FIT5042 Enterprise application development for the web - Semester 2, 2015

This unit provides students with an understanding of the design and development of systems that support the large enterprise in a web-based environment. Students will learn of the theoretical issues that need to be considered by the enterprise and how they can affect the development of the enterprise application. A number of techniques will be introduced as the technological means to build such an application with specific emphasis on the Java EE technology.

Mode of Delivery

- Caulfield (Day)
- Caulfield (Online)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

(a.) Contact hours for on-campus students:

- Two hours of lectures
- One 2-hour laboratory

(b.) Additional requirements (all students):

- A minimum of 8 hours independent study per week for completing lab and project work, private study and revision.

See also Unit timetable information

Unit Relationships

Prohibitions

CSE5060

Prerequisites

Recommended knowledge: Students undertaking this subject are expected to have a sound understanding of the concepts of the object oriented programming language, Java.

Chief Examiner

Professor Chris Messom
Campus Lecturer

Caulfield

Chris Messom

Consultation hours: Wed 11am-1pm

Tutors

Caulfield

Ashwin Krishnakumar

Consultation hours: TBA

Sunil Panda

Consultation hours: TBA

ABM Russel

Consultation hours: TBA

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 response to the last SETU of this unit, the following changes have been made:

- Additional feedback opportunities through interactive lecture based quizzes and weekly formal feedback and final assessment of Studio exercises (in week 12) have been added

Student feedback has highlighted the following strength(s) in this unit:

- The learning material enabled the student to achieve the unit's learning objectives
If you wish to view how previous students rated this unit, please go to https://emuapps.monash.edu.au/unitevaluations/index.jsp
Academic Overview

Learning Outcomes

At the completion of this unit students will:

- understand various issues pertaining to enterprise software architecture on the web;
- acquire techniques to develop enterprise applications using the Java programming language;
- discover various advanced Java technologies used to build web applications for the enterprise;
- learn to competently use the advanced Java libraries to build a medium-size web application for the enterprise.
Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No formal assessment or activities are undertaken in week 0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Unit Overview and Enterprise Architecture Concepts</td>
<td>Note: Tutorial classes commence in Week 1</td>
</tr>
<tr>
<td>2</td>
<td>Java EE Application Architecture</td>
<td>Week 1 exercise due monday 1pm</td>
</tr>
<tr>
<td>3</td>
<td>Graphical User Interface</td>
<td>Week 2 exercise due monday 1pm</td>
</tr>
<tr>
<td>4</td>
<td>Introduction to Java Persistence</td>
<td>Week 3 exercise due monday 1pm</td>
</tr>
<tr>
<td>5</td>
<td>Introduction to JavaServer Faces</td>
<td>Week 4 exercise due monday 1pm</td>
</tr>
<tr>
<td>6</td>
<td>Developing Web Interfaces with JavaServer Faces</td>
<td>Week 5 exercise due monday 1pm</td>
</tr>
<tr>
<td>7</td>
<td>Advanced Applications of Java Persistence</td>
<td>Week 6 exercise due monday 1pm</td>
</tr>
<tr>
<td>8</td>
<td>Introduction to Enterprise JavaBeans</td>
<td>Week 7 exercise due monday 1pm</td>
</tr>
<tr>
<td>9</td>
<td>Advanced Applications of Enterprise JavaBeans</td>
<td>Week 8 exercise due monday 1pm</td>
</tr>
<tr>
<td>10</td>
<td>Working with Web Services</td>
<td>Week 9 exercise due monday 1pm</td>
</tr>
<tr>
<td>11</td>
<td>Securing Enterprise Web Applications</td>
<td>Week 10 exercise due monday 1pm</td>
</tr>
<tr>
<td>12</td>
<td>Unit Revision</td>
<td>Final grading of weekly exercises due by 1pm monday week 12. Practical assignment due 2pm Friday week 12</td>
</tr>
<tr>
<td></td>
<td>SWOT VAC</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.

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach helps students to initially encounter information at lectures, discuss and explore the information during tutorials, and practice in a hands-on lab environment.

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>Tutorial Exercises</td>
<td>20%</td>
<td>Each weekly exercise will be due by 1pm monday ready for feedback in the following week's tutorial.</td>
</tr>
<tr>
<td>Practical Assignment - Enterprise Web Application</td>
<td>30%</td>
<td>Week 12, Friday 2pm</td>
</tr>
</tbody>
</table>
Unit Schedule

| Examination 1 | 50% | To be advised |
Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles (http://intranet.monash.edu.au/infotech/resources/staff/edgov/policies/assessment-examinations/assessment-hurdles.html)

Academic Integrity - Please see resources and tutorials at http://www.monash.edu/library/skills/resources/tutorials/academic-integrity/

Assessment Tasks

Participation

• Assessment task 1

  Title:  
  Tutorial Exercises

  Description:  
  Weekly programming tasks designed around that week's lecture material.

  Weighting:  
  20%

  Criteria for assessment:

  ♦ The exercises are individual assessments and are to be entirely your own work.
  ♦ The exercises will be marked against criteria of correctness and clarity.
  ♦ Each exercise will be submitted for feedback by monday the following week. Submissions for final grading will be be due end of week 12.
  ♦ Further detailed criteria will be available with the exercise specifications.

  Due date:
  Each weekly exercise will be due by 1pm monday ready for feedback in the following week's tutorial.

• Assessment task 2

  Title:  
  Practical Assignment - Enterprise Web Application

  Description:  
  This assignment will require students to design and implement a custom web application using Java enterprise technologies.

  Weighting:  
  30%

  Criteria for assessment:

  ♦ This is an individual assignment and is to be entirely your own work.
  ♦ The assignment will be marked against criteria of correctness and clarity.
  ♦ A distinction level submission should meet the requirements of a pass and credit submission and also be submitted with a high quality design document.
  ♦ A high distinction submission should meet the requirements of a distinction level submission and also be submitted with a high quality research report.
  ♦ Further detailed assessment criteria will be available with the assignment specification.
Assessment Requirements

Due date:
Week 12, Friday 2pm
Remarks:
Interviews for Distinction level design reports and high distinction level research reports will be held in week 12.

Examinations

• Examination 1

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

Learning resources

Monash Library Unit Reading List (if applicable to the unit)
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
• Solutions to tutes, labs and assignments

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.
Assessment Requirements

Assignment submission

It is a University requirement 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 electronic submission). Please note that it is your responsibility to retain copies of your assessments.

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.

You will need access to:

- Java SE 7/8
- NetBeans IDE with Java EE 7 support and Glassfish/WildFly application server

This software is freely available online to download and also be available in University computer labs. Appropriate download resources will be made accessible via Moodle.

Recommended Resources

The Java EE 7 Tutorial:

This is the official Java EE 7 Tutorial from Oracle. We will use this as a reference and use example code from the tutorial to demonstrate core concepts in the Java EE platform.

The tutorial is accessible at https://docs.oracle.com/javaee/7/tutorial/index.html

Additional subject costs

If the (ON-CAMPUS) student does not own a Turning Point lecture quiz clicker then they are advised to purchase one. These are available for sale in the Caulfield campus bookshop.
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:

Faculty resources and policies

Important student resources including Faculty policies are located at
http://intranet.monash.edu.au/infotech/resources/students/

Graduate Attributes Policy

http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.html

Student Charter


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 Malaysia 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 Malaysia, 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 Malaysia
- 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, Malaysia Campus
Other

Various web resources will be made available on Moodle.