

FIT3105 Identity management

Unit guide

Semester 1, 2009

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| Unit leader : | | |
|---------------|--|--|
| Lecturer(s): | | |

Caulfield

• Phu Dung Le

Tutors(s):

Caulfield

• Phu Dung Le

Introduction

Welcome to Security and Identity Management (FIT3105)!

This unit will be a core unit in the Security major of BITS. It can be an elective unit for students who do not major in security (subject to the approval from the school). This unit will provide students with system authentication and identity management based on different technologies such as crypto-based technology, smart cards, biometrics, etc.

Unit synopsis

ASCED 0299 Other Information Technology

Introduces students to theory and practice of system authentication and managing system component identities. This includes authentication models, biometric, smart card, crypto-based authentication and identity management, application of the authentication models and protocols in supporting security, identity management, electronic payment transactions and other IT security applications.

Learning outcomes

Knowledge and Understanding

Upon completion of this unit, students will

- understand the importance of authentication of system components: data, software, hardware, users and subsystems.
- understand the implementation of different techniques for authentication and identification.
- understand the significance of authentication and identity management in IT security
- understand different authentication and identity management systems.
- understand the role of biometric, smartcards, crypto-based techniques and their issues when applied to authentication process.
- understand existing networked authentication models and protocols for distributed systems, such as kerberos.

• appreciate the role of distributed authentication models and protocols in securing electronic transactions.

Workload

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed FIT1019 or equivalent IT study (see the lecturer for further information) You should have knowledge of overview of IT security in the first or second year of BITS, oroperating systems, networking and corporate security.

Relationships

FIT3105 is a core unit of the Security Major of BITS.

Continuous improvement

Monash is committed to 'Excellence in education' (Monash Directions 2025 -

http://www.monash.edu.au/about/monash-directions/directions.html) and strives for the highest possible quality in teaching and learning.

To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. The University's Unit Evaluation policy

(http://www.policy.monash.edu/policy-bank/academic/education/quality/unit-evaluation-policy.html) requires that every unit offered is evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Faculties have the option of administering the Unit Evaluation survey online through the my.monash portal or in class. Lecturers will inform students of the method being used for this unit towards the end of the semester.

Student Evaluations

If you wish to view how previous students rated this unit, please go to http://www.adm.monash.edu.au/cheq/evaluations/unit-evaluations/

Unit staff - contact details

Unit leader

None provided

Lecturer(s):

Dr Phu Le

Fax +61 3 9903 1247

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Tutor(s):

Dr Phu Le

Fax +61 3 9903 1247

Additional communication information

Dr Phu Dung Le, Room H.706, Phone: (03) 9903 2300, email: pdle@infotech.monash.edu.au

Teaching and learning method

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Unit Schedule

| Week | Торіс | Key dates | | |
|--------------------|--|---------------------------------|--|--|
| 1 | Introduction to authentication and identity management | | | |
| 2 | Cryptography for authentication and identification | | | |
| 3 | Smart card based authentication and identity systems | | | |
| 4 | Biometric technology for authentication and identification | | | |
| 5 | Crypto-based identity management systems | | | |
| 6 | Strong authentication for computer system components and mobile users | | | |
| Mid semester break | | | | |
| 7 | Authentication and identity systems: design and implementation | | | |
| 8 | Authentication and identity systems: design and implementation (con't) | Assignment 1 due on Friday 4PM. | | |
| 9 | Large scale identity systems: security, privacy and efficiency | | | |
| 10 | Large scale identity systems: security, privacy and efficiency (con't) | | | |
| 11 | Identity systems: Case study | | | |
| 12 | Research in authentication and identity management technologies | Assignment 2 due on Friday 4PM. | | |
| 13 | Reading and revision | | | |

Tutor(s):

Unit Resources

Prescribed text(s) and readings

There is no text book for this unit.

Text books are available from the <u>Monash University Book Shops</u>. Availability from other suppliers cannot be assured. The Bookshop orders texts in specifically for this unit. You are advised to purchase your text book early.

Recommended text(s) and readings

Recommended books, articles, and Internet resources will be advised.

Equipment and consumables required or provided

Students studying off-campus are required to have the minimum system configuration specified by the Faculty as a condition of accepting admission, and regular Internet access. On-campus students, and those studying at supported study locations may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to 12 hours per week for use of a computer, including time for newsgroups/discussion groups.

Study resources

Study resources we will provide for your study are:

- Weekly detailed lecture notes outlining the learning objectives, discussion of the content, required readings and exercises:
- Weekly tutorial or laboratory tasks and exercises;
- Assignment specifications;
- Consultations at specific consultation times;

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to http://www.lib.monash.edu.au.

The Educational Library and Media Resources (LMR) is also a very resourceful place to visit at http://www.education.monash.edu.au/library/

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (http://moodle.monash.edu.au) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: http://my.monash.edu.au

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

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In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

For more information, please visit: http://www.monash.edu.au/muso/support/students/downloadables-student.html

You can contact the MUSO Support by phone: (+61 3) 9903 1268

For further contact information including operational hours, please visit: http://www.monash.edu.au/muso/support/students/contact.html

Further information can be obtained from the MUSO support site: http://www.monash.edu.au/muso/support/index.html

Assessment

Unit assessment policy

There will be two individual assignments (20% each) and lab exercises (10%). There will be a 3-hour exam. You will have to

complete all the lab exercises attempt both assignments and the examination achieve no less that 40% of the possible marks in the exam achieve no less than 50% of possible marks

Examinations

Examination 1

Weighting: 50%

Length: 3 hours

Type (open/closed book): Closed book

Assignment submission

Do not email submissions. The due date is the date by which the submission must be received/the date by which the submission is to be posted.

Hard copies (you have to print your hard copies and have a cover sheet) and soft copies on a cd will be required as your assignment submissions.

Assignment coversheets

You need to have a cover sheet for your assignment submissions.

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Late assignment

Assignments received after the due date will be subject to a penalty of 10% for one day late, 20% for two days late, 40% for three days late, 80% for four days late and 100% for five or more days late.

Return dates

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

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at http://www.policy.monash.edu/policy-bank/academic/education/assessment/

We will aim to have assignment results made available to you within two weeks after assignment receipt.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with the University Plagiarism policy and procedure (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html) which applies to students detected plagiarising.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not

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accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- Disabilities Liaison Unit

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at http://www.monash.edu.au/exams/special-consideration.html. Contact the Faculty's Student Services staff at your campus for further information and advice.