PHIL 020: Introduction to Logic

Term: 2020 Winter Session
Instructor: Staff
Language of Instruction: English
Classroom: TBA
Office Hours: TBA

Class Sessions Per Week: 6
Total Weeks: 4
Total Class Sessions: 25
Class Session Length (minutes): 145
Credit Hours: 4

Course Description:

This course is an introduction to logic study. The main purpose is to provide students formal methods of arguments and reasoning. The course will start from presenting valid statements and arguments. Then the attention will be put on sentential logic. And finally we will focus on predicate logic. Students will have lots of practice on translation from arguments into symbolic logic and evaluate the truth. The methods you will learn is a powerful tool for your future study.

Course Materials:

Logic and Philosophy: A Modern Introduction, 12th Edition (January 1, 2012), by Alan Hausman (Author), Howard Kahane (Author), Paul Tidman (Author)
ISBN-10: 9781133050001
ISBN-13: 978-1133050001

Course Format and Requirements:

This course has 25 class sessions in total. Each class session is 145 minutes in length. Students are strongly encouraged to participate in class discussion. Please do not use electronic devices such as phones, iPads, computers, etc. during the lectures.
Attendance

Attendance is mandatory. More than three unexcused absences will result in an automatic reduction in your participation grade, for instance from A- to B+. Your active participation in the class is expected and constitutes part of your grade.

Grading Scale:

A+: 98%-100%
A: 93%-97%
A-: 90%-92%
B+: 88%-89%
B: 83%-87%
B-: 80%-82%
C+: 78%-79%
C: 73%-77%
C-: 70%-72%
D+: 68%-69%
D: 63%-67%
D-: 60%-62%
F: Below 60%

Course Assignments:

Quizzes

There will be 5 quizzes administrated throughout the whole semester. Quizzes will always be completed in the first 15 minutes of class. They will be similar to in class exercises and practice, covering topics discussed in the lecture and usually consist of conceptual multiple choices, True-False statement, computing and analyzing Truth Table or other short answer questions. There is no make-up quizzes.

Exams

There will be two midterms and one final exam administrated throughout this semester. Both the midterm exams and the final will be cumulative and close-book, composed of conceptual multiple choices, True-False Questions related to the validity, truth and soundness of a statement, analyzing questions or short essays under given statement, argument or Truth Table.

The midterm exam will be held at the regular class time. The date, time and location for the final examination will be announced later. Unless you have a documented health problem or family emergency, if you fail to take an exam, your score for the missed exam will be zero.

Course Assessment:

Quizzes	15%
Midterm 1	25%
Midterm 2	25%
Final Exam	35%
Total	**100%**

Course Schedule:

Week	Topics	Activities
1	Introduction and Basic Definitions: Logic, statement, proposition, argument, premises, conclusion; induction and deduction Go through example arguments; deductive or inductive? Semantic sentence meaning, truth conditions, what conditions of the sentence make it true? Entailment, truth-conditionally related, unrelated and equivalent; contradictory; unrelated; Valid and invalid arguments；Argument form; Counterexample; Practice on presenting arguments Sentential Logic (Propositional Logic): Predicate logic foundations: truth-conditional connectives Statement connectives and their syntax build Atomic and molecular statements; practice examples	Quiz 1

2	Sentential Logic (Propositional Logic):	Quiz 2
	From function of math to truth functions; Negation; Conjunction; Disjunction; Implication; Equivalence	Midterm Exam 1
	Complex statement; Rules for evaluating complex statement	
	How to Draw a Truth Table;	
	Test logical equivalence with a combined truth table;	
	Truth table for statements;	
	Test validity of an argument with a combined truth table	
	Translation statements into sentential logic with syntax	
	Translating Conjunctions; Translating Disjunctions;	
3	Sentential Logic (Propositional Logic):	Quizzes 3 & 4
	Translating Negations; Translating Conditionals; Translating Biconditional	Midterm 2
	Necessary and Sufficient Conditions	
	Guidelines for translating an entire argument and evaluate the truth	
	Predicate Logic:	
	Discussion on the limitations of sentential logic and their examples	
	Subjects and Predicates; Predicate Logic Statements; Polyadic or relational predicates, "And" with Polyadic Predicates; Form molecular statement use predicate logic	

4	The Universal Quantifier and The Existential Quantifier; Universal Affirmative Statements; Particular Affirmative Statements; Categorical Judgments: Universal Negative Statements and their opposites; Particular Negative Statements and their opposites Translations in Predicate Logic Combined Predicates, Disjunctive Combined Predicates, special case "AND" "Only", "The Only", "All and Only" Multiple Quantification with Polyadic Predicates Other discussion Course summary and review	Quiz 5 Final Exam

Academic Integrity:

Students are encouraged to study together, and to discuss lecture topics with one another, but all other work should be completed independently.

Students are expected to adhere to the standards of academic honesty and integrity that are described in the Shanghai Normal University's *Academic Conduct Code*. Any work suspected of violating the standards of the *Academic Conduct Code* will be reported to the Dean's Office. Penalties for violating the *Academic Conduct Code* may include dismissal from the program. All students have an individual responsibility to know and understand the provisions of the *Academic Conduct Code*.

Special Needs or Assistance:

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.