SCSSE
School of Computer Science and Software Engineering
Faculty of Informatics

CSCI927  Service-Oriented Software Engineering
Subject Outline
Spring Session 2008

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

GENERAL INFORMATION

Subject Coordinator: Dr Aditya Ghose
Telephone Number: 4221 4051
Email: aditya@uow.edu.au
Location: 3.105

Dr Ghose’s consultation times during session:
Day        Time
Monday     11:30 – 1:30
Wednesday  8:30 – 10:30

Subject Organisation
Session: Spring Session, Wollongong Campus
Credit Points: 6 credit points
Contact hours per week: 1 hour lectures, 2 hours Laboratory/Tutorial
Lecture Times & Location: Monday: 9.30 – 10.30 at 15.206
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
This subject aims to provide students with a thorough understanding of the software engineering aspects of the increasingly important service-oriented computing paradigm. Topics covered include service-oriented architectures, service modeling and requirements analysis, service semantics, service discovery, service design, service composition, service inter-operation, QoS factors, service-level agreement management, business process modeling and management, lifecycle management, compliance management, distributed transaction management, privacy and trust. The subject will involve industry guest lectures and a practical development project.

Objectives
On successful completion of this subject, students should be able to: 1. Build service-oriented systems and describe their architecture. 2. Identify appropriate software engineering methodologies and tools that apply specifically to service-oriented systems and exploit them. 3. Apply a range of techniques and tools for the management and maintenance of service-oriented systems 4. Discuss the R&D challenges and open questions in the area.
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.

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:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
</tr>
<tr>
<td>2</td>
<td>Service-Oriented Computing: Preliminaries</td>
</tr>
<tr>
<td>3</td>
<td>Service Modeling and Requirements Analysis</td>
</tr>
<tr>
<td>4</td>
<td>Service Design, Composition, Inter-operation</td>
</tr>
<tr>
<td>5</td>
<td>QoS Factors and Service-Level Agreement Management</td>
</tr>
<tr>
<td>6</td>
<td>Business Process Modeling and Management</td>
</tr>
<tr>
<td>7</td>
<td>Enterprise Service Architectures</td>
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<tr>
<td>8</td>
<td>Change Management</td>
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<tr>
<td>9</td>
<td>Service/Process Lifecycle Management</td>
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<tr>
<td>10</td>
<td>Compliance Management</td>
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<tr>
<td>11</td>
<td>Distributed Transaction Management</td>
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<tr>
<td>12</td>
<td>Case studies</td>
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<tr>
<td>13</td>
<td>Wrap-up/Review</td>
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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):
Recommended text:
Service-Oriented Computing: Semantics, Processes, Agents
Munindar P. Singh and Michael N. Huhns
John Wiley & Sons, Ltd., 2005

Other Resources:
A number of additional readings will be made available through the subject webpage:
www.uow.edu.au/~aditya/csci927/csci927.html

Assessment:
This subject has the following assessment components.
<table>
<thead>
<tr>
<th>ASSESSMENT ITEMS &amp; FORMAT</th>
<th>% OF FINAL MARK</th>
<th>GROUP/INDIVIDUAL</th>
<th>DUE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 (Report, involving modeling and analysis)</td>
<td>15%</td>
<td>Individual</td>
<td>Due Week 6, in hardcopy, to be submitted in class</td>
</tr>
<tr>
<td>Assignment 2 (Report, involving modeling and analysis)</td>
<td>15%</td>
<td>Individual</td>
<td>Due Week 9, in hardcopy, to be submitted in class</td>
</tr>
<tr>
<td>Minor project</td>
<td>30%</td>
<td>Individual – but group projects may be permitted</td>
<td>Due Week 11, in hardcopy, to be submitted in class</td>
</tr>
<tr>
<td>Major project</td>
<td>40%</td>
<td>Individual</td>
<td>Due Week 13, in hardcopy, to be submitted in class</td>
</tr>
</tbody>
</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.

**Other Procedures for the submission of assessment items:**
In addition to electronic submission students are required to submit assignments in hard copy to their tutor.
All assignments will be returned within 2 weeks of their submission.

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

**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 subject outline can be found at: http://www.uow.edu.au/informatics/common/UOW030689.html

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

| Information Literacies Introduction Program http://www.uow.edu.au/student/attributes/ilip/ | Informatics Faculty Librarian, Ms Annette Meldrum, phone: 4221 4637, email: ameldrum@uow.edu.au |