

Introduction to Logic
Philosophy 110
Professor Carol J. Moeller
Fall 2006

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Required Text: *Symbolic Logic: A First Course*, by Gary Hardegree, Third Edition, New York: McGraw-Hill, 1999. ISBN 0-07-239027-1

Office Hours: M, W 9:00 - 10:00 a.m.; T, TH 1:00 - 2:00 p.m. and by appointment.

Class Meets: Mondays and Wednesdays, 7:30 - 8:40 a.m., PPHAC 103. Note: this classroom is changed from the originally assigned room, to allow for the use of computer technology in class.

WEB Resources: This logic course is based upon Gary Hardegree's text, *Symbolic Logic: A First Course*, and the accompanying materials Hardegree has posted on the WEB, to accompany the book. Students may find it helpful to refer to Hardegree's WEB site for notes on the material. That site is people.umass.edu/gmhwww/110

Warning: This course **does not** meet any LinC requirement. It is by no means easy. Even those with initial aptitude will need to spend many hours doing homework. Philosophy majors are required to take this course as a requirement for the major. For others, taking this course is a bit like taking Chemistry or Calculus as an elective.

Course Description

This course covers traditional formal logic together with discursive logic, fallacies, and argument construction. The emphasis here is on formal logic. Two logical systems are examined:

(1) Sentential Logic

(2) Predicate Logic

Work is equally divided between:

(1) translating English sentences into symbolic notation, and

(2) constructing formal derivations.

Course Goals

- To develop skills at giving arguments and proofs
- To strengthen critical reasoning abilities
- To sharpen skills at differentiating strong arguments and reasoning from weak ones.

Intended Learning Outcomes

- To demonstrate proficiency in translating English sentences into symbolized logical notation.
- To demonstrate the ability to translate symbolized logical notation into English sentences.
- To demonstrate proficiency in constructing and evaluating formal derivations (i.e., proofs) according to rules of traditional formal logic.

Grading

The final course grade is largely based upon four examinations, each worth 25% of the final course grade. These exams are four in class as well as two optional exams. From these, the four highest scores will be counted toward your final average. In addition to these exams, occasional quizzes will be given, which we will go over in class but which will not count for a grade. They will serve more as spot-check inventories for each person to see how he/she is doing with the given material.

1. SIX EXAMS (OF WHICH THE FOUR HIGHEST SCORES ARE COUNTED)

2. THESE SIX THUS INCLUDE TWO OPTIONAL EXAMS (offered outside of class time)

In addition to the four in-class exams, there will be two optional one-hour exams to take place outside of class, at a time and place will be announced in class.

Exam #2B will be very similar to Exam #2, following roughly 2-3 weeks after Exam 2.

Exam #3B will be very similar to Exam #3, following roughly 2-3 weeks after Exam 3.

3. USING EXAMS 2B and 3B TO IMPROVE YOUR GRADE

Besides serving as make-up exams, Exams 2B and 3B can be used to improve your grade, in case you are not satisfied with your grade otherwise. Note that there is no risk in taking these optional exams.

4. FOUR HIGHEST SCORES

In calculating your final numerical score, your four highest scores are used. A missed exam counts as a zero.

5. NO MAKE-UP EXAMS

There are no make-up of exams except as provided in the above (through the optional additional exams), or official College absences (e.g., athletic matches and religious observance), serious illness documented with doctor's note).

6. INITIAL TOTAL SCORE/LETTER GRADE (that is, before any attendance/participation numbers are figured in).

Six exams (of which the four highest scores are counted). Each is worth 100 points. Since the four highest exam-scores are used; so the maximum total score is 400. Final letter grade is computed on the basis of total numerical score,

according to the following scale of cut-off scores -- the lowest number possible to get and still receive that score. E.g., a 325 would be a B.

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
380	360	340	320	300	280	260	240	220	200	180	below 180

7. EXAM 2B or 3B can substitute for the final exam. Since only the four top scores are counted, exams 1-3 plus 2B or 3B can substitute for an additional score from the final exam. Of course, you would still be responsible for attendance/participation, etc., but you need not actually take the final exam if you are satisfied with how you did on four other exams.

8. CLASS ATTENDANCE AND PARTICIPATION

Class attendance and participation are required. Unexcused absences or failure to participate actively in class will detract from your grade. In addition to the grade percentages toward your final grade, each unexcused absence beyond two will result in your final grade being dropped by 0.25 points. For example, if you have 6 unexcused absences (which would be 4 beyond the 2 "freebies" allowed); your final average will be lowered by $4 \times .25$, which equals 1. If your grade would otherwise be an 80.1 (B -), it will become a 79.1 (C +). If the final score remains right on the borderline between two letter grades, such as a 239 (which is one point short of a C -), your participation level will be taken into account (as opposed to simply attendance).

9. HOMEWORK EXERCISES

Homework exercises are absolutely essential to learning the material and doing well in the course. They will not be collected or graded, however, and it is your responsibility to do the homework exercises on time and to seek help inside and outside of class as needed. In class, I may call on students at any time and ask them to work homework problems on the board, showing their work, rather than simply saying the correct answers. Although answers to most problems are in the text, resist the urge to check your work until after you have completed a given set of exercises. If your answer is wrong, start afresh. It would do no good to simply copy the answer from the key..

Academic Integrity:

The rules of academic integrity for Moravian College must be followed. Please take them seriously. Any suspicion of violations will be actively pursued. For more information on these policies, please see the student handbook, the professor, or the academic dean's office.

Doing Well:

It is imperative that students keep up with their work in this course and get help any time they have trouble. Each chunk of material builds upon the previous chunk, and so holes in understanding will continue to cause problems. Similarly, missing even a single class or not doing a set of exercises can disrupt the learning process and leave a student feeling hopelessly lost very quickly. Please be on top of your work, come to class, ask questions, and achieve an excellent level of understanding and ability to do problems.

Further, students tend to have wide variation in how long it takes them to learn logic. It might seem that you spend eight hours on work that a friend completes in one hour. Everyone needs to spend as much time as it takes to master the material.

Learning Disabilities:

Students with learning disabilities should contact the Learning Services Office as soon as possible to arrange for any necessary accommodations.

Disabilities:

Students with any disabilities who may be interested in reasonable accommodations should contact the Learning Services Office.

Potential Syllabus Changes:

This syllabus and course schedule is subject to change at the professor's notice.

Further Note on Grading:

As in other courses, grading is at the discretion of the professor. For example, while there is an objective answer as to whether or not your answer is correct on an exam, there is an element of subjectivity in how much partial credit is given to a response. You may appeal grades to the Dean's Office.

*Thanks to Gary Hardegree, from whom much of the course material is adapted. This includes electronic materials, as well as his textbook.

Course Schedule

<i>Class</i>	<i>Day, Date</i>	<i>Readings</i>	<i>Problems</i>
1	Monday 8/28	First Day of Class	
2	Wednesday 8/30	Read 1.1-1.9 (that is, Chapter 1 Section 1 – Chapter 1 Sec. 9)	Exercises 1A-1C (that is, Chapter 1 Exercise Set A through Chapter 1 Exercise Set C)
--	Monday 9/4 Note: Tuesday, 9/5 is the last day for course changes	No Classes: Labor Day	
3	Wednesday 9/6	Read 2.1-2.13	Exercises: 2C
4	Monday 9/11	Read 3.1-3.5	Ex: 3A-3D
5	Wednesday 9/13	Read 4.1-4.17	Ex: 4A, 4B
6	Monday 9/18	Read 4.18-4.23	Ex: 4C
7	Wednesday 9/20	Read 4.24	Ex: 4D
8	Monday 9/25	Review for Exam 1	Review
9	Wednesday 9/27	Exam #1	Covers Ex. Sets 3A-3D, 4A-4D
10	Monday 10/2	Read 5.1-5.5	Ex: 5A
11	Wednesday 10/4	Read 5.6-5.8	Ex: 5B, 5C
12	Monday 10/9	Read 5.9-5.10	Ex: 5D, 5E
	Note: Tuesday, November 10 is the deadline to withdraw from courses		
13	Wednesday 10/11	Read 5.11-5.12	Ex: 5F
14	Monday 10/16	Read 5.13-5.14	Ex: 5G
15	Wednesday 10/18	Review for Exam #2	Review
16	Monday 10/23	Exam #2	Covers Ex. Sets 5D-5G (not 5H) (You may use "The Rules" during this exam.)
17	Wednesday 10/25	Read 6.1-6.10	Ex: 6A-6D
18	Monday 10/30	Read 6.11-6.16	Ex: 6E-6G
19	Wednesday 11/1	Read 6.17-6.19, 7.1-7.2	Ex: 6H, 6I, 7A
20	Monday 11/6	Read 7.3-7.5	Ex: 7B, 7C
21	Wednesday 11/8	Read 7.6-7.7	Ex: 7D, 7E
22	Monday 11/13	Review for Exam #3	
23	Wednesday 11/15	Exam #3	Covers Ex. Sets 6A-6I, 7A-7E

			(not 7E, 7G)
24	Monday 11/20	Read 8.1-8.6,	8A, 8B
--	Wednesday 11/22	No Class: Thanksgiving Break	
25	Monday 11/27	Read 8.7-8.9	Ex: 8C, 8D
26	Wednesday 11/29	Read 8.10-8.11	Ex: 8E, 8F
27	Monday 12/4	Read 8.12, 8.14	Ex: 8G, 8H
28	Wednesday 12/6		
29	Monday 12/11	Review for Final Exam	Review Ch. 8
	12/12, 12/17	Reading Days	
30	12/13-12-16, 12/18-12/19, as scheduled	Final Exam	Covers Ex. Sets 8A-8H (Note: You may use "The Rules" for this exam.)

Note: It is College policy that final examinations may not be rescheduled except by approval from the dean's office. If you anticipate needing to leave town before the last day of final exams, seek that approval. The professor is not permitted to allow other re-scheduling or make-ups of finals, beyond those permitted by official policy (as detailed in the College Catalog). There will be no exceptions.