Security Engineering and Cyber Security

Overview

Introduction to computer security, prevention of cybercrime and cyberterror. The principles of engineering secure systems. How to think like a security engineer.

Engineering secure systems. How security fails. Security analysis and design. Private and public cryptographic protocols. Introduction to information security: Confidentiality, Integrity, Authentication, Non-repudiation, hashing, signatures, bits of security. Physical security, social engineering, sniffing, intrusion detection, prevention and response, firewalls, honeypots. Overview of vulnerabilities and exploits including areas such as buffer overflow, inter overflow, heap attacks, Return-Oriented-Programming, heap attacks. Principles of risk and security. Case studies drawn from the history of hacking and from current events.

Additional topics drawn from recent developments and current research in applied computer security.

There are numerous formative assessments and activities throughout the course to provide feedback and learning opportunities. These do not directly contribute to your final grade but are expected to be used to provide evidence of your capabilities in your portfolio.

A programming background is not required but it will be helpful in some of the more applied topics. Students need a keen devious and analytical mind. To get the most from this course students will need to engage in independent study and research and be able to act as independent self-directed learners.
Faculty
Faculty of Engineering

School
School of Computer Science and Engineering

Study Level
Postgraduate

Offering Terms
Term 1

Campus
Kensington

Indicative contact hours
4

Timetable
Visit timetable website for details
Exclusion Courses

COMP3441 | 6 UOC
Security Engineering

COMP6841 | 6 UOC
Extended Security Engineering and Cyber Security

COMP9441 | 6 UOC
Security Engineering
Course Outline

To access course outline, please visit:

COMP6441 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)

Pre-2019 Handbook Editions
© 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