



MONASH University

**FIT5042**  
**Enterprise application development for the web**

**Unit Guide**

**Semester 2, 2009**

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

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# **FIT5042 Enterprise application development for the web - Semester 2, 2009**

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## Introduction

Welcome to FIT5042 Enterprise application development for the web for semester 2, 2009. The unit has been designed to provide you with an understanding of developing web application for the enterprise using the Java programming language.

## Unit synopsis

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.

## Learning outcomes

On completion of this unit students will:

1. Understand various issues pertaining to enterprise software architecture on the web.
2. Acquire techniques to develop enterprise applications using the Java programming language
3. Discover various advanced Java technologies used to build web applications for the enterprise.
4. Learn to competently use the advanced Java libraries to build a medium-size web application for the enterprise.

## Contact hours

4 hrs/week

## Workload

- two-hour lecture and
- two-hour tutorial (or laboratory)
- a minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.
- You will need to allocate up to 5 hours per week in some weeks, for use of a computer, including time for newsgroups/discussion groups.

## Unit relationships

### Prerequisites

For MAIT students, [FIT9017](#), [FIT9018](#), [FIT9019](#), [FIT9030](#), [FIT9020](#), [FIT4037](#) and [FIT4041](#).

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

## **Prohibitions**

CSE5060

## **Relationships**

- FIT5042 is a core unit in the Internet and web application development specialisation of Master of Information Technology.
- For MAIT students, you must have satisfactorily completed FIT9017, FIT9018, FIT9019, FIT9030, FIT9020, FIT4037 and FIT4041, or equivalent, before attempting this unit.
- Students undertaking this subject are expected to have a sound understanding of the concepts of the object oriented programming language, Java.
- You may not study this unit and CSE5060 in your degree.

## Teaching and learning method

### Timetable information

For information on timetabling for on-campus classes please refer to MUTTS, <http://mutts.monash.edu.au/MUTTS/>

### Tutorial allocation

On-campus students should register for tutorials/laboratories using the Allocate+ system:

<http://allocate.cc.monash.edu.au/>

### Unit Schedule

| Week               | Topic  | Key dates                                      |
|--------------------|--|--|
| 1                  | Unit Introduction / OO Revision  |  |
| 2                  | Introduction to Database Systems & Persistence I: JDBC                             |  |
| 3                  | Introduction to Enterprise Computing and Core Spring & Persistence II: Spring JDBC | Week 2 Tutorial Exercise due                   |
| 4                  | Persistence III: Hibernate   | Week 3 Tutorial Exercise due                   |
| 5                  | Persistence IV: JPA with Hibernate   | Week 4 Tutorial Exercise due                   |
| 6                  | Session Bean   | Week 5 Tutorial Exercise due                   |
| 7                  | Web Tier I   | Week 6 Tutorial Exercise due                   |
| 8                  | Web Tier II  | Week 7 Tutorial Exercise due                   |
| 9                  | JMS  | Week 8 Tutorial Exercise due                   |
| 10                 | Agile Development / Security   | Research Paper due at 5pm (Fri) 25th Sep       |
| Mid semester break |  |  |
| 11                 | Guest Speaker  |  |
| 12                 | Presentation on Research Papers I  | Practical Assignment due at 5pm (Fri) 16th Oct |
| 13                 | Presentation on Research Papers II   |  |

## Unit Resources

### Prescribed text(s) and readings

none

### Recommended text(s) and readings

- R. Johnson, J. Hoeller, A. Arendsen, T. Risberg and C. Sampaleanu. Professional Java Development with the Spring Framework. Wiley Publishing Inc., 2005, ISBN: 0-7645-7483-3.
- C. Walls and R. Breidenbach. Spring in Action 2nd Edition. Manning Publications Co., 2008. ISBN: 1-933988-13-4.
- D. Panda, R. Rahman and D. Lane. EJB3 in Action. Manning Publications Co., 2007. ISBN: 10933988-34-7.
- R. Sriganesh, G. Brose and M. Silverman. Mastering Enterprise JavaBeans 3.0. Wiley Publishing Inc., 2006. ISBN: 978-0-471-78541-5.
- J. Bloch. Effective Java: Programming Language Guide. Prentice Hall PTR, 2001. ISBN: 978-0201310054.

### Required software and/or hardware

Software Requirement:

- Java Standard Edition 6.0 SDK, Sun Microsystems
- Java EnterpriseEdition 1.5 SDK, Sun Microsystems
- NetBeans IDE 6.x

Software may be downloaded from:

- <http://java.sun.com>
- <http://www.netbeans.org/>

Hardware Requirements:

- A PC with Windows OS installed

### Equipment and consumables required or provided

Students studying off-campus are required to have the minimum system configuration specified by the Faculty as a condition of accepting admission, and regular Internet access. On-campus students, and those studying at supported study locations may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to 5 hours per week for use of a computer, including time for newsgroups/discussion groups.

### Study resources

Study resources we will provide for your study are:

- Weekly detailed lecture notes outlining the learning objectives, discussion of the content, required readings and exercises;
- Weekly tutorial or laboratory tasks;
- Assignment specifications;

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- This Unit Guide outlining the administrative information for the unit;
- The unit web site on MUSO, where resources outlined above will be made available.

## Assessment

### Overview

Assignments: 100%

### Faculty assessment policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 44% then a mark of no greater than 44-N will be recorded for the unit.

### Assignment tasks

#### Assignment coversheets

Assignment coversheets are available via "Student Forms" on the Faculty website:

<http://www.infotech.monash.edu.au/resources/student/forms/>

You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

**Assignment submission and return procedures, and assessment criteria will be specified with each assignment.**

#### • Assignment task 1

**Title:**

Tutorial Exercises

**Description:**

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

**Weighting:**

20%

**Due date:**

Each weekly exercise will be due for assessment in the following week's tutorial.

#### • Assignment task 2

**Title:**

JavaEE Web Application

**Description:**

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

**Weighting:**

50%

**Due date:**

5pm (Fri) 16th Oct, 2009

### • Assignment task 3

**Title:**

Research Paper

**Description:**

A research paper on a topic related to enterprise application development of approximately 2000 words.

**Weighting:**

30%

**Due date:**

5pm (Fri) 25th Sep, 2009

## Due dates and extensions

Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are not regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Students requesting an extension for any assessment during semester (eg. Assignments, tests or presentations) are required to submit a Special Consideration application form (in-semester exam/assessment task), along with original copies of supporting documentation, directly to their lecturer within two working days before the assessment submission deadline. Lecturers will provide specific outcomes directly to students via email within 2 working days. The lecturer reserves the right to refuse late applications.

A copy of the email or other written communication of an extension must be attached to the assignment submission.

Refer to the Faculty Special consideration webpage or further details and to access application forms:

<http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html>

## Late assignment

Assignments received after the due date will be subject to a penalty of **10% of available mark per day**, including weekends. Assignments received later than 4 days after the due date will not normally be accepted. In some cases, this period may be shorter if there is a need to release sample solutions.

## Return dates

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

## Appendix

Please visit the following URL: <http://www.infotech.monash.edu.au/units/appendix.html> for further information about:

- Continuous improvement
- Unit evaluations
- Communication, participation and feedback
- Library access
- Monash University Studies Online (MUSO)
- Plagiarism, cheating and collusion
- Register of counselling about plagiarism
- Non-discriminatory language
- Students with disability
- End of semester special consideration / deferred exams