FIT5192 Internet applications and web services - Semester 2, 2013

This unit focuses on the design and development of Internet applications with a focus on web services technology. The unit presents an overview of multi-tier web applications and technologies that operate in different layers of typical web architectures. In particular, the unit will introduce the emergence of web services from middleware and Enterprise Architecture Integration (EAI), the fundamental concepts of Service Oriented Architectures (SOA), web services and the key standards that underpin web services: SOAP, WSDL and UDDI. Various service discovery protocols will be evaluated and compared. This unit also teaches a range of web application development technologies focusing on state-of-the-art object oriented scripting languages for mobile and conventional web applications. The unit will provide students with skills to enable web page functionality through scripting, to program and deploy web services as well as to access and consume/use web services. It is assumed that all students have a strong knowledge of object-oriented programming.

Contact Hours

10 hrs lectures/wk, 10 hrs laboratories/wk for 5 weeks

Workload requirements

Student workload commitments are:

- 10-hour lectures and
- 10-hour tutorials per week (requiring advance preparation)
- up to 30 hours per week personal study in order to satisfy the preparation, reading and assignment expectations

Unit Relationships

Prerequisites

It is assumed that all students have a strong knowledge of object-oriented programming, e.g. Java, C# or C++.

Chief Examiner

Dr Jue Xie

Campus Lecturer
Academic Overview

Learning Outcomes

At the completion of this unit students will have -

- an understanding of web environments and their components;
- an understanding of the principles of object oriented scripting and the knowledge of the various uses to which scripting may be put;
- the knowledge and skills to implement web applications, in an applications development environment;
- an understanding of the principles of large scale, and small scale, web site development including an understanding of advanced design principles;
- an understanding of the uses of mark-up languages and meta-languages in structuring data, particularly in a web context;
- the knowledge and skills to implement web sites varying size and complexity, using XHTML and XML;
- a professional attitude towards the development of web based information systems.
# Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Introduction</td>
<td>No formal assessment or activities are undertaken in week 0</td>
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<tr>
<td>1</td>
<td>Sessions 1-5 for SOA Introduction, XML Refresher, Web Services Standards</td>
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<tr>
<td>2</td>
<td>Sessions 6-10 for Web Services Composition, Reliable Messaging, Security, Metrics and Service Level Agreements</td>
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<tr>
<td>3</td>
<td>Sessions 11-15 for Web Services Advanced Topics, Introduction to C# and ASP.NET</td>
<td>Assignment 1 due on Monday 12 August 2013 at 11:55PM</td>
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<td>4</td>
<td>Sessions 16-20 for ASP.NET Server Controls and Data Source Controls</td>
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<tr>
<td>5</td>
<td>Sessions 21-24 for Web Site Creation Using ASP.NET MVC, Revision and Discussion</td>
<td>Assignment 2 due on Wednesday 28 August 2013 at 11:55PM; Examination on Friday 30 August 2013</td>
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<td>6</td>
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<td>12</td>
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</table>

Examination period


*Unit Schedule details will be maintained and communicated to you via your learning system.*

# Assessment Summary

Examination (3 hours): 50%; In-semester assessment: 50%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 - Create and Consume Web Services Using Java</td>
<td>25%</td>
<td>Monday 12 August 2013 at 11:55PM</td>
</tr>
<tr>
<td>Assignment 2 - Web Application Development Using ASP.NET</td>
<td>25%</td>
<td>Wednesday 28 August 2013 at 11:55PM</td>
</tr>
<tr>
<td>Examination 1</td>
<td>50%</td>
<td>To be advised</td>
</tr>
</tbody>
</table>
Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.
Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at
http://lib.monash.edu/tutorials/citing/

Assessment Tasks

Participation

• Assessment task 1

  Title: Assignment 1 - Create and Consume Web Services Using Java

  Description: This task will assess students' practical and programming skills in web services
development, deployment and invocation.

  Weighting: 25%

  Criteria for assessment:

  1. The level of accomplishment in each task.
  2. The degree the programs meet the specified requirements.
  3. How well the code is written and maintained.

  Due date: Monday 12 August 2013 at 11:55PM

• Assessment task 2

  Title: Assignment 2 - Web Application Development Using ASP.NET

  Description: This is a group assignment of maximum two students for each group, to develop and
deploy a web site for a fictitious company, which allows user registration, login and
searching, using both the traditional ASP.NET event driven model and the ASP.NET MVC
model. Students have options to do this assignment as an individual work, or as a group
work with another student. Each member of a group work should demonstrate 50%
contribution in application design, development and documentation construction, and will
be marked accordingly.

  Weighting: 25%

  Criteria for assessment:

  1. The level of accomplishment in each task.
  2. The degree the programs meet the specified requirements.
  3. How well the code is written and maintained.

  Due date: Wednesday 28 August 2013 at 11:55PM
Examinations

- Examination 1

  Weighting: 50%
  Length: 3 hours
  Type (open/closed book): Closed book
  Electronic devices allowed in the exam: None

Learning resources

Reading list


Monash Library Unit Reading List
http://readinglists.lib.monash.edu/index.html

Feedback to you

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Interviews

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: http://www.monash.edu.au/exams/special-consideration.html

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.
Assignment submission

It is a University requirement (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html) for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at http://www.infotech.monash.edu.au/resources/student/forms/. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an online quiz).

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.

Required Resources

Please check with your lecturer before purchasing any Required Resources. Limited copies of prescribed texts are available for you to borrow in the library, and prescribed software is available in student labs.

- NetBeans IDE (freeware downloadable from netbeans.org)
- Glassfish Server Open Source Edition (downloadable from glassfish.java.net)
- MySQL (freeware downloadable from www.mysql.com)
- Microsoft Visual Studio 2012
Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University’s academic standards, and to provide advice on how they might uphold them. You can find Monash’s Education Policies at: www.policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Plagiarism;  
  http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html
- Assessment in Coursework Programs;  
- Special Consideration;  
  http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html
- Grading Scale;  
  http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html
- Discipline: Student Policy;  
  http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html
- Academic Calendar and Semesters;  http://www.monash.edu.au/students/dates/
- Orientation and Transition;  http://intranet.monash.edu.au/infotech/resources/students/orientation/
- Academic and Administrative Complaints and Grievances Policy;  
  http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.html
- Code of Practice for Teaching and Learning;  
- Graduate Attributes Policy
  http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.html

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at http://www.monash.edu.au/students. For Sunway see http://www.monash.edu.my/Student-services, and for South Africa see http://www.monash.ac.za/current/.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in my.monash portal for more information. At Sunway, visit the Library and Learning Commons at http://www.lib.monash.edu.my/. At South Africa visit http://www.lib.monash.ac.za/.
Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

Website: http://www.monash.edu/equity-diversity/disability/index.html
Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Community Services at 03 55146018 at Sunway
Email: dlu@monash.edu
Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University’s student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash’s educational strategy, see:

www.monash.edu.au/about/monash-directions and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

Previous feedback has highlighted the value of using the ASP.NET MVC model for web application development, which was designed as a bonus component of Assignment 2. In this offer, developing an alternative web site using ASP.NET MVC will be a compulsory component of Assignment 2. However, concerned about the limited time available to students, this will be a group assignment formed by maximum two students for each group.

If you wish to view how previous students rated this unit, please go to