**SCSSE**  
School of Computer Science & Software Engineering  
Faculty of Informatics

**CSCI204 Object Programming and Frameworks**  
Subject Outline  
Spring Session 2007

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

### GENERAL INFORMATION

**Subject Coordinator**  
Dr Igor Kharitonenko  
Telephone Number: 02 4221 4825  
Email: igor@uow.edu.au  
Location: 3.108

Dr Kharitonenko’s Consultation Times During Session  
**Day** | **Time**  
---|---  
Tuesday | 15:30 – 17:30  
Wednesday | 11:30 - 13:30

**Lecturer**  
Dr Luke McAven  
Telephone Number: 02 4221 4879  
Email: lukemc@uow.edu.au  
Location: 3.109

Dr McAven’s Consultation Times During Session  
**Day** | **Time**  
---|---  
Tuesday | 9:30-11:30am  
Thursday | 9:30-11:30am

**Subject Organisation**  
Session: Spring Session, Wollongong  
Credit Points: 6  
Contact hours per week: 3 hours lecture; 2 hours laboratory/ 1hr tutorial  
Lecture Times & Location:  
<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td><strong>Wed</strong></td>
<td>15:30</td>
<td>17:30</td>
</tr>
<tr>
<td><strong>Fri</strong></td>
<td>12:30</td>
<td>13:30</td>
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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. Any information posted to the web site is deemed to have been notified to all students.

**Content**  
CSCI204 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.

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 tutorials and laboratories. If you are present for less than 80% you need to apply for special
consideration, otherwise a fail grade may be recorded.

Method of Presentation
Contact hours for this subject comprise 3 hours of lectures, 1 hour of tutorials and 2 hours of labs. Students must enroll
in both an 1 hour tutorial and a 2 hour lab. Both tutorials and labs commence in week 2.

Lecture Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assessment Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to object-oriented programming.</td>
<td>A1 released (6%).</td>
</tr>
<tr>
<td>2 - 4</td>
<td>Encapsulation, Classes and objects.</td>
<td>A1 due (Week 4). A2 released (12%).</td>
</tr>
<tr>
<td>4-6</td>
<td>Inheritance, polymorphism.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>C++ Input/output and Exceptions.</td>
<td>A2 due. A3 released (12%).</td>
</tr>
<tr>
<td>8</td>
<td>Template, Object functions.</td>
<td></td>
</tr>
<tr>
<td>12 - 13</td>
<td>Object-oriented Design and GUI.</td>
<td>A4 due.</td>
</tr>
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</table>

Subject Materials

Textbook:

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

References:
• Main M. and Savitch W. 2001, Data Structures and Other Objects Using C++, Addison Wesley.
• Stroustrup, Bjarne, The C++ Programming Language, Addison-Wesley

Many of these are available from the UniCentre Bookshop.

These 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.
Assessment
This subject has the following assessment components.

<table>
<thead>
<tr>
<th>Assessment Items &amp; Format</th>
<th>Percentage of Final Mark</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratories</td>
<td>10 marks</td>
<td>During weeks 2-13</td>
</tr>
<tr>
<td>Four assignments</td>
<td>40 marks</td>
<td>As scheduled</td>
</tr>
<tr>
<td>Final Examination</td>
<td>50 marks</td>
<td>Exam week</td>
</tr>
<tr>
<td>Total</td>
<td>100 marks</td>
<td></td>
</tr>
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</table>

Notes on Assessment

Scaling
Final results in this subject may be scaled. The scaling method that will be used in this subject is as follows.
If $E$ is the student exam mark out of 40, and $A$ is the student assignment mark out of 60, the student final mark will be determined as follows:

- if $E \geq 40\%$ of the maximum exam mark: then student final mark is $E + A$;
- if $30\% \leq E < 40\%$ of the maximum exam mark: then student final mark is $\min\{E+A, 47\}$;
- if $E < 30\%$ of the maximum exam mark: then student final mark is $\min\{E+A, 42\}$.

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

Assignments are to be submitted electronically using the submit program on Banshee. Receipts for submitted work are e-mailed to the student and should be kept by the student as evidence of submission. The receipt may contain compilation messages. It is the student's responsibility to ensure that any errors reported are corrected. Assignments must compile and run on Banshee using the specified instructions. Assignments which fail to compile on Banshee are likely to receive zero. Submission via email will not be accepted.

Return of Assessment Items

Marked assignments will be returned in laboratory or tutorial sessions, or marks will be emailed. Enquiries about the marks should be made within two weeks after the marks are released.

Penalties for late submission of Assessment Items

Unless special consideration has been granted, late submissions receive a penalty of 25% per day including weekends.
Unless special consideration has been granted, work 4 or more days late will not be marked

Special consideration

An extension of time for the completion of an assignment may be granted in certain circumstances. A request for an extension must be made to the Subject Coordinator via SOLs before the due date. Do not assume special consideration will be granted.
Remarks on Assessment:
There will be 4 assessed programming assignments. There is no requirement to carry out this work in the laboratories. You may work at home. It is the student’s responsibility to keep a backup of his/her work. There will usually not be extensions granted for failure of a student’s own equipment.

Students who copy an assignment may receive zero for that assignment. This also covers assignments which may be the product of community effort by several students. Working together is acceptable, but the final coding should be the work of the individual student, as assessment is a measure of your own ability. All students involved in plagiarism may have zero marks for that assessment task.

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 special consideration in order to complete all assessable work.

The University applies strict criteria to the granting of special consideration. Before applying for special consideration students should carefully read the University’s policy. The policy can be found at:

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.

Additional Information
Students must refer to the Faculty Handbook or online references which contains a range of policies on educational issues and student matters.

Tutorial and 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 tutorials and laboratories students should be familiar with the lecture notes and suggested chapters of the text book or other sources. Tutorial and lab sheets will be distributed at the beginning of the tutorial and lab sessions. The lecture notes or the textbook may be needed for reference during the tutorials and labs. It is much easier having a printed copy of the lecture notes.

Supplementary Exams
Supplementary Exams will be dealt with in accordance with Special 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.

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.
4. Plagiarism will not be tolerated.
5. 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 Calendar under University Policies, 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 or 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 judgement of the lecturer and can only review the grievance to ensure proper procedure has been followed.

For more information, please consult the UOW policy in full at http://www.uow.edu.au/handbook/courserules/studacgrievpol.html

This outline should be read in conjunction with the following documents:

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<th>Code of Practice - Teaching and Assessment</th>
<th>Key Dates</th>
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<tr>
<th>Code of Practice - Students</th>
<th>Information Literacies Introduction Program</th>
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<tr>
<th>Acknowledgement Practice</th>
<th>Student Support Services:</th>
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<tr>
<td>Plagiarism will not be tolerated</td>
<td><a href="http://www.uow.edu.au/student/services/">http://www.uow.edu.au/student/services/</a></td>
</tr>
<tr>
<td><a href="http://www.uow.edu.au/handbook/courserules/plagiarism.html">http://www.uow.edu.au/handbook/courserules/plagiarism.html</a></td>
<td>Informatics 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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<tr>
<th>Code of Practice-Honours</th>
<th>Intellectual Property Policy</th>
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<tr>
<th>Non-Discriminatory Language Practice and Presentation</th>
<th>SCSSE SISAT Internet Access &amp; Student Resource Centre</th>
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<th>SCSSE SISAT Computer Usage Rules</th>
<th>SCSSE SISAT Subject Outlines</th>
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SCSSE SISAT Style Guide for Footnotes, Documentation, Essay and Report Writing