

# Introduction to Logic

2 Semester Hours

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## Introduction

Logic is the study of argument. In this course we will learn the techniques by which we judge arguments to be acceptable or unacceptable. We will see, (among other things): what qualifies as an argument, what the different parts of arguments are, what sort of connections exist between parts of arguments, and how to recognize and construct good and persuasive arguments.

## Course goals

This course introduces students to the basic concepts of modern logic. Once acquainted with the fundamental notions, students may apply these basic ideas in logic to everyday reasoning.

## Course schedule

Unit	Topic
1	Introduction: Arguments, Premises and Conclusions
2	Deduction and Induction
3	Validity, Truth, Soundness, Strength and Cogency
4	Fallacies
5	Introduction to Propositional Logic
6	Symbols and Translation

7	Truth Functions
8	Truth Tables for Propositions
9	Truth Tables for Arguments
10	Short Truth Tables for Arguments
11	Introduction to Natural Deduction
12	8 Basic Inference Rules
13	10 Rules of Replacement
14	Conditional Proof
15	Indirect Proof
16	More challenging Proofs
17	Review for Final

### **Textbook**

Alan Hausman, Howard Kahane and Paul Tidman. 2007. *Logic and Philosophy: A Modern Introduction* (tenth edition). Thomson Wadsworth.

This book is available from Tamkang University Bookstore.

### **Grading procedure**

1. 5 unexpected exams: 30%
2. midterm exam: 30%
3. final exam: 40%
4. Attendance is not required (not compulsory)
5. *Incessant talking in class is prohibited*; students violating this rule will fail in this course.

### **Website**

<http://mail.tku.edu.tw/117520>