

# COURSE DETAIL

## LOGIC FOR PROOFS AND PROGRAMS

**Country**

Singapore

**Host Institution**

National University of Singapore

**Program(s)**

National University of Singapore

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

141

**UCEAP Course Suffix****UCEAP Official Title**

LOGIC FOR PROOFS AND PROGRAMS

**UCEAP Transcript Title**

LOGIC/PROOFS&PROG

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course introduces logic as a means for specifying and solving computational problems. It explores how logic can be used to represent computational problems, how these representations can be proven correct, and how they can be executed on a computer. Students learn about logic as formal systems (semantic, axiomatic, and deductive) and how to write proofs in the different systems. They also learn how to use a proof assistant such as Coq and how to program in a logic programming language such as Prolog. Topics include classical and intuitionistic logic, SAT, Peano's axioms, Hoare logic, and other selected logic systems.

### Language(s) of Instruction

English

### Host Institution Course Number

CS3234

### Host Institution Course Title

LOGIC FOR PROOFS AND PROGRAMS

### Host Institution Campus

### Host Institution Faculty

### Host Institution Degree

### Host Institution Department

Computer Science

[Print](#)