SCSSE
School of Computer Science and Software Engineering
Faculty of Informatics

MCS9204 Object Programming and Frameworks
Subject Outline
Spring Session 2008

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

GENERAL INFORMATION

Subject Coordinator
Dr Wanqing Li
Telephone Number: 4221 5410
Email: wanqing@uow.edu.au
Location: 3.101

Dr Wanqing’s consultation times during session:
Day     Time
Thursday 3:30pm – 5:30pm
Friday  8:30am – 10:30am

Subject Organisation
Session: Spring Session, Wollongong Campus
Credit Points: 6 credit points
Contact hours per week: 3 hours lecture, 2 hours lab
Lecture Times & Location:
Thursday: 17.30 – 19.30 at 20.LT2
Friday: 12.30 – 13.30 at 20.LT4

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
MCS9204 develops a thorough understanding of the object-based approach and introduces topics including encapsulation, data hiding, inheritance, polymorphism and runtime binding. Templates are introduced as method of achieving generalisation. Container classes and the Standard Template Library are introduced as tools of generic programming. Graphical User Interface Design Concepts are discussed, including a framework as an example of OO design and implementation.

Objectives
On successful completion of this subject, students should be able to: 1. Design and use objects through encapsulation, inheritance and polymorphism. 2. Design object-oriented solution to problems. 3. Devise solutions to problems through the use of generic programming 4. Apply object oriented programming to user interface frameworks based application programs.

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.

Students MUST attend their allocated laboratory 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.

Contact hours for this subject comprise 3 hours of lectures and 2 hours of labs. Students must enroll in a 2 hour lab. Both tutorials and labs commence in week 2.

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

<table>
<thead>
<tr>
<th>Topics</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part I</strong></td>
<td>Assignment 1</td>
</tr>
<tr>
<td>Introduction to object-oriented programming</td>
<td></td>
</tr>
<tr>
<td>Encapsulation, Classes and objects.</td>
<td></td>
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<tr>
<td>Friends and Overloading Operators</td>
<td></td>
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<tr>
<td><strong>Part II</strong></td>
<td>Assignment 2 &amp; 3</td>
</tr>
<tr>
<td>Inheritance, polymorphism and virtual functions</td>
<td></td>
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<tr>
<td>Exception, Namespaces and C++ I/O</td>
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<tr>
<td><strong>Part III</strong></td>
<td></td>
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<tr>
<td>Template, Object functions.</td>
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<tr>
<td>C++ Standard Template Libraries</td>
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<tr>
<td><strong>Part IV</strong></td>
<td></td>
</tr>
<tr>
<td>Object-oriented Design</td>
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</table>

Changes to the above schedule will be posted 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 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):**

It may be purchased from the UniCentre bookshop. This text book only partially covers the topics of the subject

**Other Resources:**
References:
- Horstmann, C. and Budd, T., Big C++, John Wiley & Sons, Inc. 2005
- Stroustrup, Bjarne, The C++ Programming Language, Addison-Wesley
Many of these are available from the UniCentre Bookshop

**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>Laboratories</td>
<td>10 marks</td>
<td>During weeks 2-13</td>
</tr>
<tr>
<td>Three assignments</td>
<td>45 marks</td>
<td>40% Due in week 5, 8 &amp; 12</td>
</tr>
<tr>
<td>Final Examination</td>
<td>45 marks</td>
<td>40% As per exam schedule</td>
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<tr>
<td>Total</td>
<td>100 marks</td>
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</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.

(a) There will be 3 assignments, which will be assessed. There is no requirement to carry out this work in the laboratories. You may work at home to develop solutions. Your completed solutions must be submitted electronically via the UNIX/Linux submit system. **No submission via email will be accepted.**

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

(c) Assignments are to be submitted electronically during the scheduled week. It is the student’s responsibility to keep a backup of his/her work. There will be no extension granted due to any circumstance related to the failure of a student’s own equipment.

(d) As assignments are intended to assess students’ understanding of the subject material covered in the lectures, each assignment must be solved using only material covered up to that point in the lectures (unless otherwise stated in the question).

(e) Programs that do not compile due to syntax errors may receive **zero marks.**

(f) **Late assignments will not be accepted without a granted special consideration.** The exact time after which the submitted assignment will not be accepted by the system will be indicated in every assignment specification.

(g) Marked assignments will be returned in laboratory classes. Enquiries about the marks can only be made to the tutors during the laboratory class time, within a **maximum of 1 week after the assignment is handed back.** After 1 week, **no more marks can be changed.**

(h) Requests for extensions should be made electronically by logging on to SOLS at, http://www.uow.edu.au/student/index.html, and following the Special Consideration link. All such requests must be made prior to the due date and supporting documentation (e.g. medical certificates) should be lodged with administration. Please note that such requests are not necessarily granted. In particular, no extension will be allowed after model solutions have been released or discussed in class. The following advice, which forms part of the Special Consideration application process, should also be noted.
“Please be aware that your Subject Coordinator(s) may not be able to consider your application for special consideration immediately. If the nature of assistance sought is urgent, or you are seeking a short extension of time to submit your assessment item, please approach your Subject Coordinator directly, soon after submitting the form.”

Thus, you should not assume your application has been granted. You should discuss the situation with your subject coordinator or lecturer as soon as possible after submitting your application and prior to the due date for the assessment item.

(i) To be eligible for a Pass in this subject a student must
   a. Achieve an overall score of at least 50%, AND
   b. Achieve at least the minimum required score for each of the assessment items listed in the table of assessment items. The minimum required score for each assessment item is shown in the column labeled ‘Minimum % required’.

   See the examples below and discuss with the tutor if you have any doubts about the meaning.

   Example: total score less than total 50 marks - fail the subject.
   Example: score 24% for assignments – fail the subject.
   Example: score 46% for the final exam, but score 67 total marks - pass the subject.

   c. Students who fail to achieve the minimum marks will be given a TF (Technical Fail) for this subject.

Lab sessions

- Students must abide by the laboratory rules posted on the wall of the Laboratory (and included in this document).

- 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 prepare for laboratories students should be familiar with the lecture notes and suggested chapters of the text book or other sources. Lab sheets will be made available on WebCT before the lab sessions. The lecture notes or the textbook may be needed for reference during the labs. It is much easier having a printed copy of the lecture notes.

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 more than four (4) days late will be awarded a mark of zero.

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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<tr>
<td>Information Literacies Introduction Program <a href="http://www.uow.edu.au/student/attributes/ilip/">http://www.uow.edu.au/student/attributes/ilip/</a></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>
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