

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 Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Computer Science

Course Last Reviewed

2021-2022

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