



**MONASH** University  
Information Technology

**FIT3027**  
**Mobile middleware**

**Unit Guide**

**Semester 1, 2011**

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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# **FIT3027 Mobile middleware - Semester 1, 2011**

This unit focuses on how object-oriented abstractions, models, and software can be employed in networked, net centric, and mobile computing to manage and address the complexity found in environments that are heterogeneous, span multiple platforms, and are delivered to various client devices. The unit will emphasise hands-on, practical experience with actual devices and emulators. Research topics and ideas will also be covered for potential post-graduate students

## **Mode of Delivery**

Caulfield (Day)

## **Contact Hours**

2 hrs lectures/wk, 2 hrs laboratories/wk

## **Workload**

Students are expected to spend an average of 12 hours per week on this subject. The breakdown of time is the following:

- 2 hours per week: Topic material coverage (lecture attendance for on-campus students)
- 2 hours per week: Peer group involvement (tutorials or labs for on-campus students)
- 8 hours per week: Private study to review topic materials, explore supplementary subject resources and complete practical work and assignments.

## **Unit Relationships**

### **Prohibitions**

CSE3211, CPE3010, [FIT4039](#)

### **Prerequisites**

CSE1201 or [FIT1001](#) AND a second level programming unit - FIT1007 or [FIT2034](#) or CSE1203 or CPE1004 or equivalent

### **Chief Examiner**

Janet Fraser

### **Campus Lecturer**

## Caulfield

### Trent Mifsud

Contact hours: Email for appointment

## Learning Objectives

At the completion of this unit students will be able to:

- understand how object-oriented and other forms of middleware can be used to address the major issues and challenges found in networked, net centric, mobile, and other forms of computing;
- design and implement software for networked, net centric, mobile, and other forms of computing based on middleware such as .NET, Java components, and other technologies;
- design and implement software for networked, net centric and mobile and other forms of computing based contemporary middleware technologies;
- design applications for networked, net centric, mobile, and other forms of computing based on software patterns and architectures, such as federations and brokers;
- understand and be able to explain the differences between various forms of networked, net centric, mobile, and other forms of middleware.

## Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:

- a. engage in an internationalised world
- b. exhibit cross-cultural competence
- c. demonstrate ethical values

critical and creative scholars who:

- a. produce innovative solutions to problems
- b. apply research skills to a range of challenges
- c. communicate perceptively and effectively

## Assessment Summary

Examination (3 hours): 60%; In-semester assessment: 40%

<b>Assessment Task</b>	<b>Value</b>	<b>Due Date</b>
Assignment 1 - Remote Downloader application	20%	Week 7
Assignment 2 - Code access security application	20%	Week 12
Examination 1	60%	To be advised

## Teaching Approach

- **Lecture and tutorials or problem classes**

The aim of the lectures is to introduce one or more concepts in a way, and at a pace, that is adequate for students to learn, not to provide students with everything there is to know about those concepts. In this sense, the lecture notes provide a first step towards learning those concepts, a first step that will be complemented by tutes and/or pracs, consultation hours and personal reading and working time.

- **Laboratory-based classes**

The aim of the prac is to increase the knowledge of students on a particular area covered by the associated unit. In pracs this is achieved by each student (or group of students) practicing on their own the concepts already learned previously.

## Feedback

### Our 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

### 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 SETU, Student Evaluation of Teacher and Unit. 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, and on student evaluations, see:

<http://www.monash.edu.au/about/monash-directions/directions.html>

<http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html>

## Previous Student Evaluations of this unit

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

<https://emuapps.monash.edu.au/unitevaluations/index.jsp>

## Required Resources

Software may be obtained from the Faculty of IT

- Visual Studio 2008 with Pocket PC and Smartphone 2005 (or later) add-ons
- Activesync 4.x or later

Will be made available to students from unit leader

## Unit Schedule

Week	Date*	Activities	Assessment
0	21/02/11		No formal assessment or activities are undertaken in week 0
1	28/02/11	Introduction to Middleware and Revision	
2	07/03/11	Intro to .NET and C#	
3	14/03/11	.NET Networking, .NET Remoting	
4	21/03/11	.NET Winforms, Windows Comms Foundation	
5	28/03/11	Alternative Mobile Development Platforms	
6	04/04/11	iPhone	
7	11/04/11	iPhone	Assignment 1: Remote Downloader Application due
8	18/04/11	.Net Security	
Mid semester break			
9	02/05/11	Compact Framework	
10	09/05/11	Advanced Compact Framework	
11	16/05/11	Mobile Security	
12	23/05/11	iPhone and Android Development	Assignment 2: Code Access Security Application due
	30/05/11	SWOT VAC	No formal assessment is undertaken SWOT VAC

\*Please note that these dates may only apply to Australian campuses of Monash University. Off-shore students need to check the dates with their unit leader.

## 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 50% then a mark of no greater than 49-N will be recorded for the unit

## Assessment Tasks

### Participation

- **Assessment task 1**

**Title:**

Assignment 1 - Remote Downloader application

**Description:**

A detailed description will be provided in the assignment specifications

**Weighting:**

20%

**Criteria for assessment:**

**Due date:**

Week 7

- **Assessment task 2**

**Title:**

Assignment 2 - Code access security application

**Description:**

A detailed description will be provided in the assignment specifications

**Weighting:**

20%

**Criteria for assessment:**

**Due date:**

Week 12

### Examinations

- **Examination 1**

**Weighting:**

60%

**Length:**

3 hours

**Type (open/closed book):**

Closed book

**Electronic devices allowed in the exam:**

None

### Assignment submission

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.

## 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.infotech.monash.edu.au/resources/student/equity/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

## 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:

<http://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  
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-p>)
- Special Consideration  
(<http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.h>)
- 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/key-dates/>);
- Orientation and Transition (<http://www.infotech.monash.edu.au/resources/student/orientation/>);  
and
- Academic and Administrative Complaints and Grievances Policy  
(<http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy>)

## 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 [www.monash.edu.au/students](http://www.monash.edu.au/students) The Monash University Library provides a range of services and resources that enable you to save time and be more effective in your learning and research. Go to <http://www.lib.monash.edu.au> or the library tab in my.monash portal for more information. 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://adm.monash.edu/sss/equity-diversity/disability-liaison/index.html>;
- Telephone: 03 9905 5704 to book an appointment with a DLO;
- Email: [dlu@monash.edu](mailto:dlu@monash.edu)



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- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus.

Online references will be advised throughout the semester.