

**Course Description & Syllabus**  
**MODAL LOGIC**  
**Phil. 122.**  
**Prof. G. Sher**  
**M,W 5-6:20**

Modal logic is a course about the logic of Necessity and Possibility. Necessity and possibility are central notion in most branches of philosophy - Metaphysics, Epistemology, Philosophy of Science, Philosophy of Language, Philosophy of Logic, Philosophy of Mathematics, Ethics, and History of Philosophy - as well as in Computer Science, Linguistics, and Cognitive Science. The course will focus both on Possible-Worlds Semantics - the semantics of modal logic - and on axiomatizations and proofs concerning necessity and possibility.

Essential requirement: Philosophy 120 or the instructor's permission (based on mastery of phil 120 or equivalent formal background).

The course can be used by philosophy graduate students to satisfy the 2nd Logic Requirement.

Textbook: *A New Introduction to Modal Logic*, G.E. Hughes & M.J. Cresswell.

Grades: 2 Midterms & Final. Each Midterm - 25%, Final - 50%

Office Hours: 8042 HS&S. W 3:30-4:30

**Schedule of Classes:**

M 1/9 Introduction to Class. Ch 1: The Basic Notions - "Necessity" and "Possibility"

Modal Propositional Logic

W 1/11 Ch. 2: The Systems K and T- 2 increasingly strong conceptions of Necessity & Possibility

M 1/16 Cont.

W 1/18 Ch. 3: The Systems S4, S5 - 2 still stronger conceptions of Necessity & Possibility

M 1/23 Cont.

W 1/25 Preparation for Midterm 1

M 1/30 **Midterm 1**

W 2/1 Ch. 4: Testing for Validity

M 2/6 Cont.

Modal Predicate Logic

W 2/8 Ch 13: The Lower Predicate Calculus - General Predicate Logic & Modal Predicate Logic

M 2/13 Cont.

W 2/15 Ch. 15: Expanding Domains

M 2/20 UNIVERSITY HOLIDAY

W 2/22	Preparation for Midterm 2
M 2/27	<b>Midterm 2</b>
W 3/1	Ch. 16: Modality & Existence
M 3/6	Cont.
W 3/8	Ch. 17: Identity & Descriptions
M 3/13	Cont.
W 3/15	Preparation for Final