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# SCSSE

**School of Computer Science and Software Engineering  
Faculty of Informatics**

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## **CSCI222 Systems Development Subject Outline Spring Session 2009**

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

### **GENERAL INFORMATION**

#### **Subject Coordinator**

Telephone Number:

Email:

Location:

Associate Professor Neil Gray

02 4221 3812

nabg@uow.edu.au

3.206

Associate Professor Gray's consultation times during session:

Day

Monday

Tuesday

Time

10.30-12.30

10.30-12.30

#### **Subject Organisation**

Session:

Credit Points

Contact hours per week:

Lecture Times & Location:

Spring Session, Wollongong Campus

6 credit points

3 hours lectures, 2 hours Computer lab

Lecture A 13:30– 15:30 Wed, 38-G01

Lecture B 9:30-10:30 Fri, 38.G01

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/>. Any information posted to the web site is deemed to have been notified to all students.

#### **Subject Description**

This subject provides a framework for understanding and developing the necessary skills to successfully undertake the major third year software project. The subject provides an introduction to the practical aspects of the development of a software application following a well defined process. Students will gain experience in the software development cycle, including requirements, design, and implementation, and also learn to exploit implementation support technologies. Assignments will provide experience of structured development work in a small group setting. The implementation language used in illustrations and assignments is C++.

#### **Subject Objectives**

On successful completion of this subject, students will be able to:

- 1.Design a software application of moderate size and complexity, making effective use of design tools.
  - 2.Use appropriate tools to develop and implement a software application of moderate design and complexity
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This subject outline can be found at: <http://www.uow.edu.au/informatics/scsse/current>

3. Create, plan, and implement a test plan for a software application.
4. Work in a group following a defined software development process

### Graduate Qualities

This subject will continue to the following graduate qualities:

Informed  
Problem Solvers  
Effective Communicators  
Team Work  
Innovation & Design

Further information can be found at:

<http://www.uow.edu.au/informatics/scsse/current/SubjectInformation/UOW049401.html>

### 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.

Satisfactory attendance is deemed by the University, to be attendance at approximately 80% of the allocated contact hours.

Attendance rolls will be kept for lectures and laboratories. If you are present for less than 80% and would have otherwise passed you need to apply for student academic consideration, otherwise a TF (technical fail) grade will be recorded.

### Method of Presentation:

In order to maximize learning outcomes, it is strongly recommended that students attend all lectures.

### Lecture Schedule:

A proposed Lecture schedule for the subject is as follows:

Week	Topic
1	Overview of subject, and introduction to the IDE environment that is to be used in the laboratories
2	Review of classes and revision of their realization in C++ ; “Testing”
3	“Software Engineering”, cppUnit unit testing for C++
4	Software process models – sequential, iterative, agile; unit testing and version management
5	UML modeling of a program; subversion version management
6	Modeling; Group work and group organization
7	Rational Unified Process (RUP)
8	RUP and RUP case study continued
9	Distributed Systems
10	Distributed Systems continued; UML modeling of “systems”
11	UML modeling continued
12	Requirements
13	User interface issues, summarize

Changes to the above schedule will be posted via e-Learning space <http://www.uow.edu.au/student/>. 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

Lectures notes and assignment specifications will be available through e-Learning space <http://www.uow.edu.au/student/101>.

Any variations of assignment specifications will be announced in lectures, NOT via e-Learning. Supplementary materials will be found in /share/cs-pub/csci222. These materials may include software systems that can be installed on your own machine, reference manuals for software, and data files.

### Textbook(s):

"Software development for small teams [electronic resource]: a RUP-centric approach" by Gary Pollice et al

"The rational unified process: an introduction" by Philippe Kruchten

"Unit Test Frameworks" by Paul Hamill

"Using UML: Software Engineering with Objects and Components", by Perdita Stevens and Rob Pooley

### Assessment:

This subject has the following assessment components.

ASSESSMENT ITEMS & FORMAT	% OF FINAL MARK	GROUP/INDIVIDUAL	DUE DATE
Assignment 1: Individual assignment, unit-testing of C++ code	15%	Individual	August 28 <sup>th</sup>
Assignment 2: Group assignment, "Elaboration and Construction"	25%	Group	September 25 <sup>th</sup>
Assignment 3: Group assignment, "Inception and Elaboration"	20%	Group	October 28 <sup>th</sup>
Final Exam	40%	Individual	Scheduled by the University

### Notes on Assessment:

Plagiarism may result in a FAIL grade being recorded for that assignment.

Students must form groups of four members prior to the start of the first group assignment. The groups persist for the remainder of the session. Groups will identify their members to the subject coordinator at the start of assignment 2.

The assignments require the preparation of reports containing variously design artifacts, code, evidence for correct operation of code, and other components as specified. These reports are prepared as PDF documents and submitted electronically.

In assignment-1, the unit-test assignment, the submitted work must be that of an individual; collaboration is not permitted. For assignments 2 and 3, groups must electronically submit a single PDF report and, in addition, must manually submit a cover note, signed by all group members, the group.

### Electronic Submission of Assessment Items:

Unless otherwise notified by the subject coordinator, all written assignments must be submitted electronically.

Assignments are submitted electronically using the turnin program on the University's banshee computer (the main server for CS undergraduate work). Details of the use of turnin are included in the assignments.

Submission of assessment items via email will not be accepted.

### **Other Procedures for the submission of assessment items:**

**To be eligible for a Pass in this subject a student must achieve a mark of at least 15 out of 40 in the final exam. Students who fail to achieve this minimum mark & would have otherwise passed will be given a TF (Technical Fail) for this subject.**

### **Procedures for the return of assessment items:**

Marks are posted to the SOLS system. Marker comments will be returned to students via the university's email system.

### **Penalties for late submission of assessment items:**

Penalties apply to all late work, except if student academic consideration has been granted. Late submissions will attract a penalty of 10% of the assessment mark.

This amount is per day including weekends.

Work more than 4 days late will be awarded a mark of zero.

### **Tutorial/Lab Closure Policy**

If for any reason, the number of students in a tutorial or lab falls below a sustainable enrolment level, as determined by the Head of School, tutorials/labs offered for that subject may be collapsed or deleted.

You will have to attend the new tutorials/lab if this closure affects the one you are attending.

We will endeavour to make this decision no later than Week 4 of session.

### **Supplementary Exams**

Supplementary Exams will be dealt with in accordance with student academic consideration policy (<http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf>) 9.2 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.**

## **Student Academic 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 academic consideration in order to complete all assessable work.

The University applies strict criteria to the granting of student academic consideration. Before applying for student academic consideration, students should carefully read the University's policy which can be found at: <http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf>.

## **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 outline should be read in conjunction with the following documents:

Code of Practice - Teaching and Assessment <a href="http://www.uow.edu.au/handbook/codesofprac/teaching_code.pdf">http://www.uow.edu.au/handbook/codesofprac/teaching_code.pdf</a>	Code of Practice - Students <a href="http://www.uow.edu.au/handbook/codesofprac/cop_students.html">http://www.uow.edu.au/handbook/codesofprac/cop_students.html</a>
Code of Practice-Honours <a href="http://www.uow.edu.au/handbook/CodeofPractice-Honours.pdf">http://www.uow.edu.au/handbook/CodeofPractice-Honours.pdf</a>	Acknowledgement Practice <b>Plagiarism will not be tolerated:</b> <a href="http://www.uow.edu.au/handbook/courserules/plagiarism.html">http://www.uow.edu.au/handbook/courserules/plagiarism.html</a>
Key Dates <a href="http://www.uow.edu.au/student/dates.html">http://www.uow.edu.au/student/dates.html</a>	Student Academic Consideration Policy: <a href="http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf">http://www.uow.edu.au/about/policy/studentacademicconsiderationpolicy.pdf</a>
Course Progress Requirements: <a href="http://www.uow.edu.au/student/mrp/index.html">http://www.uow.edu.au/student/mrp/index.html</a>	Graduate Qualities Policy: <a href="http://www.uow.edu.au/about/teaching/qualities/index.html#_The_new_UOW">http://www.uow.edu.au/about/teaching/qualities/index.html#_The new UOW</a>
Academic Grievance Policy (Coursework and honours students) <a href="http://www.uow.edu.au/handbook/courserules/studacgrievpol.html">http://www.uow.edu.au/handbook/courserules/studacgrievpol.html</a>	Non-Discriminatory Language Practice and Presentation <a href="http://staff.uow.edu.au/eed/nondiscrimlanguage.html">http://staff.uow.edu.au/eed/nondiscrimlanguage.html</a>
Occupational Health and Safety <a href="http://staff.uow.edu.au/ohs/commitment/ohspolicy/index.html">http://staff.uow.edu.au/ohs/commitment/ohspolicy/index.html</a>	Ownership of Work & Intellectual Property Policy: <a href="http://www.uow.edu.au/handbook/generalcourserules/UOW028651.html">http://www.uow.edu.au/handbook/generalcourserules/UOW028651.html</a>
Human Research Ethics Committee: <a href="http://www.uow.edu.au/research/rso/ethics/human/">http://www.uow.edu.au/research/rso/ethics/human/</a>	Rules for student conduct: <a href="http://www.uow.edu.au/handbook/generalrules/StudentConductRules.pdf">http://www.uow.edu.au/handbook/generalrules/StudentConductRules.pdf</a>
Independent Learners' Introductory Program <a href="http://www.uow.edu.au/student/attributes/ilip/">http://www.uow.edu.au/student/attributes/ilip/</a>	Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, email: <a href="mailto:ameldrum@uow.edu.au">ameldrum@uow.edu.au</a>
Student Support Services: <a href="http://www.uow.edu.au/student/services/">http://www.uow.edu.au/student/services/</a> Informatics Faculty SEDLO ( <b>Student Equity and Diversity Liaison Officers</b> ) Virginie Schmelitschek, phone 4221 3833, <a href="mailto:virginie@uow.edu.au">virginie@uow.edu.au</a>	SCSSE Internet Access & Student Resource Centre <a href="http://www.uow.edu.au/informatics/common/uow024466.html">http://www.uow.edu.au/informatics/common/uow024466.html</a>
SCSSE Computer Usage Rules <a href="http://www.uow.edu.au/informatics/common/uow024457.html">http://www.uow.edu.au/informatics/common/uow024457.html</a>	SCSSE Subject Outlines <a href="http://www.uow.edu.au/informatics/scsse/current">http://www.uow.edu.au/informatics/scsse/current</a>