



MONASH University
Information Technology

FIT2078
Introduction to security

Unit Guide

Semester 2, 2015

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FIT2078 Introduction to security - Semester 2, 2015

This unit will provide students with a knowledge of information systems security issues, and their relevance to the management of information systems in contemporary organisations. The students will gain knowledge of the nature of information threats, risks and vulnerabilities and of the control technologies and techniques which can be applied to reduce risk. Students will be expected to demonstrate ethically sound viewpoints with respect to the protection of information resources while maintaining a secure IS framework related to a defence in depth strategy. Further students will have an understanding of the ethical, legal and criminal issues relating to the security of information systems. Additionally students will be required to analyse and assess recent developments and future trends in IS security technologies.

Mode of Delivery

Clayton (Day)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

(a.) Contact hours for on-campus students:

- Two hours of lectures
- One 2-hour tutorial

(b.) Additional requirements (all students):

- A minimum of 8 hours independent study per week for completing private study, revision and assessment requirements.

See also Unit timetable information

Unit Relationships

Prohibitions

FIT1019

Prerequisites

FIT1001 or FIT1031

Chief Examiner

Dr Nandita Bhattacharjee

Campus Lecturer

Clayton

Nandita Bhattacharjee

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, see:

www.monash.edu.au/about/monash-directions/ and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

Lectures in this unit are delivered in Caulfield and Clayton Campuses. Based on the student evaluations students were satisfied with the unit overall. But by improving student engagement student satisfaction can be further improved. Including practical examples that apply the theory may help students further.

Students were in general satisfied with the content and the method of assessment in this unit.

If you wish to view how previous students rated this unit, please go to
<https://emuapps.monash.edu.au/unitevaluations/index.jsp>

Academic Overview

Learning Outcomes

At the completion of this unit, students should be able to:

- critically assess threats, vulnerabilities and risks to an organisations information assets and propose control technologies and techniques which can be applied to reduce the security risk;
- apply cryptographic techniques to develop methods to disguise information to ensure its integrity, confidentiality and authenticity;
- describe the ethical, legal and criminal issues relating to the security of information systems;
- apply information security concepts in the analysis of information systems security issues;
- apply risk management techniques to the planning and management of security of information systems;
- implement access control mechanisms to create a security architecture to protect the assets of the information system.

Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Introduction	
2	IT risk management	
3	Authentication	Discussion class. Quiz 1 during tutorial session
4	Access control	
5	Introduction to number theory	Discussion class. Quiz 2 during tutorial session
6	Cryptography I	
7	Cryptography II	Discussion class. Quiz 3 during tutorial session
8	Public key cryptography	
9	Digital signature	Discussion class. Quiz 4 during tutorial session
10	Database security	Mid-semester Test during the lecture
11	Integrity management	
12	Ethics & Privacy	Discussion class. Quiz 5 during tutorial session
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html

*Unit Schedule details will be maintained and communicated to you via your learning system.

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

The lectures will cover the theoretical concepts of security. The tutorial/discussion classes will be used to explore the principles, available tools and operating system platforms. The exploration aims to demonstrate and illustrate the concepts provided in the lectures.

Assessment Summary

Examination (3 hours): 60%; In-semester assessment: 40%

Assessment Task

Value

Due Date

Unit Schedule

Tutorial Quizzes 1-5	20% (4% for each quiz)	Weeks 3, 5, 7, 9 and 12 during tutorial session
Mid-semester Test	20%	Week 10 during the lecture
Examination 1	60%	To be advised

Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

(<http://intranet.monash.edu.au/infotech/resources/staff/edgov/policies/assessment-examinations/assessment-hurdles>)

Academic Integrity - Please see resources and tutorials at

<http://www.monash.edu/library/skills/resources/tutorials/academic-integrity/>

Assessment Tasks

Participation

- **Assessment task 1**

Title:

Tutorial Quizzes 1-5

Description:

Principles and application based on previous weeks topics. This assessment relates to learning outcomes 1, 2, 5 and 6.

Weighting:

20% (4% for each quiz)

Criteria for assessment:

Understanding of the appropriate security principles and its applications to specific situations.

Due date:

Weeks 3, 5, 7, 9 and 12 during tutorial session

- **Assessment task 2**

Title:

Mid-semester Test

Description:

Multiple choice questions and principles and applications based on the material covered up to Week 8. This assessment relates to learning outcomes 1, 2, 4, 5 and 6

Weighting:

20%

Criteria for assessment:

Demonstrate an understanding of the topics covered up to Week 8.

Due date:

Week 10 during the lecture

Examinations

- **Examination 1**

Weighting:

60%

Length:

3 hours

Assessment Requirements

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

None

Remarks:

This assessment relates to learning outcomes 1 to 6.

Learning resources

Reading list

1. Goodrich M and Tamassia R, *Introduction to Computer Security*, Addison-Wesley, 2011
2. Jill Slay and Andy Koronios, *Information Technology Security & Risk Management*, 3rd Edition, Wiley.
3. Gollmann, D. (2010), *Computer Security*, Wiley, UK

Monash Library Unit Reading List (if applicable to the unit)

<http://readinglists.lib.monash.edu/index.html>

Feedback to you

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Test results and feedback
- Quiz results
- Solutions to tutes, labs and assignments
- Other: Individual student meetings

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: <http://www.monash.edu.au/exams/special-consideration.html>

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assignment submission

It is a University requirement

<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-managing-pla> for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at <http://www.infotech.monash.edu.au/resources/student/forms/>. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an electronic submission). Please note that it is your responsibility to retain copies of your assessments.

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.

Prescribed text(s)

Limited copies of prescribed texts are available for you to borrow in the library.

William Stallings & Lawrie Brown. (2015). *Computer Security: Principles and Practice*. (3rd Edition)
Pearson Education Limited.

Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:

www.policy.monash.edu.au/policy-bank/academic/education/index.html

Faculty resources and policies

Important student resources including Faculty policies are located at

<http://intranet.monash.edu.au/infotech/resources/students/>

Graduate Attributes Policy

<http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.h>

Student Charter

www.opq.monash.edu.au/ep/student-charter/monash-university-student-charter.html

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at <http://www.monash.edu.au/students>. For Malaysia see <http://www.monash.edu.my/Student-services>, and for South Africa see <http://www.monash.ac.za/current/>.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in [my.monash](#) portal for more information. At Malaysia, visit the Library and Learning Commons at <http://www.lib.monash.edu.my/>. At South Africa visit <http://www.lib.monash.ac.za/>.

Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

- Website: <http://www.monash.edu/equity-diversity/disability/index.html>
- Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Community Services at 03 55146018 at Malaysia
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Malaysia Campus