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**FIT5030 Web services and service oriented computing - Semester 1, 2013**

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FIT5030 Web services and service oriented computing - Semester 1, 2013

This unit focuses on the Service Oriented Computing paradigm and web services technology. Students will be exposed to the motivations that led to the emergence of web services from middleware and Enterprise Architecture Integration (EAI). The unit will introduce the fundamental concepts of Service Oriented Architectures (SOA), web services and the key standards that underpin web services: SOAP, WSDL and UDDI. The unit will evaluate and compare various service discovery protocols. The unit will provide students with skills to program and deploy web services as well as to access and consume/use web services.

Mode of Delivery

Caulfield (Evening)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload requirements

Students will be expected to spend a total of 12 hours per week during semester on this unit as follows:

- 2-hour lecture
- 2-hour tutorial
- 8 hours study/working on assignments/completing tutorial exercises on your own.

Unit Relationships

Prohibitions

CPE5009

Prerequisites

Recommended knowledge: Students undertaking this unit are expected to have a sound understanding of the concepts of an object oriented concepts and programming languages. A sound knowledge of Java is preferred.

Chief Examiner

Dr Pari Delir Haghighi
Campus Lecturer

Caulfield

Pari Delir Haghighi
Academic Overview

Learning Outcomes

At the completion of this unit students will:

- have knowledge of the Service Oriented Computing paradigm, its evolution and the emergence of web services;
- understand the Service Oriented Architectures and the various key standards that enable the realisation of web services such as SOAP, WSDL and UDDI;
- compare and evaluate various Service Discovery Protocols;
- have the skills to build and deploy web services using a range of current technologies;
- be able to access, invoke and use publicly available web services in application development (e.g. Google Web Service);
- have an understanding on emerging issues, trends and topics in web services research.
## Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>No formal assessment or activities are undertaken in week 0</td>
</tr>
<tr>
<td>1</td>
<td>Introduction to Service Oriented Computing and Service Oriented Architectures (SOA)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>XML Refresher</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Web Services Standards - SOAP</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Web Services - REST</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Web Services Standards - WSDL</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Web Services Standards - UDDI</td>
<td>Assignment Phase 1 due</td>
</tr>
<tr>
<td>7</td>
<td>Web Services Composition and WS-BPEL</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Web Services Reliable Messaging</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Web Services Security</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Web Service Metrics and Service Level Agreements</td>
<td>Assignment Phase 2 due</td>
</tr>
<tr>
<td>11</td>
<td>Advanced Topics and Future Trends</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Revision and Discussion</td>
<td></td>
</tr>
<tr>
<td>SWOT VAC</td>
<td></td>
<td>No formal assessment is undertaken in SWOT VAC</td>
</tr>
</tbody>
</table>

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

## Assessment Summary

Exam (2 hours): 40%; Practical Assignments: 60%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Services Practical Assignment</td>
<td>60%</td>
<td>Week 6 (Phase 1), Week 10 (Phase 2)</td>
</tr>
<tr>
<td>Examination 1</td>
<td>40%</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: Web Services Practical Assignment
  Description: This task will assess students' practical and programming skills in web services
devolution, deployment and invocation.
  Weighting: 60%
  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: Week 6 (Phase 1), Week 10 (Phase 2)

Examinations

• Examination 1

  Weighting: 40%
  Length: 2 hours
  Type (open/closed book): Closed book
  Electronic devices allowed in the exam: None

Learning resources
Assessment Requirements

Reading list


2. SOA Using Java Web Services by Mark D. Hansen

3. Any other papers/resources provided in the lectures.

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
- Test results and feedback

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:

Returning assignments

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

Resubmission of assignments

There will be no resubmission of assignments

Referencing requirements

Students must reference material used from other sources.

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
Assessment Requirements

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
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
- 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/
- 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

In general students have rated this unit highly.

Based on previous evaluations:

All the lecture notes and tutorial materials will include both the elementary and fundamental concepts as well as the most current technologies and trends in web services.

Since different versions of the development environment support different features, all the exercises and assignment tasks will be designed such that all the required tasks are supported by the same version of the development environment.

If you wish to view how previous students rated this unit, please go to https://emuapps.monash.edu.au/unitevaluations/index.jsp