

**CAMOSUN COLLEGE  
School of Arts & Science  
Humanities Department**

**Phil 212-01, Symbolic Logic  
Winter 2005**

**COURSE OUTLINE**

**1. Instructor Information**

Instructor: Sandy Bannikoff  
Office hours: Monday and Friday, 9:30-10:20  
Tuesday and Thursday, 12:30-1:20  
Location: office, Y320  
Phone: 370-3508  
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**2. Intended Learning Outcomes**

At the end of the course the student will be able to:

1. Translate complicated arguments into a standard symbolic language and use that language to produce rigorous proofs.

**3. Required Materials**

Text:

1. Simpson, R.L. Essentials of Symbolic Logic

**4. Course Content and Schedule**

**Course Content** The course begins at §3.11 of the text. The system of derivations which was studied in Philosophy 210 will be extended to include the construction of derivations having multiple scope lines. The course will then go on to cover predicate logic, logic that can deal with sentences using words like 'all' and 'some'. The last part of the course deals with derivations in predicate logic.

**Structure** The course consists of three hours of lectures each week. Class time will be spent going through the text and homework exercises.

**Homework** There will be a short homework assignment given in almost every class. These assignments will consist of studying five to ten pages of the text and completing some exercises. The written assignments will not usually take more than a page or two, and will involve such things as doing some translations or producing derivations. **The rule for homework is: written assignments will not be marked unless they are handed in at the beginning of the next class.** Part of each lecture period will consist of going through the assignment from the previous class, and this will not be of help to students who have not attempted the assignments. I will hand out solutions at the beginning of each class, so I recommend that students keep a copy of their homework to check against the solutions. This will help students to avoid repeating mistakes on the next assignment. Notice that this rule entails that neither early nor late homework will be accepted. Exceptions to this rule will be made only in the event of a documented illness or crisis that has caused a student to miss five or more consecutive homework assignments.

**Grading Notes** Passing Philosophy 210 is necessary for taking Philosophy 212. Philosophy 210 is an introductory course, open to students who have no idea of what symbolic logic requires. In Philosophy 212, there will not be time for going over elementary mistakes. If you managed to get through Philosophy 210 without clearly understanding the derivation rules and the translation techniques in sentence logic, you are strongly advised to drop the course now.

It is in the nature of symbolic logic that one incorrect symbol can completely alter the meaning of a formula. Therefore, correct notation is mandatory. The situation in logic is quite different from writing English in which the meaning of a misspelled word can still be determined and in which an unclear letter can be deciphered from looking at the context. You must always write clearly. Someone reading your work should not have to guess as to whether there is a 'T' or an 'F', a left bracket or a 'C', etc. In order to define symbols it will be necessary to write English sentences. It is up to the student to turn in work free of mistakes in English without being told that correct English is important.

**Weekly Schedule Caveat:** What follows is a tentative schedule. In case the class moves through the material more quickly than anticipated, we will go through material in Chapter Six.

**Week One** Derivation Rules

*Essentials of Symbolic Logic*, Chapter 3 (3.11 – 3.15, 3.17)

**Week Two** Derivation Construction

*Essentials*, Chapter 3 (3.16 – 3.19)

**Week Three** Indirect Proof

*Essentials*, Chapter 3 (3.20 – 3.21)

**Week Four** Categorical Derivations

*Essentials*, Chapter 3 (3.22 – 3.23)

**Week Five Exam One**

(Which day of the week the exam is on will be announced in class in Week Four.)

Predicate Logic

*Essentials*, Chapter 4 (4.1 – 4.4)

**Week Six** Quantifiers

*Essentials*, Chapter 4 (4.5 – 4.9)

**Week Seven** Translations

*Essentials*, Chapter 4 (4.10 – 4.11, 4.14)

**Week Eight** Translation Problems and Domains

*Essentials*, Chapter 4 (4.12 – 4.14)

**Week Nine** Arguments and Interpretations

*Essentials*, Chapter 4 (4.15 – 4.18)

**Week Ten Exam Two**

(Which day of the week the exam is on will be announced in class in Week Nine.)

Derivation Rules in Predicate Logic

*Essentials*, Chapter 5 (5.1 – 5.3)

**Week Eleven** Derivation Rules

*Essentials*, Chapter 5 (5.4 – 5.8)

**Week Twelve** Derivation Strategies

*Essentials*, Chapter 5 (5.9 – 5.10)

**Week Thirteen** Derivation Strategies

*Essentials*, Chapter 5 (5.11 – 5.12)

**Week Fourteen** Categorical Derivations*Essentials*, Chapter 5 (5.13 – 5.14)**5. Basis of Student Assessment (Weighting)**

1. First Exam.....25%
2. Second Exam.....25%
3. Final Exam.....25%
4. Homework .....25%

There will be three open-book exams in which the student will be able to refer to the text and notes. Each of the exams will count for 25% of the final grade, for a total of 75%. The first exam is in week five, the second is in week ten, and the third will be scheduled in the final exam period. It is each student's responsibility to find out the date and location of the final exam.

The weighting of the homework portion of the final grade reflects the expectation that students will make mistakes and learn from them. At the end of semester all the homework grades will be sorted by grade into three groups, each containing one third of the assignments. The mean grade of the lowest group will be ignored. The mean grade of the middle group will count for 5% of the final grade. The mean grade of the highest group will count for 20% of the final grade. The homework, therefore, will count for 25% of the final grade.

**6. Grading System**

The following percentage conversion to letter grade will be used:

A+ = 95-100%	B = 75-79%	D = 50-59%
A = 90-94%	B- = 70-74%	F = 0.0-49%
A- = 85-89%	C+ = 65-69%	
B+ = 80-84%	C = 60-64%	

**7. Recommended Materials or Services to Assist Students to Succeed throughout the Course**

**Do Your Homework:**

As mentioned, there will be a homework assignment after almost every class. It is important to do all the homework assignments and to see the instructor as soon as difficulties arise. In most cases, these assignments will take about an hour. However, some assignments will take far longer, because the student is coming across some material that he or she finds particularly difficult. The general principle is that the homework is for making mistakes and learning from them, and students are encouraged to bring half-completed assignments to class and discuss their difficulties.

### **LEARNING SUPPORT AND SERVICES FOR STUDENTS**

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at <http://www.camosun.bc.ca>

### **ACADEMIC CONDUCT POLICY**

There is an Academic Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section.

[www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html](http://www.camosun.bc.ca/divisions/pres/policy/2-education/2-5.html)