

# Modal Logic

Ted Sider, Fall 2010

[http://tedsider.org/teaching/modal\\_logic](http://tedsider.org/teaching/modal_logic)

## DESCRIPTION

In this course we'll do two things. We'll take a deeper look at standard (propositional and predicate) logic. And we'll discuss modal logic—the logic of possibility and necessity—and counterfactual conditionals. Our main approach will be that of possible-worlds semantics.

## PREREQUISITE

V83.0070 (Logic), or instructor's approval. We'll review introductory logic, so remembering details from that course won't be essential, but modal logic will be a good deal more abstract and difficult (and more interesting!).

## REQUIREMENTS

Exams (80%), plus periodic homework assignments (20%). Assignments, announcements, due dates, and review sheets will be posted on the course web site.

## TEXT

Sider, *Logic for Philosophy*

## SCHEDULE

- Basics of logic, chapter 1 (read §1.8 carefully, skim the rest)
- Propositional logic, chapter 2 (skip §2.5; skim 2.8, 2.9)
- Modal propositional logic, chapter 6 (skim §6.6)
- Beyond standard modal propositional logic, chapter 7 (skip §7.4)
- Counterfactuals, chapter 8
- Predicate logic, chapter 4 (skim §4.5), chapter 5, §5.1
- Quantified modal logic, chapter 9
- Two-dimensional modal logic, chapter 10