



**MONASH** University  
Information Technology

**FIT2081**  
**Mobile application development**

**Unit Guide**

**Semester 2, 2013**

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.

*Last updated: 25 Jul 2013*

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# **FIT2081 Mobile application development - Semester 2, 2013**

This unit introduces the Java programming language and object-oriented application development in the context of Android application development for smartphones and tablets. The approach is strictly application driven. Students will learn Java language syntax and semantics and object oriented design and coding techniques by analysing a sequence of carefully graded, finished applications. Students will also design and build their own applications.

## **Contact Hours**

2 hrs lectures/wk, 2 hrs laboratories/wk

## **Workload requirements**

This delivery is to Enhancement students only.

Workload commitments per week are:

- two-hour workshop/laboratory and
- a minimum of 3-4 hours of personal study per one hour of contact time in order to satisfy the reading, analysing and coding requirements.

## **Unit Relationships**

### **Prerequisites**

FIT1040 or FIT1002 or equivalent

### **Chief Examiner**

Mr Stephen Huxford

### **Campus Lecturer**

#### **Clayton**

**Stephen Huxford**

Consultation hours: tba week 1

### **Tutors**

#### **Clayton**

**Stephen Huxford**

Consultation hours: tba week 1

# Academic Overview

## Learning Outcomes

At the completion of this unit students will have: A knowledge and understanding of:

- core Java concepts through examples of their use in mobile applications;
- core Java syntax through examples of its use in mobile applications;
- core XML concepts and syntax;
- object-oriented design and programming techniques;
- how to write clean, maintainable, error free code;
- best practices for the development platform;
- a real-life Integrated Development Environment (IDE) for mobile application development;
- the mobile application space, its most popular platforms, players and marketplaces and their differences, advantages and disadvantages;
- how the knowledge and understanding already itemised above transfers to application development beyond the mobile space.

Developed the skills to:

- create, test and debug non-trivial, working mobile applications that are maintainable and use the best practices of the development platform;
- upload these to an appropriate marketplace.

## Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Unit Admin + Introduction to Java and the Eclipse IDE	lab
2	Procedural Java	lab worth 4% (top 10 labs count)
3	Classes and Objects	lab worth 4% (top 10 labs count)
4	Interfaces and Inheritance	lab worth 4% (top 10 labs count)
5	Specialised Advanced Java Topics	lab worth 4% (top 10 labs count)
6	Introduction to Android	lab worth 4% (top 10 labs count)
7	App - Layouts and Views	lab worth 4% (top 10 labs count)
8	App - Persistent data, Intents, adding GUI components dynamically, Dialogs	lab worth 4% (top 10 labs count)
9	App - Assets, Menus, Simple animation, Logging with LogCat	lab worth 4% (top 10 labs count)
10	App - Game, Custom views, Touch/Gestures, Sounds, Threads	lab worth 4% (top 10 labs count)
11	App - Week 10 App continued	lab worth 4% (top 10 labs count)
12	Revision and Exam Preparation	lab worth 4% (top 10 labs count)
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: <a href="http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html">http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html</a>

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

## Assessment Summary

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

Assessment Task	Value	Due Date
11 Laboratory Assessments	Each of 10 laboratories will be worth 4 marks for a total of 40% of your final mark for the unit	Lab work for the week will be marked in that weeks lab
Examination 1	60%	To be advised

Unit Schedule

## **Teaching Approach**

### **Studio teaching**

This approach is hands-on learning where you interact with fellow students and a tutor in a laboratory workroom

# Assessment Requirements

## Assessment Policy

Faculty Policy - Unit Assessment Hurdles

(<http://www.infotech.monash.edu.au/resources/staff/edgov/policies/assessment-examinations/unit-assessment-hu>)

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at

<http://lib.monash.edu/tutorials/citing/>

## Assessment Tasks

### Participation

- **Assessment task 1**

**Title:**

11 Laboratory Assessments

**Description:**

During each lab session students will be required to complete specified coding tasks. This work will be marked in the same laboratory session.

Each laboratory is worth 4% of the final mark. The best 10 of the 11 laboratory marks will constitute the 40% non-exam mark for each student.

**Weighting:**

Each of 10 laboratories will be worth 4 marks for a total of 40% of your final mark for the unit

**Criteria for assessment:**

Students will be awarded marks for completing coding tasks according to the principles and styles enumerated in lectures. It is important to understand working code will NOT attract full marks in its own right. Students will be questioned on their code. Marks will only be given for code the student can clearly describe and syntactically and semantically interpret to the satisfaction of the marking tutor.

**Due date:**

Lab work for the week will be marked in that weeks lab

## Examinations

- **Examination 1**

**Weighting:**

60%

**Length:**

3 hours

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

Closed book

**Hurdle requirements:**

40% or more in both exam and non-exam assessment

**Electronic devices allowed in the exam:**

None

## Learning resources

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
- 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.

## Resubmission of assignments

Lab work for each week is marked in the Lab for that same week.

## 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). 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.



## Assessment Requirements

The labs will contain all required resources. You can also set up all the required resources on your own personal computer (OSX or Windows based).

All the required software can be downloaded for free (details in week 1).

To save/backup your lab work a removable memory device is recommended.

## Prescribed text(s)

Limited copies of prescribed texts are available for you to borrow in the library.

P. Deitel et al. (2013). *Android How to Program*. (1st Edition) Pearson (ISBN: 0-13-299054-7).

## Recommended Resources

The following website contains relevant and useful information:

<http://developer.android.com>

## 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](http://www.policy.monash.edu.au/policy-bank/academic/education/index.html)

Key educational policies include:

- Academic integrity;  
<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-policy.html>
- Assessment in Coursework Programs;  
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-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/>
- 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;  
<http://www.policy.monash.edu.au/policy-bank/academic/education/conduct/suppdocs/code-of-practice-teaching-and-learning.html>

### 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](http://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](mailto: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](http://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](http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html)

## Previous Student Evaluations of this Unit

This is the second delivery of this unit. The assumed knowledge has changed since the first delivery from Java (basic level) is assumed to a text-based programming language (basic level) is assumed.

Therefore feedback from the first delivery especially that involved with difficulty with Java is not relevant as these will be covered in detail in this delivery.

Students feedback was by-and-large positive with many commenting on the accomplishment they felt in developing actual Android Apps that ran on their Android devices.

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

## Other

In addition to the prescribed text the following resources will be used.

To learn Java we will study many of the tutorials presented at <http://docs.oracle.com/javase/tutorial/>

To learn Android will use many of the resources (especially documentation of the Android API) at <http://developer.android.com/develop/index.html>