SCSSE
School of Computer Science and Software Engineering
Faculty of Informatics

MCS9114  Procedural Programming
Subject Outline
Spring Session 2008

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

GENERAL INFORMATION

Subject Coordinator
Mr Peter Castle
Telephone Number: 4221 3837
Email: risqué@uow.edu.au
Location: 3.102

Mr Castle’s consultation times during session:
Day  Time
Monday  1:30 – 3:30
Tuesday  9:30 – 10:30
Friday  9:30 – 10:30

Lecturer
Miss Gene Awyzio
Telephone Number: 4221 4090
Email: gene@uow.edu.au
Location: 3.106

Miss Awyzio’s consultation times during session:
Day  Time
Monday  11:30 – 1:30
Tuesday  2:30 – 3:30
Friday  9:30 – 10:30

Subject Organisation
Session: Spring Session, Wollongong Campus
Credit Points: 6 credit points
Contact hours per week: 4 hours lectures, 2 hours Computer lab/tutorial
Lecture Times & Location:
Tues 11.30 AM – 1.30 PM  20.1
Fri 1.30 PM – 3.30 PM  20.3

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
MCS9114 introduces the procedural approach to program design and implementation. Covers basic language constructs for defining variables of built-in types, flow control constructs and simple I/O.
Explores functional decomposition as a design technique, and the implementation of functions. Introduces simple user-defined data types and aggregates.

**Equivalence**
MCS9114 is not to count with BUSS111 or CSCI111.

**Subject Objectives**
On successful completion of this subject, students should be able to:
1. Effectively use basic C++ functionality to code simple algorithms
2. Analyse and explain the behaviour of simple programs
3. Design, implement, test and debug simple programs
4. Apply the techniques of structured decomposition to break a program into smaller pieces
5. Display a working knowledge of good programming style

**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/.

**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 to be attendance at approximately 80%* of the allocated contact hours. Attendance rolls will be kept for lectures, tutorials and laboratories. If you are present for less than 80%* you need to apply for special consideration, otherwise a fail grade will be recorded.

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

CSCI114 and MCS9114 have a joint web site, which will be made available through the CSCI114/MCS9114 website on e-Learning (http://www.uow.edu.au/student/elearning).

This subject comprises lectures and laboratory classes. Laboratory classes will relate to the lecture topics. Laboratory classes commence in week 2. Lecture material, programming examples and Laboratory Exercises will be available from the subject’s website prior to the lectures for each topic. Students are free to print their own copies of these notes and programs for perusal before the lectures. However, as the notes will not be the same as the presentations given in lecture times and may not include all of the examples and explanations given in lectures, attendance at lectures will be required.

**Laboratory Procedures**
- Students must abide by the laboratory rules posted on the wall of the Laboratory.
- Students may use the computers outside their designated laboratory times provided the laboratory is open and no other laboratory class is scheduled. If another class is scheduled for the laboratory, you may enter no earlier than 20 minutes after the scheduled starting time and ask the supervisor whether any vacant machines may be used.
- To complete the assignment component of the subject, students need to design and implement programs in C++ (using a C++ standard compiler). There is no requirement to carry out the assignment in the laboratories. You may still work at home to develop solutions. However, submissions are via the labs, and assistance in laboratories will be for programs demonstrable in a Linux/UNIX environment.
- Copying software from another person is in breach of copyright, as is selling original disks of software whilst retaining a copy. Exchanging disks also leads to the introduction of software viruses, which may corrupt the system.
- Students are advised to purchase a flash drive. It can be used to keep current and archive copies of assignments. Loss or damage of disks is no excuse for failure to submit assignments. It is the
student’s responsibility to make sure that their assignments can be submitted on time.

• Students should do their laboratory exercises during the laboratory time (see assessment for more detail).

• Assignments can be done in the lab if the laboratory work has been completed. However, it is the student’s responsibility to work outside the laboratory time and make sure that the assignments can be submitted on time.

Lecture Schedule:

A proposed Lecture schedule for the subject is as follows:

<table>
<thead>
<tr>
<th>Topic</th>
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<tbody>
<tr>
<td>Introduction to computing concepts.</td>
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<tr>
<td>Introduction to computer programming languages.</td>
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<tr>
<td>Writing, editing, compiling and linking programs</td>
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<tr>
<td>Internal representation of data.</td>
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<td>Numbering systems</td>
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<tr>
<td>Introduction to programming in C++</td>
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<tr>
<td>Programming style</td>
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<td>Introduction to algorithms</td>
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<tr>
<td>C++ Data Types, operators and expressions</td>
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<tr>
<td>Simple input/output</td>
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<tr>
<td>Control Structures: Conditional</td>
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<tr>
<td>Control Structures: Repetition</td>
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<tr>
<td>Modular programming with functions</td>
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<tr>
<td>Variable Storage Classes</td>
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<tr>
<td>Arrays</td>
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<tr>
<td>C-Strings</td>
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<tr>
<td>Input/output formatting and files</td>
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<tr>
<td>User defined data types: typedef, structures</td>
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<tr>
<td>Recursion</td>
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</tbody>
</table>

Changes to the above schedule will be posted via the subject's website. 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):

None required.

Other Resources:

Reference Books:

• D. S. Malik

• Tony Gaddis

• Judy Scholl
  C++ Programming: From Problem Analysis to Program Design, Lab Manual, 2005

• Walter Savitch

• Gary J. Bronson

• Bjarne Stroustrup
• Forouzan and Gilberg
• Dean DeFino and Michael Bardzell

Assessment:
This subject has the following assessment components.

<table>
<thead>
<tr>
<th>ASSESSMENT ITEMS &amp; FORMAT</th>
<th>% OF FINAL MARK</th>
<th>DUE DATE</th>
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<tbody>
<tr>
<td>6 Assignments</td>
<td>36%</td>
<td>See notes below. Assignments are due in weeks 3, 5, 7, 9, 11, and 13.</td>
</tr>
<tr>
<td>Mid Term Test</td>
<td>14%</td>
<td>Week 7 on Friday, during lecture time</td>
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<tr>
<td>Final Examination</td>
<td>50%</td>
<td>Examination Period</td>
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Notes on Assessment:
All assignments are expected to be completed independently. Plagiarism may result in a FAIL grade being recorded for that assignment.

(a) There will be 6 programming assignments which will be assessed. These will contain programming problems and/or complete programs that exercise particular skills as you learn them. Your completed attempts must be submitted electronically via the UNIX/Linux submit system. **No submission via email will be accepted.**

(b) All assignments are to be completed independently. Plagiarism may result in a zero mark being recorded for that assignment.

(c) Any changes to assignment due dates will be posted on the website of the subject. It is each student’s responsibility to regularly check the subject’s website.

(d) Assignments are to be submitted electronically before the scheduled time, normally by Thursday, 11.59pm

(e) As assignments are to assess a student's understanding of course material, each assignment must be solved using only material covered up to that point in the course (unless otherwise explicitly stated in the assignment).

(f) Any assignment program submitted which does not produce the required result on the laboratory Linux system cannot be awarded more than half marks. Programs that do not compile on the laboratory Linux system due to syntax errors may receive no marks, but feedback on the student's errors will still be provided.

(g) Late assignments will be marked but the mark awarded will be reduced by 1 for each day late. Assignments will not be accepted more than three days late. Penalties may be waived if special consideration or an extension has been granted by your subject coordinator. Such an extension may be granted by the subject coordinator. The subject coordinator has the full right to deny/award the extension. Each student must apply for the extension through the SOLS system **before** the assignment due date. In many circumstances, students may be asked to produce documentation to support his/her case.

(h) Assignments will be returned electronically. Enquiries about the marks can be made to the subject coordinator, with a **maximum of 1 week after the assignment is returned.** After 1 week, **no marks can be changed.**
(i) Weekly Laboratory Exercises usually start with one exercise labeled Task 0 which should be completed before the respective lab class. Most of the other exercises are to be completed in the lab class. Any remaining weekly exercises not completed in class should be completed during the student’s own study time.

(j) There is no supplementary test available for the mid term test. The test will be conducted in Friday’s lecture time in Week 7. The venue will be arranged and published via the website. You must ensure that you attend this test to avoid losing 14% of the total marks in this subject.

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

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

As an example: If a student requires an extension of time for the completion of an assignment this may be granted in certain circumstances. A request for an extension must be made to the Subject Coordinator via SOLs before the due date.

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:

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<thead>
<tr>
<th>Code of Practice - Teaching and Assessment</th>
<th>Code of Practice - Students</th>
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<tr>
<th>Code of Practice-Honours</th>
<th>Acknowledgement Practice Plagiarism will not be tolerated:</th>
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<tr>
<th>Key Dates</th>
<th>Special Consideration Policy:</th>
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<th>Course Progress Policy:</th>
<th>Graduate Qualities Policy:</th>
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<tr>
<th>Academic Grievance Policy (Coursework and honours students)</th>
<th>Non-Discriminatory Language Practice and Presentation</th>
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<tr>
<th>Occupational Health and Safety</th>
<th>Intellectual Property Policy</th>
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<th>Human Research Ethics:</th>
<th>Rules for student conduct and discipline:</th>
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<tr>
<th>Information Literacies Introduction Program</th>
<th>Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, email: <a href="mailto:ameldrum@uow.edu.au">ameldrum@uow.edu.au</a></th>
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<th>Student Support Services:</th>
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<td><a href="http://www.uow.edu.au/student/services/Informatics">http://www.uow.edu.au/student/services/Informatics</a> 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>
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