SWINBURNE UNIVERSITY OF TECHNOLOGY

COS80013
Internet Security

Lecturer: Sheng Wen

Program Leader for System Security & Blockchain

@Swinburne Cybersecurity Lab

@Swinburne Blockchain Lab

DRICP

About me

Dr Sheng Wen, PhD, MIEEE
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Tutor

Van Cuong Bui: vancuongbui@swin.edu.au

Expert in Blockchain, Communication, and Security

11 Lab Sessions: each tutor teaches 2 sessions (I will teach the rest one)

He will host one-hour consultation session per week starting from week 1. You can also send him emails if you have questions in your study.

Assessment

- Assessment components
  - Two individual assessments
    - Practical assignments
      - Test 1: 5%
      - Test 2: 15%
      - Assignment: 30%
      - Lab Report: 10%
      - Late submission penalty:
        10% deduction per day from total grade
    - Final examination: 40%

- Minimum requirement for a pass.
  - 50% of the total marks
  - 40% in each assessment components

Unit and Lab Schedule

Week	Topics	Assessment	Labs and tutorials
1	Introduction to Internet Security		Linux Lab
2	Secure Software Development Principles and Approaches		Network lab
3	Threat Modeling and Mitigation Techniques		Buffer overflows
4	Secure (and Insecure) Coding Techniques I		Malware RATs and remote access
5	Secure (and Insecure) Coding Techniques II		Denial of Service
6	Security Testing	Assignment I due	Firewalls, nmap, Wireshark, netstat, ifconfig
7	More on Security Testing		XSS, cookies
8	Web Application Security I		Crypto
9	Web Application Security II		SQL injection
10	Cloud Security		E-Forensics
11	Mobile Security	Assignment II due	On-site consultancy
12	Software Security in a Nutshell		To be advised
	Examination period		

Prerequisites

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COS60004 Creating Web Applications

OR

COS60007 Creating Web Applications and Databases

OR

Admission into MA-ITPC1 - Master of Information Technology (Professional Computing)

OR

Admission into MA-ITPC - Master of Information Technology (Professional Computing)

AND One of

COS70007 Data Communications and Security

OR

TNE60006 Networks and Switching

OR

COS80021 Web Application Development

OR

TNE60002 Network Administration

- Additional requirements (all students):

  A minimum of 2-3 hours of personal study per one hour of lecture time in order to satisfy the reading, tute, prac and assignment expectations.

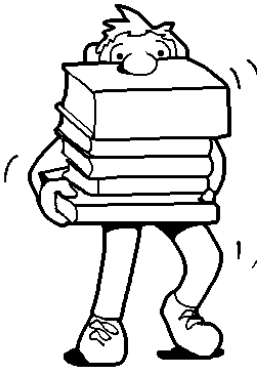
Lectures

- Lectures will cover and provide insight into material

- Textbook references and other reading material posted weekly on lecture slides are recommended to be read (preferably before and after the lecture) for a more complete understanding of the material

Textbooks for Reference ONLY

- G McGraw, *Software Security*, Addison-Wesley Software Security Series, 2006.
- M Howard and D LeBlanc, *Writing Secure Code*, Microsoft, 2002.
- J Erickson, *Hacking: The Art of Exploitation*, No Starch Press, 2008.
- D Stuttard and M Pinto, *The Web Application Hacker's Handbook*, Wiley, 2nd Ed, 2011
- M G Graff and K R van Wyk, Secure Coding, O'Reilly, 2003.
- R Anderson. Security engineering. John Wiley & Sons, 2008.
- W Du, Computer Security - A Hands-on Approach, 2017



- Other references are listed as part of the handout page on the web, or will be provided on Moodle.