SISAT
School of Information Systems & Technology
Faculty of Informatics

ITCS951 Web Services for Dynamic eBusiness
Subject Outline
Spring Session 2007

Head of School –Associate Professor Peter Hyland, Student Resource Centre, Tel: (02) 4221 3606

GENERAL INFORMATION

Subject Coordinator: Dr Jun Shen
Telephone Number: 4221 3873
Email: jshen@uow.edu.au
Location: 39.211

Dr. Jun Shen’s consultation times during session:

<table>
<thead>
<tr>
<th>Time</th>
<th>Tuesday</th>
<th>10:30 AM -12:30 PM</th>
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</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>11.30 AM – 1.30 PM</td>
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</tbody>
</table>

Subject Organisation

Session: Spring Session, Wollongong Campus
Credit Points: 6 credit points
Contact hours per week: 1 hours lecture, 2 hours lab/ tutorial
Lecture Times & Location: Tuesday 12.30 – 1.30 PM & 38.G01
Tutorial Day, Time and Location can be found at: http://www.uow.edu.au/student/sols/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.

Content

Web Services are at the core of what is being termed the next generation of eBusiness. The term 'Web Services' refers to the set of standard protocols and associated technologies that enable software applications to communicate with each other across the Internet. To effectively exploit the potential of Web Services requires appropriate effort in the proper design of business processes and service architectures.

Objectives

On successful completion of this subject, students should be able to: 1. Describe and discuss the perceived expectations and anticipated impact of Web Services on the next generation of eBusiness;2. describe each of the basic standard components from which Web Services are constructed, i.e., XML, SOAP, UDDI, WSDL, and describe how these components combine to enable the publishing and exploitation of Web Services;3. build simple examples of distributed applications constructed using Web Services;4. Exploit a high-level Web Services Development Toolkit to implement and deploy Web Services.

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

The subject is delivered in full time mode only (not part-time) and uses lectures, tutorials and lab sessions. The subject is not available in distance education mode. Satisfactory attendance at lectures, tutorials and labs is an essential requirement for the successful completion of this subject. Failure to comply may result in a fail grade being recorded. Satisfactory attendance is deemed to be attendance at approximately 80% of the allocated contact hours. There will be no tutorials or lab sessions in week 1.
Method of Presentation
This is a 6 credit point single-session subject offered in the spring session. From week 2 to week 11, the lab sessions will be exploited to expand or reflect knowledge within or beyond lecture contents. Tutors will assist students to go through lab tasks within the guideline frameworks which are posted on e-Learning. Students will be required to participate in labs to perform tasks specified in the lab materials. Labs are also platforms for team members to meet regularly when working together towards the assignment. Attendance of labs will be recorded. Lab contents will become core parts of assignments.

The System Lab (room 3.230) has been installed with .Net Visual Studio while the Mega Lab (room 3.127) is installed with IBM’s WebSphere ADIE (a J2EE development platform). Note most of the Web services theoretical investigation remains platform neutral and the practical lab sessions have time to focus only on one platform. In this subject, the chosen platform, which will be accompanied with learning materials for the supervised practical lab work, is the .Net. The interested students may choose to learn the J2EE on their own (for example through samples downloadable from Informatics server through \Visor\infopub\Windows\Apps\websphere\ds-resources). Both labs are flexibly accessible with authorised accounts.

Lecture Schedule
A proposed Lecture schedule for the subject is as follows (subject to variations):

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Topics</th>
<th>Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Web services</td>
<td>n/a</td>
</tr>
<tr>
<td>2</td>
<td>(Week 1 cont’d) XML for Web services</td>
<td>Introduction to VS.Net environment</td>
</tr>
<tr>
<td>3</td>
<td>Dynamic e-Business and Web services</td>
<td>ADO.Net</td>
</tr>
<tr>
<td>4</td>
<td>Service-Oriented Architecture (SOA)</td>
<td>XML data</td>
</tr>
<tr>
<td>5</td>
<td>SOAP</td>
<td>Basic Web services</td>
</tr>
<tr>
<td>6</td>
<td>WSDL</td>
<td>SOAP</td>
</tr>
<tr>
<td>7</td>
<td>UDDI</td>
<td>Advanced Web services (1)</td>
</tr>
<tr>
<td>8</td>
<td>WS-BPEL</td>
<td>WSDL</td>
</tr>
<tr>
<td>9</td>
<td>Web service lifecycle and enterprise platforms</td>
<td>Advanced Web services (2)</td>
</tr>
<tr>
<td>10</td>
<td>WS-Coordination, WS-Transaction</td>
<td>Deployment of pseudo Web services</td>
</tr>
<tr>
<td>11</td>
<td>WS-Interoperability</td>
<td>Wrap up, project presentations</td>
</tr>
<tr>
<td>12</td>
<td>Advanced topics and future trends (extensions, Grid etc.)</td>
<td>Project presentations</td>
</tr>
<tr>
<td>13</td>
<td>Subject review</td>
<td>Project presentations</td>
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</table>

Subject Materials
There is no set text book for this subject. A considerable collection of legitimately free and up-to-date resources is available on the Web and a considerable collection of highly relevant resources (most of which are equivalent to text books) has been compiled in the lab. But students need to be careful when selecting relevant materials from different sources as Web services technologies are developing very quickly. For those inclined to explore textbooks, please note: in industry, the two main platforms on which Web services are being built are J2EE platforms from Sun, IBM, (and many other vendors) and .NET platforms from Microsoft; in public domain, there are also many open source software.

The following books are carefully selected by the subject coordinator from large amount of available texts as highly recommended, but they are not mandatory. If you feel necessary to investigate further on specific perspectives in this subject, you can purchase some of them from UniShop (in case some are out of stock, you may enquire UniShop staff).


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>Minimum % required to pass</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Lab Sessions</td>
<td>15%</td>
<td>60%</td>
<td>Weekly (week 2-week 11), attend labs and perform task satisfactorily</td>
</tr>
<tr>
<td>Team Assignment Report</td>
<td>25%</td>
<td>40%</td>
<td>Teamwork, submit digital copy onto e-Learning space by Oct 12th (Friday of week 11) submit hardcopy in week 12 classes/labs</td>
</tr>
<tr>
<td>Assignment Presentation</td>
<td>10%</td>
<td>20%</td>
<td>Weeks 11-13, present individually in a team context</td>
</tr>
<tr>
<td>Final Examination</td>
<td>50%</td>
<td>40%</td>
<td>Examination period per ARD schedule</td>
</tr>
</tbody>
</table>

Notes on Assessment
To pass the subject you must achieve at least the minimum required score for each of the assessment items listed in the Assessment Items table. The minimum required score for each assessment item is shown in the column labeled ‘Minimum % required’. Note that in some cases the minimum % required is lower than the 50% pass mark. Some tasks (25% of final marks including some assignment tasks, i.e., presentations) are expected to be performed individually and some (another 25% of final marks) are expected to be performed in teams. All teams are formed with the agreement of the tutor in week 2 and the tutor reserves the right to change team membership at any time. Each team generally has 4 or 5 members. Team allocations and submissions will be managed and undertaken with the cooperation between tutors and students through e-Learning space.

The criteria specification for the major piece of submitted work, Team Assignment Report, will be issued on e-Learning space in week 2. The completed assignment should be submitted in week 11. Note the weekly lab contents may contribute to the report. All students are required to attend lab sessions where a record of attendance will be kept. Tutors will also examine whether the attendee can perform the lab tasks satisfactorily on site.

The Team Assignment Report needs to be submitted BOTH as a printed version and in digital form. The printed hardcopy must include a completed School Cover Sheet. Members of each team should reach agreement on contribution balances among them and indicate this issue clearly with signature in their hardcopy submission. Students must also retain a copy of their work in case assignments go missing. Students must also retain their own copies of all materials that are posted to the e-Learning space and may be required to repost those materials at any time during the subject. Marked assignments may be collected from the subject coordinator during consultation hours after week 13.

Penalties apply to all late work, except if special consideration has been granted. Late submissions will attract a penalty of 10% of the assessment mark per day including weekends. Work more than 7 days late will be awarded a mark of zero. Requests for extensions should be lodged as a special consideration request (on-line via SOLS) with administration prior to the due date. Documentation (e.g., medical certificates) to support special consideration requests should be lodged to administration as well. In case occasional e-Learning space system failure when submitting materials, please notify tutor/lecturer immediately through email to avoid penalties for late submissions.

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: 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.

Scaling
Final results in this subject may be scaled. The scaling method that may be used in this subject is as follows.

If E is the student exam mark, and A is the student assignment mark, the student final mark will be determined as follows:

if E >= 40% of the maximum exam mark: then student final mark is E + A;
E < 40% of the maximum exam mark: then student final mark is min{E+A, 47}
Additional Information

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

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 of 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, 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 subject outline can be found at [http://www.itacs.uow.edu.au/current/subject_outlines](http://www.itacs.uow.edu.au/current/subject_outlines)

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

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