SCSSE
School of Computer Science and Software Engineering
Faculty of Informatics

CSCI262  System Security
Subject Outline
Spring Session 2008

Head of School – Professor Philip Ogunbona, Student Resource Centre, Tel: (02) 4221 3606

GENERAL INFORMATION

Subject Coordinator
Dr Tianbing Xia
Telephone Number: 4221 3076
Email: txia@uow.edu.au
Location: 3.205

Dr Xia’s consultation times during session:
Day       Time
Monday   9:30-11:30
Wednesday 9:30-11:30

Lecturer
Dr Luke McAven
Telephone Number: 4221 4879
Email: lukemc@uow.edu.au
Location: 3.109

Dr McAven’s consultation times during session:
Day       Time
Monday   12:30-1:30
Monday   3:30-4:30
Thursday 12:30-1:30
Friday   9:30-10:30

Subject Organisation
Session: Spring Session, Wollongong Campus
Credit Points: 6 credit points
Contact hours per week: 3 hours lectures, 2 hours Computer lab
Lecture Times & Location:
    Monday: 13.30 – 15.30 at 15.206
    Wednesday: 13.30 – 14.30 at 3.121
Tutorial Day, Time and Location can be found at: http://www.uow.edu.au/student/timetables/index.html

Students should check the subject's web site regularly as important information, including details of unavoidable changes in assessment requirements will be posted from time to time via e-Learning space http://www.uow.edu.au/student/lol. Any information posted to the web site is deemed to have been notified to all students.

Subject Description
The subject covers some fundamental computer security technologies in the following aspects: (1)
Operating system security such as physical security, file protections, system abuses, attacks and protections; (2) Database security including data integrity, data recover, data encryption/ decryption, access control, and authentication; (3) Mobile code security including malicious logic, host and mobile code protection, mobile agents' security. (4) Intrusion detection; (5) Security policies; (6) Security management and risk analysis.

**Objectives**
A student who successfully completes this subject should be able to: 1. Analyse risks and threats to computer systems. 2. Evaluate and manage the security in computer systems. 3. Understand models of security in Operating System and methods of providing protection. 4. Understand database security models; apply security mechanisms in database management systems. 5. Provide security for mobile code systems.

**Graduate Qualities**
All Schools in the Faculty of Informatics have adopted the UOW Graduate Qualities. On completion of their course graduates will be informed, independent learners, problem solvers, effective communicators and responsible. Further information can be found at [http://www.uow.edu.au/about/teaching/qualities/](http://www.uow.edu.au/about/teaching/qualities/).

**Attendance Requirements:**
It is the responsibility of students to attend all lectures/tutorials/labs/seminars/ practical work for subjects for which you are enrolled. It should be noted that the amount of time spent on each 6 credit point subject should be at least 12 hours per week, which includes lectures/tutorials/labs etc.

Students MUST attend their *allocated* tutorial unless they have the written permission of the subject coordinator.

**Method of Presentation:**
In order to maximize learning outcomes, it is strongly recommended that students attend all lectures.

Lecture notes, lab exercises and assessment tasks will be made available through Learning. Students should check the subject’s website regularly. Any information posted to the website is deemed to have been notified to all students.

**Lecture Schedule:**
A proposed Lecture schedule for the subject is as follows:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction, user authentication</td>
</tr>
<tr>
<td>2</td>
<td>User security, Access control</td>
</tr>
<tr>
<td>3</td>
<td>Access control (Windows, Unix, Linux)</td>
</tr>
<tr>
<td>4</td>
<td>Buffer overrun, secure code</td>
</tr>
<tr>
<td>5</td>
<td>Viruses, bad code</td>
</tr>
<tr>
<td>6</td>
<td>Intrusion detection</td>
</tr>
<tr>
<td>7</td>
<td>Denial of Service attacks</td>
</tr>
<tr>
<td>8</td>
<td>Windows Security</td>
</tr>
<tr>
<td>9</td>
<td>Web system security</td>
</tr>
<tr>
<td>10</td>
<td>Database system security</td>
</tr>
<tr>
<td>11</td>
<td>Database system security</td>
</tr>
<tr>
<td>12</td>
<td>Database system security</td>
</tr>
<tr>
<td>13</td>
<td>Other issues, revision</td>
</tr>
</tbody>
</table>

Changes to the above schedule will be posted via e-Learning space [http://www.uow.edu.au/student/lol](http://www.uow.edu.au/student/lol). Any information posted to the web site is deemed to have been notified to all students.
Subject Materials:
Any readings/references are recommended only and are not intended to be an exhaustive list. Students are encouraged to use the library catalogue and databases to locate additional readings.

Textbook(s):

Other Resources:

References:

Note: The textbook provides approximately half required contents. The other half will be provided by the lecturer in lecture notes.

Assessment:
This subject has the following assessment components.

<table>
<thead>
<tr>
<th>ASSESSMENT ITEMS &amp; FORMAT</th>
<th>% OF FINAL MARK</th>
<th>GROUP/INDIVIDUAL</th>
<th>DUE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 (Report &amp; programming)</td>
<td>10%</td>
<td>individual</td>
<td>Week Four</td>
</tr>
<tr>
<td>Assignment 2 (Report &amp; programming)</td>
<td>10%</td>
<td>individual</td>
<td>Week Seven</td>
</tr>
<tr>
<td>Assignment 3 (Report &amp; programming)</td>
<td>10%</td>
<td>individual</td>
<td>Week Ten</td>
</tr>
<tr>
<td>Assignment 4 (Report &amp; programming)</td>
<td>10%</td>
<td>individual</td>
<td>Week Thirteen</td>
</tr>
<tr>
<td>Exam</td>
<td>60%</td>
<td>individual</td>
<td>Exam period</td>
</tr>
</tbody>
</table>

Notes on Assessment:
All assignments are expected to be completed independently. Plagiarism may result in a FAIL grade being recorded for that assignment.

Electronic Submission of Assessment Items:
Unless otherwise notified by the subject coordinator, all written assignments must be submitted electronically.

Other Procedures for the submission of assessment items:
In addition to electronic submission students are required to submit assignments in hard copy to their tutor.
All assignments will be returned within 2 weeks of their submission.

Remarks on Assessment:
- The due dates are tentative. They are subject to change.
- Assignments are to be scanned with a plagiarism detector.
- An extension of time for the completion of an assignment may be granted in certain circumstances. A request for an extension must be made to the Subject Coordinator before the due date (via SOLS and via email to the Subject coordinator). Supporting documentation must accompany the request for extension. The Subject Coordinator has the right to determine whether the request can be granted or not.
- Students must pass the exam.
To be eligible for a Pass in this subject a student must achieve a mark of at least 40% in the Exam (24/60). Students who fail to achieve this minimum mark will be given a TF (Technical Fail) for this subject.

Procedures for the return of assessment items:
Assignments will be returned back to the students during lab times. Marks of the assignments will be uploaded on SOLs.

Penalties for late submission of assessment items:
Penalties apply to all late work, except if special consideration has been granted. Late submissions will attract a penalty of 25% of the assessment mark per day including weekends. Work four (4) or more days late will be awarded a mark of zero and will not be marked.

Supplementary Exams
Supplementary Exams will be dealt with in accordance with student academic consideration policy (http://www.uow.edu.au/handbook/courserules/specialconsideration.html) 6.2 Timing of Supplementary Exams.

While the School normally grants supplementary exams when the student does not sit the standard exam for an acceptable reason, each case will be assessed on its own merit and there is no guarantee a supplementary exam will be granted. If a supplementary exam is granted, you will normally be notified via SOLs Mail the time and date of this supplementary exam. You must follow the instructions given in the email message.

Please note that if this is your last session and you are granted a supplementary exam, be aware that your results will not be processed in time to meet the graduation deadline.

Special Consideration Policy
The School recognises that it has a responsibility to ensure equity and consistency across its subjects for all students. Sometimes, in exceptional circumstances, students need to apply for student special consideration in order to complete all assessable work.

The University applies strict criteria to the granting of special consideration. Before applying for student special consideration, students should carefully read the University’s policy which can be found at: http://www.uow.edu.au/handbook/courserules/specialconsideration.html

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Plagiarism
When you submit an assessment task, you are declaring the following
1. It is your own work and you did not collaborate with or copy from others.
2. You have read and understand your responsibilities under the University of Wollongong's policy on plagiarism.
3. You have not plagiarised from published work (including the internet). Where you have used the work from others, you have referenced it in the text and provided a reference list at the end of the assignment.

Students must remember that:
Plagiarism will not be tolerated.
Students are responsible for submitting original work for assessment, without plagiarising or cheating, abiding by the University’s policies on Plagiarism as set out in the University Handbook under University Policy Directory and in Faculty handbooks and subject guides. Plagiarism has led to the expulsion from the University.

Student Academic Grievance Policy
The School aims to provide a fair, equitable and productive learning environment for all its students. The Student Academic Grievance Policy seeks to support the achievement of this goal by providing a transparent and consistent process for resolving student academic grievances.

Any student who has a grievance over a result should obtain a Faculty of Informatics Appeal Against Decision or Action Affecting Academic Experience form from the Informatics Student Enquiry Centre. (http://www.uow.edu.au/content/groups/public/@web/@inf/@faculty/documents/doc/uow017433.pdf) The student should firstly take the form to the marker/lecturer to discuss the matter and, if the student is still not satisfied, s/he should take the next step as outlined on the form.

Once the grievance has been considered by the Faculty, if the student still feels the situation has not been fully resolved s/he may consult the Dean of Students. However, the Dean of Students can have no input into the academic judgment of the lecturer and can only review the grievance to ensure proper procedure has been followed.

Relevant University Policies, procedures and students services:
For more information students must refer to the Faculty handbook, online references or consult the UOW policy in full at http://www.uow.edu.au/handbook/courserules/studacgrievpol.html which contains a range of policies on educational issues and student matters.
This subject outline can be found at: [http://www.uow.edu.au/informatics/common/UOW030689.html](http://www.uow.edu.au/informatics/common/UOW030689.html)

This outline should be read in conjunction with the following documents:

<table>
<thead>
<tr>
<th>Code of Practice - Teaching and Assessment</th>
<th>Code of Practice - Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code of Practice-Honours</td>
<td>Acknowledgement Practice Plagiarism will not be tolerated:</td>
</tr>
<tr>
<td>Key Dates</td>
<td>Special Consideration Policy:</td>
</tr>
<tr>
<td>Course Progress Policy:</td>
<td>Graduate Qualities Policy:</td>
</tr>
<tr>
<td>Academic Grievance Policy (Coursework and honours students)</td>
<td>Non-Discriminatory Language Practice and Presentation</td>
</tr>
<tr>
<td>Occupational Health and Safety</td>
<td>Intellectual Property Policy</td>
</tr>
<tr>
<td>Human Research Ethics:</td>
<td>Rules for student conduct and discipline:</td>
</tr>
<tr>
<td>Information Literacies Introduction Program</td>
<td>Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, email: <a href="mailto:ameldrum@uow.edu.au">ameldrum@uow.edu.au</a></td>
</tr>
<tr>
<td>Student Support Services:</td>
<td>SCSSE Internet Access &amp; Student Resource Centre</td>
</tr>
<tr>
<td>Informatics Faculty SEDLO (Student Equity and Diversity Liaison Officers) Virginie Schmelitschek, phone 4221 3833, <a href="mailto:virginie@uow.edu.au">virginie@uow.edu.au</a></td>
<td></td>
</tr>
<tr>
<td>SCSSE Computer Usage Rules</td>
<td>SCSSE Subject Outlines</td>
</tr>
</tbody>
</table>