Instructor: Stan Husi
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Philosophy 106 – Logic | Spring Semester 2009

Monday – Wednesday – Friday (9-9.50 a.m.)

Course Description:

Logic investigates formal relationships between statements, most prominently between statements that serve as premises and conclusion in a line of reasoning. We will call an *argument* any set of statements so arranged in terms of (possibly multiple) premises and one conclusion. If the premises of an argument *entail* or *imply* its conclusion, the argument is said to be *valid*. In this course we will develop a precise formal language (**S**entential **L**ogic and **P**redicate **L**ogic) in which such relationships can be clearly stated and evaluated. We will learn how to translate arguments back and forth from English into that language. We will familiarize ourselves with techniques that enable us to formally prove which arguments are valid. The course will be rounded off with some reflections about logic itself. The course is introductory and self-contained, and requires no former contact with logical theory.

Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities should also contact Disability Support Services in the Ley Student Center. (www.dss.rice.edu)

Required/Recommended Text:

Bergmann, Merrie & Moor James & Nelson, Jack, *The Logic Book*, McGraw-Hill.

> *The Logic Book* comes in several editions (up to the 5th edition), and is not inexpensive. It will be used in subsequent logic courses at Rice, such as PHIL305 (Mathematical Logic). Please feel free to contact me if you have any questions about this or other introductory logic books.

General Course Mechanics:

Office Hours. There will be multiple forms of office hours. I offer *regular office* hours every day at lunch time (12-1) if students request them at least one hour in advance; students may notify me by email (please send me an empty email with the subject "request office hour DAY", or after class. I will be available after class as well. I also offer *E-office hours* at some specified time during the weekend. During E-office hours I will be available for instant email/chat questions. Additional office hours can be arranged by appointment.

Owl-Space. I will regularly post material on Owlspace, as well as use the chat function to answer questions at E-office hours. Solutions to exams, homeworks and problems will be posted on the website on Owlspace.

Readings: There are no formal reading requirements for this class. I will indicate sections of the logic book for (optional) review after class. The course will be self-contained, and only material introduced in class will be examined in homeworks and exams. Students who come to all classes should be able to do well without necessarily consulting the book, though reviewing the relevant sections may be quite helpful. Most importantly, though, is that students practice regularly. The book offers plenty of extra practice.

Grading & Grading Scheme:

Graduating Seniors. I'd like to ask graduating seniors to keep me posted as we approach the end of the semester. Grading will be straightforward, and students shall know where they stand throughout the course. I want to especially encourage graduating seniors who are close to a problematic grade/point range to stay in close contact with me.

Grades. The grades will be determined on the basis of 10 homeworks and 4 take home exams. Each homework is worth 2 points (totaling 20), and each exam is worth 20 points (totaling 80). Together exams and homeworks add up to a maximum of 100 points. The grades will correspond to the point totals students receive in strictly additive fashion. In addition to exams and homeworks, there will also be problems given out at the end of classes and briefly reviewed at the beginning of the subsequent class. They will not be graded, though students who volunteer to put their solutions on the board may receive up to 5 extra points that can be added to the final point total resulting from exams and homeworks.

Grade Range: A: 100-90 points, **B**: 89-80, **C**: 79-65, **D**: 64-50, **F**: less than 50, **P** more than 50 points.

Individual and Group Exams/Homeworks. Exams and homeworks each come in two forms, *individual* and *group*. Individual exams and homeworks must be taken individually; group exams and homeworks must be taken as a group, with at least two, but no more than three members. Group exams and homeworks may not be taken individually. I will make sure each student will be accommodated by some group. Each member of each group receives exactly the number of points awarded for the joint exam or homework. Groups shall be determined by the time of the first group homework, and shall not change absent special circumstances. Students may only switch groups in consultation with me, and only for sufficiently good reasons. Each group member must make a sufficient contribution to the joint exam or homework, which includes but is not exhausted by his/her presence at all times the exam/homework is taken. By adding his/her name, the student as well as the other members of the group will vouch for every group members' sufficient contribution. What sufficient contribution amounts will ultimately be left to the discretion of the group. However, if group members feel the effort put into the joint project is too unequally distributed, they should contact me.

Group exams and homeworks will be somewhat more challenging than individual exams and homeworks. They are designed to promote collaboration. I will also allow more time for the group exams than for the individual exams.

Homeworks. I will grade homeworks coarsely and based on effort, not necessarily on the basis of the correctness of the results (though the correctness often is the best indicator of effort). Homeworks either receive 0,1 or 2 points. They receive 2 points if I determine the student(s) has (have) dedicated sufficient effort for solving the problems. They receive 0 points if the homework has not been turned in without excuse or if I determine insufficient effort has been dedicated to solving the problem. They will receive 1 point in (rare) borderline cases. Fully correct answers guarantee, but are not necessary for, the award of full 2 points. Students who are sufficiently confident of their solution may turn in very short and final answers that do not necessarily represent all the previous steps undertaken. Those less confident may turn in what they have, though brevity is certainly appreciated.

Homworks are not timed, and so students may use as much time as they see fit. Students may only consult the Logic Book and their own notes. In the individual version, students may not consult with other students, though they may and even are encouraged to prepare/review material with other students. In the group version, all members of a group must participate at all times the homework is taken. Students must indicate at

what times they jointly worked on the homework. Each group should determine precisely when and where they are going to meet (and to have each others' contact information, like call phone numbers). I'd encourage, but do not require, students to form groups who know/trust each other sufficiently well, and who live in reasonably close proximity (perhaps in same/close colleges).

Exams. Exams will be graded exclusively on merit, not, like homeworks, on effort. Individual exams will be timed (3 hours). Timelines will be enforced by Rice' active honor code. Students may consult http://honor.rice.edu/index.cfm in case they have questions about the nature of Rice' honor system. Group exams have no strict time limits, though they should not exceed 5 hours, and preferably should not take longer than individual exams. All members of a group must participate at all times the exam is taken. Students must indicate at what times they jointly worked on the exam. Each group should determine precisely when and where they are going to meet (and to have each others' contact information, like call phone numbers).

Late submissions of exams and homeworks. Exams and homeworks must be turned in by 9.30 at the relevant day. Exams and homeworks turned in late without sufficient excuse will be heavily discounted. Sufficient excuse must be documented (both for sickness and family emergencies as well as other contingencies). In case of sickness or family emergencies, I'd like ask students to contact me in advance if possible. I will enforce documentation for excuses without exception. I encourage students to keep me updated in case any difficulties arise. I'm willing to work with students in such cases, but only if I sense the student does his/her part as well. This importantly includes informing me early.

Appeal. Students who feel unhappy with the points received in their exams or homeworks may appeal their score. They must do so by the class directly following the official return of the exam. No later appeals are possible once that time framework has been passed.

Agreement. I ask each student to read this syllabus carefully, and indicate their understanding of the course structuring as laid out by that syllabus by signing the form on the last page. I also like to ask students to provide some information concerning their background in logical theory, their year and college, their majors/intended majors, and their expectations for this course.

Syllabus - Program

1/05	Introduction	
1/07	Syllogisms	Problems #1
1/09	Syllogisms and Venn Diagrams	Hwk#1 (Individual)
1/12	Syntax of SL: Setting up our Language	Problems#2
1/14	Syntax/Translations	Problems#3
1/16	Syntax/Translations	Hwk#2 (I)
1/19	Martin Luther King Day – **No Class**	
1/21	Semantic of SL: Truth and Interpretation, Truth Tables	Problems#4
1/23	More semantics: Truth-functional Truth, Falsity and Indeterminacy	Hwk#3 (Group)
1/26	Arguments: Validity and Entailment	Problems#5
1/28	More arguments	Problems#6
1/30	Arguments plus Translations	Hwk#4 (G)
2/02	Contraries, Contradictories, Equivalence, etc. for SL	Problems#7
2/04	Truth-Trees	Problems#8
2/06	More Truth-Trees	Exam#1 (Individual)
2/09	Syntax of PL: Expanding our Language	Problems#9
2/11	Syntax/Translations	Problems#10
2/13	Syntax/Translations	Hwk#5 (I)
2/16	Semantics of PL	Problems#11
2/18	Semantics/Models	Problems#12
2/20	Semantics/Formal Models	Hwk#6 (I)
2/23	Arguments PL	Exam#2 (Group) Handed out Problems#13
2/25	Quantificational Truth	
2/27	Quantificational Truth	Exam#2 (G) to be turned in

3/02	Spring Break – **No Class**	
3/04	Spring Break – **No Class**	
3/06	Spring Break – **No Class**	
3/09	Review	Problems#14
3/11	Contraries, Contradictories, Equivalence, etc. for PL	Problems#15
3/13	More Contraries, Contradictories, Equivalence, etc.	Hwk#7 (I)
3/16	Derivations SL	Problems#16
3/18	Derivations SL	Problems#17
3/20	Derivations SL	Hwk#8 (I)
3/23	Derivations SL	Problems#18
3/25	Derivations SL	Exam#3 (G) handed out
3/27	Derivations SL	
3/30	Derivations PL	Exam#3 (G) to be turned in
4/01	Derivations PL	Hwk#9 (I)
4/03	Spring Recess	
4/06	Derivations PL	Problems#19
4/08	Derivations PL	Problems#20
4/10	Identity	Hwk#10 (I)
4/13	Review	Exam#4 (I) handed out
4/15	Review	
4/17	Preview	Exam#4 (I) to be turned in

Agreement

I'd like to ask each student to provide some brief information about himself/herself, as well as to confirm that the student has carefully read and fully understands the Syllabus.

I am a Freshman a Sophomore a Junior a Senior

I am planning to graduate this spring 2009 at a later year

I am majoring in, or intending to major in _____

This is my first logic course my second logic course my third or more logic course

This is my first philosophy class my second philosophy class my third or more philosophy class

I am taking this course as a requirement because of interest

I expect from this course to learn about logic to pass it to acquire skills useful outside Rice

Or in your own words: _____

_____

I have carefully read and fully understand the Syllabus for this class, PHIL106, Intro into Logic.

_____ _____

Name Sign and date.