Lectures: MWF 9:00 - 9:50
Location: EDC 388

Instructor: Masashi Kasaki
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Office Hours: MF 10:00 – 11:00 or by appointment

Teaching Assistant: Ka Wo Chan
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Tutorial: T07 M 10:00 – 10:50, EDT 920
       T08 M 13:00 – 13:50, EDC 156
       T09 T 11:00 – 11:50, EDC 156
Office Hours: M 14:00 – 15: 00
       R 11:00 – 12:00 or by appointment
*Tutorials start in week 2.

Course Description:
This is an introduction to standard sentential and predicate logic. The primary objective of the course is to master these formal languages and use them to prove that a sentence, or set of sentences, of formal language have important logical properties. In particular, we shall begin by examining some fundamental logical properties of formal languages, such as implication, logical truth, consistency, and validity. The core of the course then consists in learning formal procedures for proving logical properties of sentences in formal language. These procedures include truth-tables and natural deduction. In addition, we will learn how to translate sentences of natural language into formal language.

Texts:
REQUIRED: Bergmann, Moor & Nelson, *The Logic Book*, 5th edition (McGraw-Hill).

Graded Work:

1) Five assignments, each worth 8% of the final mark. They are due by 4:00 p.m. on Sep. 25, Oct. 2, Oct. 16, Nov. 9, and Nov. 27. No late assignment is accepted, save in exceptional circumstances and after consultation with the **teaching assistant**. Emailed submissions are not accepted. Assignments may be deposited in the drop-box in the hallway of the Philosophy Department (Social Sciences, 12th Floor).

2) Four in-class exams on Oct. 9, Oct. 23, Nov. 20, Dec. 7 (no Registrar-scheduled final exam). The first two are each worth 15%, the third 20%, and the fourth 10%, of the final mark. There will be no make-up exam under normal circumstances.

The following conversion table will be used to calculate final letter grades.

< 50%	F	60-63.9%	C-	71-74.9%	B-	86-90.9%	A-
50-54.9%	D	64-66.9%	C	75-79.9%	B	91-95.9%	A
55-59.9%	D+	67-69.9%	C+	80-85.9%	B+	96-100%	A+

These are fixed percentages, i.e., grades will not be curved.

INTELLECTUAL HONESTY

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. As a result, cheating or plagiarism on any assignment or examination is regarded as an extremely serious academic offence, the penalty for which may be an F on the assignment and possibly also an F in the course, academic probation, or requirement to withdraw. The University Calendar states that plagiarism exists when:

- *the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test;*
- *parts of the work are taken from another source without reference to the original author;*
- *the whole work (e.g., an essay) is copied from another source; and/or*
- *a student submits or presents work in one course which has also been submitted in another course (although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved.*

While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious offence. Plagiarism occurs not only when direct quotations are taken from a source without specific acknowledgement, but also when original ideas or data from the source are not acknowledged. A bibliography is insufficient to establish which portions of the student's work are taken from external sources; footnotes or other recognized forms of citation must be used for this purpose.

ACADEMIC ACCOMMODATION

It is the student's responsibility to request academic accommodation. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

STUDENTS' UNION REPRESENTATIVE

The Humanities Representative is Britney Luimes, MSC 251, humanitiesrep@su.ucalgary.ca or 220-3913.

Syllabus

Week 1 (Sep 9, 11)	Introduction + Chapter 1	
Introduction. Fundamental Concepts in Logic: Argument, Validity, Soundness, Logical Truth/Falsity, and Logical Equivalence, etc.		
Week 2 (Sep 14, 16, 18)	Chapter 1 (cont'd) + Chapter 2	
Symbolization and Syntax of Sentential Logic. Sentential Connectives ∼, ∧, ∨, ⊃, and ≡. Simple Symbolization Practice.		
Week 3 (Sep 21, 23, 25)	Chapter 2 (cont'd) + Chapter 3	Assignment 1 (Sep, 25)
Complex Symbolization Practice. Semantics of Sentential Logic: Truth-Value Assignment and Truth-Tables for Sentences. Important Semantic Concepts of Sentential Logic: Truth-Functional Validity, Truth-Functional Consistency, Truth-Functional Truth/Falsity, and etc.		
Week 4 (Sep 28, 30, Oct 2)	Chapter 3 (cont'd)	Assignment 2 (Oct, 2)
How to Use Truth-Table in Proofs.		
Week 5 (Oct 5, 7, 9)	Chapter 5 + Review of Chapters 1 through 3	Exam 1 (Oct, 9)
Derivation in Sentential Logic, with the Derivation System *SD.* Introduction and Elimination Rules for the Sentential Connectives. Simple Derivation Practice.		
Week 6 (Oct 14, 16)	Chapter 5 (cont'd)	Assignment 3 (Oct, 16) No Class on Thanksgiving Day (Oct, 12)
Complex Derivation Practice. Derivation with *SD+*.		
Week 7 (Oct 19, 21, 23)	Chapter 7	Exam 2 (Oct, 23)
Symbolization and Syntax of Predicate Logic. Limitations of Sentential Logic, and Needs for Quantifiers ∃ and ∀. Multiple Quantifies with Overlapping Scopes.		
Week 8 (Oct 26, 28, 30)	Chapter 7(cont'd)	
Symbolization Practice. Identity, Definite Description, and Functions		
Week 9 (Nov 2, 4, 6)	Chapter 8	Assignment 4 (Nov, 6)
Semantics of Predicate Logic: Interpretation Important Semantic Concepts of Predicate Logic: Quantificational Validity, Quantificational Consistency, Quantificational Truth/Falsity, and etc.		
Week 10 (Nov 9)	Chapter 8 (cont'd)	No Class during Reading Week (Nov, 11-15)
Semantics for Predicate Logic with Identity and Functors		

Week 11 (Nov 16, 18, 20)	Chapter 8 (cont'd) + Review of Chapters 7 and 8	Exam 3 (Nov, 20)
Interpretation Practice		
Week 12 (Nov 23, 25, 27)	Chapter 10	Assignment 5 (Nov, 27)
Derivation in Predicate Logic, with the Derivation System *PD*. Introduction and Elimination Rules for the Quantifiers. Simple Derivation Practice.		
Week 13 (Nov 30, Dec 2, 4)	Chapter 10 (cont'd) + Chapter 6 + Wrap-Up	
Complex Derivation Practice. A bit of Metatheory: the Completeness and Soundness of Sentential Logic. Review and Outlook.		
Week 14 (Dec 7)		Exam 4 (Dec, 7)