
SCSSE

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

**MCS9337 Organisation of Programming Languages
Subject Outline
Spring Session 2009**

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

GENERAL INFORMATION

Subject Coordinator

Telephone Number:

Email:

Location:

Dr Ian Piper

02 4221 3157

ian@uow.edu.au

3.103

Dr Piper's consultation times during session:

Day

Monday

Friday

Time

1:30-3:30

8:30-10:30

Subject Organisation

Session:

Credit Points

Contact hours per week:

Lecture Times & Location:

Spring Session, Wollongong Campus

6 credit points

3 hours lectures

Lecture A 15:30-17:30 Thurs, 1.G03

Lecture B 9:30-10:30 Thurs, 19-2001

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

MCS9337 develops an understanding of major programming paradigms including imperative, functional, logical, object-oriented, and procedural paradigms. Introduces formal language specification. Covers language definition and syntax; data types and data structures, control structures and data flow; run-time considerations; and interpreted languages.

Subject Objectives

On successful completion of this subject, a student should be able to:

- i) Understand and appropriately use the major programming paradigms including, imperative, object-oriented, functional and logic programming.
 - ii) Understand the role of formal analysis in the design and definition of programming languages.
 - iii) Demonstrate programming proficiency in at least one representative language from each paradigm.
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This subject outline can be found at: <http://www.uow.edu.au/informatics/scsse/current>

- iv) Understand the relationship between formal specifications for syntax and semantics and the implementation of the language.
- v) Use Knuth's literate programming paradigm to develop a fully documented program.

Graduate Qualities

This subject will continue to the following graduate qualities:

Informed
Independent Learners
Problem Solvers
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.

There will be 3 hours of lectures every week. Material will be presented in two strands. The one-hour lecture each week will be used for the presentation of an introductory sequence in language design covering such areas as syntax, semantics and the various programming paradigms. The two-hour lecture will be used to present more complex or in-depth material such as new programming languages and formal semantics.

The assignments for this subject consist of four programming tasks in which students will be expected to produce solutions for the same programming problem using four different programming paradigms and programming languages.

Lecture Schedule:

A proposed Lecture schedule for the subject is as follows:

Week	Topic
1	Introduction and Overview
2	History and future of programming languages
3	Lexical structures, Syntax, parse trees
4	Grammars, BNF
5	Semantics part 1
6	Semantics part 2
7	Semantics part 3
8	The Object Paradigm
9	Functional programming
10	Logic programming
11	Parallel programming
12	Lambda calculus
13	Review

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):

Due to the nature of this subject there is no set textbook, nor are there any specific reference books. There is a wealth of suitable books on Programming Languages available in the library.

Assessment:

This subject has the following assessment components.

ASSESSMENT ITEMS & FORMAT	% OF FINAL MARK	GROUP/INDIVIDUAL	DUE DATE
Assignment 1 – Imperative programming task and presentation.	10%	Individual	5:00pm 14/8/2009 Electronic submission
Assignment 2 – Literate programming task and presentation.	10%	Individual	5:00pm 4/9/2009 Electronic submission
Assignment 3 – Functional programming task and presentation.	10%	Individual	5:00pm 25/9/2009 Electronic submission
Assignment 4 – Logic programming task and presentation.	10%	Individual	5:00pm 23/10/2009 Electronic submission
Final Examination	60%	Individual	Official exam period

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.

Submission of assessment items via email will not be accepted.

There will be 4 assignments, each worth 10% of the final mark, and marked out of 10.

Collaboration means discussing how to solve a problem, not writing the answer together.

Plagiarism and/or copying may result in a zero mark being awarded for the assignment to all students involved.

Procedures for the return of assessment items:

Marked assignment and comments will be returned to students within two weeks of submission.

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 20% of the assessment mark per day overdue.

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:

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

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