quiz, you will *not* be able to make it up unless you have an appropriate excuse for your absence and the relevant documentation (see Section VIII below).

C. Exams

There will be three, in-class exams. The first exam will take place roughly 1/3 of the way through the semester while the second exam will take place roughly 2/3 of the way through the semester. The final exam will take place during the exam period at the end of the semester. Information on the final exam schedule can be found here: http://finalexams.rutgers.edu/. Each exam will be worth 20% of your total grade.

Exam Preparation: Doing your homework is *very* important to preparing for the exams. And, the quizzes will also be an important part of helping you prepare for the exams. But to provide further help, I will be posting both a *study guide* on Sakai. In addition to this, I'll spend some time reviewing, in-class, before the exam.

Note: If you miss a quiz, you will not be able to make it up unless you have an appropriate excuse for your absence and the relevant documentation (see Section VIII below).

D. Final Grade Calculation

(1) Homework Assignments—A total of five collected, worth 20% of the overall grade

(2) Quizzes—A total of six, worth 20% of the overall grade

(3) Exams—A total of three, worth 60% of the overall grade

Your grade will be determined by the following grading scale:

A	B+	B	C+	C	D	F
100% - 90%	89% - 87%	86% - 80%	79% - 77%	76% - 70%	69% - 60%	59% - 0%

VII. Sakai Site

The course will have a Sakai site. I will post lecture slides and you will also be able to keep track of your grade. Additionally, I will post announcements and updates on this page. You can check the Sakai site for this information, but an email will also be sent to you when any information is added to the site. Emails sent through Sakai will be sent to your Rutgers email address. So, if you do not check the Sakai site regularly and primarily use another email aside from your Rutgers one e.g., Google, you should set up the email that you primarily use so that messages sent from Sakai to your Rutgers email account can be forwarded to your primary email address.

The Sakai site can be accessed at:

https://sakai.rutgers.edu/portal

You will need your Rutgers NetID and password to access the site. Once you have accessed the course page on Sakai, you will see several "buttons" on the left hand side of the screen. Lecture notes will be under "Resources"; Grades will be under "Grades"; and Announcements will be listed in the top right corner of the course home page.

Important: It is your responsibility to check your email and Sakai to keep up with important information about the course. I will both send emails and post announcements as necessary. Every so often, I may feel the need to send a message elaborating on difficult material presented in the lecture. If I do so, you are responsible for reading it. Also, if there are changes in the syllabus, material to be covered and so

forth, I will send a message. So, again, keep up with your emails as it is your responsibility to read them and the material posted on Sakai.

VIII. Attendance Policy

Here is the attendance statement required by Rutgers: "Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website https://sims.rutgers.edu/ssra/ to indicate the date and reason for your absence. An email is automatically sent to me."

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Important: If you miss class, you must fill out the online student absence form and you must print off *two* copies of the form. You will keep one of them for your records and give one to me. And, you must have the appropriate documentation for your absence (e.g., doctor's note) and turn this into me along with the copy of the student absence report. If you do *not* have appropriate documentation of your absence you will *not* be allowed to make up the work you missed on the day you were absent.

VIIII. Policy on Cheating

You can find the current Academic Integrity Policy for Rutgers here:

http://academicintegrity.rutgers.edu/files/documents/AI_Policy_9_01_2011.pdf

Basically, violations include: cheating, fabrication, plagiarism, denying others access to information or material, and facilitating violations of academic integrity.

In this course, **if you cheat, you will fail the course**. You will also be reported to the Office of Student Conduct. There will be *no* exceptions to this policy.