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# SCSSE

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

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**CSCI928 Software Engineering Requirements and Specifications  
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:

Professor Aditya Ghose

02 4221 4051

aditya@uow.edu.au

3.105

Professor Ghose's consultation times during session:

Day

Monday

Tuesday

Time

15:00 – 16:00

08:30 – 11:30

### Subject Organisation

Session:

Credit Points

Contact hours per week:

Lecture Times & Location:

Tutorial Day, Time and Location can be found at:

Spring Session, Wollongong Campus

6 credit points

2 hours lectures

13:30–15:30 Tues, 67.104

<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

Software development can be viewed as an activity in which useful things are built to serve recognisable purposes. For software developers, these "useful things" are a special kind of machine known as software systems, and the "purpose" of these machines is to help solve problems in some application domain. This subject emphasises the importance of understanding the application domains that software systems interact with and the problems we try to solve in these domains. The subject focuses on writing explicit and precise descriptions known as:

1. Requirements - descriptions of application domains and the problems to be solved there;
  2. Specifications - descriptions of the interface between the machine and the application domain. The subject addresses techniques used to record, elicit, and reason about these descriptions. The subject examines the approach to Requirements and Specification techniques taken by a range of systems engineering methodologies. The concepts of method engineering are introduced and the role of software tools to support this activity is discussed.
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## Subject Objectives

On completion of this subject the student should be able to:

1. Describe state of the art techniques of software requirements capture and analysis;
2. Explain how software system requirements are translated to appropriate software specifications expressed in a range of different formalisms;
3. Demonstrate an ability to interpret a particular set of software requirements and translate into a specification;
4. Apply the knowledge and skills presented in this subject to typical software development scenarios encountered in the software industry.

## Graduate Qualities

This subject will continue to the following graduate qualities:

Informed

Independent Learners

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.

## 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	Subject Introduction Role of Requirements Engineering in Software Engineering
2	Requirements Analysis
3	Requirements Specifications
4	Goal-oriented requirements engineering
5	Eliciting Requirements
6	Modelling Business Rules & Processes
7	Modelling Enterprises
8	Object Oriented Modelling & Modelling Relationships
9	Modelling System Interactions
10	Formal Specifications
11	Non-Functional Requirements
12	Managing Requirements Change
13	Subject Revision and Exam preparation

This subject outline can be found at: <http://www.uow.edu.au/informatics/scsse/current>

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

### **Textbook(s):**

#### **Other Resources:**

There is no compulsory textbook for this subject. However, students will find the following texts useful:

Ian Sommerville and Peter Sawyer (2003), *Requirements Engineering: A good practice guide*, John Wiley & Sons, USA.

Suzanne and James Robertson (2006), *Mastering the Requirements Process*, 2<sup>nd</sup> Edition, Addison-Wesley.

Martin Fowler (2004), *UML Distilled: A Brief Guide to the Standard Modeling Language*, 3<sup>rd</sup> Edition, Addison-Wesley

Ian Sommerville (2004), *Software Engineering*, 7<sup>th</sup> Edition, Addison-Wesley

Roger Pressman (2005), *Software Engineering: A Practitioner's Approach*, 6<sup>th</sup> Edition, McGraw Hill.

A range of reading material and resources will be made available through the subject website: [www.uow.edu.au/~aditya/CSCI928/CSCI928.html](http://www.uow.edu.au/~aditya/CSCI928/CSCI928.html)

### **Assessment:**

This subject has the following assessment components.

<b>ASSESSMENT ITEMS &amp; FORMAT</b>	<b>% OF FINAL MARK</b>	<b>GROUP/ INDIVIDUAL</b>	<b>DUE DATE</b>
Assignment	10%	Individual	Week 4
Project	40%	Group	Week 13
Final Exam	50%	Individual	Examination Period

### **Notes on Assessment:**

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

Both the assignment and project requirements will be made available through the subject website: [www.uow.edu.au/~aditya/CSCI928/CSCI928.html](http://www.uow.edu.au/~aditya/CSCI928/CSCI928.html)

### **Electronic Submission of Assessment Items:**

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

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

Assignments and project reports will be available from the subject coordinator after being marked.

### **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 10 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>)

This subject outline can be found at: <http://www.uow.edu.au/informatics/scsse/current>

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>