Week 1: Course Introduction
Securing Fixed and Wireless Networks, COMP4337/9337

Professor Sanjay K. Jha

School of Computer Science and Engineering, UNSW
Course Overview
LIC: Professor Sanjay Jha

Sanjay K. Jha is a Professor, and director of the Cybersecurity and Privacy Lab at the University of New South Wales. Sanjay holds a Ph.D. degree from the University of Technology, Sydney, Australia. Sanjay has published over 300 articles in high quality journals and conferences.

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(mark Attn: LIC if you want a response from me on certain matters)

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All class related inquiries which doesn’t require privacy, should be sent to the following email (private emails to staff will not be attended)  
**Email:** eng.cse.comp4337@unsw.edu.au
Today’s Agenda

Part 1
• Introduction to Administrative Matters

Part 2
• What is this course about?
• Introduction to Fixed and Wireless Networks and Security Challenges
• Introduction to Wireless Networks (some revision from 3331/9331 in WLAN)
# Lecture and Lab Schedules

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### Tip: to find your way around campus, download:

![Lost On Campus by StudentVIP](https://example.com)
Teaching Strategies

• Lectures
• Labs
  – Hands-on learning
  – Homework self-guided
• Project
  – Programming/Report/Demo/Analysis of Network Security (TBA)
• Sample Problems (no formal tutorials)
  – U will gain problem solving skills
Lectures

- Go beyond the text book
  - Latest in R&D
  - Advanced concepts - links will be provided
- Down side (is it ??)
  - Certain material will be left for self-study
  - These will be indicated on the lecture notes, related text sections will be pointed to you

Note: Self-study and additional material (as indicated by LIC) is all examinable

- Please ask questions if needed
Labs

Tell me and I forget
Show me and I remember
Involve me and I understand
- Chinese Proverb

- 2 hour lab sessions starting Week2 (see notice)
- Hands-on experiments related to concepts that you learn in lectures
- Will use Wireshark and other tools: more in labs
- Schedule will be posted on the course web page, you will receive instructions on group formation (max-2) – tried to find a partner that you can work with.
• LIC’s Consultations (By Appointment)
  – LIC will be available after lectures as well.
• WebCMS has community interaction (forums)
  o LIC and TAs will monitor and try to help when possible.
• Basic set of rules
  o Do not post code/program/script fragments
  o TAs cannot provide final solutions
  o Common courtesy
  o Details posted for each forum. Please read them.
Assessment

- Lab Assessments (20 marks)
- Project, Research (20 marks)
- Quiz/homework/Activities (20 Marks)
- Final Exam (40 Marks)

*Double pass applies: Read course outline.*

No Plagiarism, We are **serious**. Please read policy in course outline. We are using plagiarism tools such as Turnitin for written reports.
Part 2
Securing Fixed and Wireless Networks

- This year, the course title has changed to include Fixed Network Security, some content will be adjusted though we taught both in previous years too.

- We assume that you have learnt basics of networking and various architectures in COMP3331/9331. No prior security course is assumed. We may review a few things to put security in context.

- If you have learnt most of these topics, please consider taking another elective. We have limited space and there are students in wait list.
What Is This Course About?

• Threats, vulnerabilities, and security countermeasures of existing and upcoming fixed and wireless networks.

• Security topics include a wide range of mainstream fixed Internet and wireless technologies, including WLAN, VANETS and WSN, IoT.
  – Mobile/Cellular Security a big area, we may have a quick glimpse.

• We will be taking a systems approach, the course is very much PROTOCOL centric.

• Study crypto primitives and protocols applicable to wireless & Wired networks.

• Learn practice of security in networks
• We have good plans but we expect your cooperation and patience this session.
  – We learnt a few things from last session would be making changes this session (no mandatory attendance but a lot of learning happens in class, more class interactions – needs multi-party communication, quicker feedback on quizzes, guest lectures to be spread out not towards the end – but this is subject to availability and also helps if you know the basics)
• Your ideas/feedback on continual improvement is welcome. (no need to wait for end of the session survey)
  • Additionally, there may be another feedback survey through Moodle.
WRONG WAY – Please Exit?

- This is not about “WEB SECURITY”
- This is not about Android/MacOS or “OS Security”
- This is not about “Maths Crypto”
- This is not about “AI Techniques to Security”
  - May offer research topics related to networking security though
- Please outline and if this doesn’t match your expectations, please make room for other students in the waitlist
  - We find it very disappointing to see such remarks in myExperience surveys despite early warnings.