Overview

Computability: formal languages and problems, Turing Machines (TMs), computability, (semi-)decidability, universal TMs, Church-Turing thesis, halting problem, reduction and undecidability proofs, examples; Complexity: run time, space, complexity classes, non-determinism and NP, polynomial reductions and NP completeness, optimisation problems and approximation, randomisation; Languages and Automata: regular expressions and languages, finite automata, determinisation, context-free grammars and languages (CFLs), Chomsky normal form, word problems, pumping lemma, push-down automata, decidability problems for CFLs; Semantics and Correctness: while programs, assertions and program correctness, Hoare logic, loops and loop invariants, relative completeness of Hoare logic (and its role in a proof of Gödel's incompleteness result)
Faculty
Faculty of Engineering

School
School of Computer Science and Engineering

Study Level
Postgraduate

Offering Terms
Term 1

Campus
Kensington

Delivery Mode
Fully on-site

Indicative contact hours
5

Timetable
Visit timetable website for details
Conditions for Enrolment

Prerequisite: COMP9020 and COMP9024
Course Outline

To access course outline, please visit:

COMP4141 Course Outline
Fees

Commonwealth Supported Students  $1191
Domestic Students  $4470
International Students  $5910

DISCLAIMER
Please note that the University reserves the right to vary student fees in line with relevant legislation. This fee information is provided as a guide and more specific information about fees, including fee policy, can be found on the fee website.

For advice about fees for courses with a fee displayed as "Not Applicable", including some Work Experience and UNSW Canberra at ADFA courses, please contact the relevant Faculty.

Where a Commonwealth Supported Students fee is displayed, it does not guarantee such places are available.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)
© UNSW Sydney (CRICOS Provider No.: 00098G), 2019. The information contained in this Handbook is indicative only. While every effort is made to keep this information up-to-date, the University reserves the right to discontinue or vary arrangements, programs and courses at any time without notice and at its discretion. While the University will try to avoid or minimise any inconvenience, changes may also be made to programs, courses and staff after enrolment. The University may also set limits on the number of students in a course.

Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179