



MONASH University
Information Technology

FIT2001 Systems development

Unit Guide

Semester 2, 2014

Copyright © Monash University 2014. All rights reserved. Except as provided in the Copyright Act 1968, this work may not be reproduced in any form without the written permission of the host Faculty and School/Department.

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: 13 Aug 2014

Table of Contents

<u>FIT2001 Systems development - Semester 2, 2014</u>	1
<u>Mode of Delivery</u>	1
<u>Workload Requirements</u>	1
<u>Unit Relationships</u>	1
<u>Prohibitions</u>	1
<u>Co-requisites</u>	1
<u>Chief Examiner</u>	2
<u>Campus Lecturer</u>	2
<u>Caulfield</u>	2
<u>Tutors</u>	2
<u>Caulfield</u>	2
<u>Your feedback to Us</u>	2
<u>Previous Student Evaluations of this Unit</u>	2
<u>Academic Overview</u>	4
<u>Learning Outcomes</u>	4
<u>Unit Schedule</u>	5
<u>Teaching Approach</u>	6
<u>Assessment Summary</u>	6
<u>Assessment Requirements</u>	7
<u>Assessment Policy</u>	7
<u>Assessment Tasks</u>	7
<u>Participation</u>	7
<u>Examinations</u>	8
<u>Examination 1</u>	8
<u>Learning resources</u>	9
<u>Reading list</u>	9
<u>Feedback to you</u>	9
<u>Extensions and penalties</u>	10
<u>Returning assignments</u>	10
<u>Assignment submission</u>	10
<u>Online submission</u>	10
<u>Required Resources</u>	10
<u>Recommended text(s)</u>	10
<u>Other Information</u>	11
<u>Policies</u>	11
<u>Faculty resources and policies</u>	11
<u>Graduate Attributes Policy</u>	11
<u>Student Charter</u>	11
<u>Student services</u>	11
<u>Monash University Library</u>	12
<u>Disability Liaison Unit</u>	12

FIT2001 Systems development - Semester 2, 2014

This unit will provide students with an introduction to systems development using an agile development approach. The unit will focus on the application of UML models to the analysis and design of a system. The unit will introduce students to the nature of systems analysis and design as a problem-solving activity, describe the key elements of analysis and design, and explain the place of the analysis and design phases within the an agile development life cycle. The unit will introduce students to the nature of modelling as an analytical and a communicative process.

Major topics include: Agile development and the role of prototyping in systems development, user interface design, domain modelling with UML class diagrams, process modelling with use-case diagrams, use-case driven development and testing, use-case realisation with sequence diagrams, requirements gathering and the implementation and support phases of systems development.

Mode of Delivery

Caulfield (Day)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

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

- One 2-hour lecture
- One 2-hour laboratory

(b.) Study schedule for off-campus students:

- Off-campus students generally do not attend lecture and tutorial sessions, however should plan to spend equivalent time working through the relevant resources and participating in discussion groups each week.

(c.) Additional requirements (all students):

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

Unit Relationships

Prohibitions

BUS2021, CPE2003, CSE1204, CSE1205, GCO1813, GCO2601, GCO2852, GCO2826, IMS1001, IMS1002, IMS1805, IMS2071, IMS9001

Co-requisites

FIT1004 or FIT2010

Chief Examiner

Ms Chris Gonsalvez

Campus Lecturer

Caulfield

Chris Gonsalvez

Consultation hours: Please contact me via email to organise an appointment

Tutors

Caulfield

Peter Huynh

Anthony Wong

Jay Zeal

Phil Ward

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 student feedback for this unit, the following changes have been made:

- the order of the lectures has been revised.
- the 2 assignments have been changed to 6 smaller assignments to encourage every student in the team to collaborate on all part of the assignment rather than use the 'divide and conquer' method.

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

FIT2001 Systems development - Semester 2, 2014

- the tutorial participation in groups in the unit, which gives students the opportunity to collaborate, develop their teamwork skills, and benefit from learning from their peers.
- the case based approach used in tutorials which helps students contextualise the subject content.

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 have a knowledge and understanding of:

- the roles of systems analysts and designers in agile system development;
- the criteria that can be used to evaluate the quality of a model of a system;
- the purpose of different types of models in the UML;
- the role and application of automated tools in systems modelling.

Developed attitudes that enable them to:

- appreciate that a range of valid solutions exist for any given problem.

Developed the skills to:

- interpret and evaluate systems analysis and systems design models created using UML;
- create analysis and design models using the main elements of UML; namely class, use-case, sequence and robustness diagrams;
- create system test plans and test cases, and conduct system testing;
- create and evaluate models and prototypes of a user interface using storyboards and wireframes;
- apply problem solving techniques at different levels of abstraction and understand the effect this may have on a system specification.

Demonstrated the communication skills necessary to:

- explain the interdependence and relationships between all stake-holders in the systems development process;
- create and understand RFP documents.

Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Introduction, The nature of systems development, Development methodologies - Focus on Agile	Tutorials start in Week 1. Tutorial participation is assessed each week
2	Stakeholder management, Investigating system requirements - Interviews, Forms, Questionnaires	
3	Understanding and documenting system requirements - Why use modelling? Use Cases, Activity diagrams, System sequence diagrams, User stories, Domain models, Class diagrams, Prototyping.	
4	Understanding and documenting system requirements (contd.)	Assignment 1.1 Interview documentation due Friday 22 August 2014, 5pm
5	Understanding and documenting system requirements (contd.), Interface design principles	
6	Interface design, Usability, The Requirements specifications	Assignment 1.2 System overview, Use Cases, Activity Diagrams due Friday 5 September 2014, 5pm
7	System Design	Assignment 1.3 User Stories, Domain model class diagram due Friday 12 September 2014, 5pm
8	Detailed design: OO fundamentals, Use case realisation with sequence diagrams, design class diagrams	Assignment 1.4 Prototypes due Friday 19 September 2014, 5pm
9	Testing the system	
10	Securing, implementing and maintaining the system	Assignment 2.1 Sequence diagrams, Design class diagrams due Friday 10 October 2014, 5pm
11	Systems development approaches, Industry perspective	Assignment 2.2 Test cases, Implementation planning due Friday 17 October 2014, 5pm
12	Build or Buy? Request for Proposal, Review	
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html

*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 provides facilitated learning, practical exploration and peer learning.

- **Studio teaching**

This approach is hands-on learning where you interact with fellow students in a studio environment.

Assessment Summary

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

Assessment Task	Value	Due Date
Assignment 1: Analysing Requirements	20%	Weeks 4, 6, 7 and 8 for different assignment components. Refer to Unit Schedule and Assignment Specification for details.
Assignment 2: Designing the System and Preparing for Implementation	10%	Weeks 10 and 11 for different assignment components. Refer to Unit Schedule and Assignment Specification for details.
Tutorial participation	10%	Every week in tutorials, starting Week 1
Examination 1	60%	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>)

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:

Assignment 1: Analysing Requirements

Description:

This group assignment involves creating a requirements specification using requirements gathering techniques, and documenting the requirements using prototyping and relevant modelling tools.

Full details of the assignment will be available on the unit web site.

Weighting:

20%

Criteria for assessment:

The assignment will be assessed using the following main criteria:

- ◆ Quality, accuracy and completeness of the requirements specification and models;
- ◆ Quality of the prototypes;
- ◆ Consistency of the models;
- ◆ Professionalism of the submission and supporting documentation.

Marks for individual group members may vary based on peer assessment, contribution assessment and tutor observation and discussion with group. All team members must complete the self and peer assessment for each component of the assignment.

Due date:

Weeks 4, 6, 7 and 8 for different assignment components. Refer to Unit Schedule and Assignment Specification for details.

• Assessment task 2

Title:

Assignment 2: Designing the System and Preparing for Implementation

Description:

This group assignment involves a creating system design models and test cases, and detailing Implementation considerations for the system.

Full details of the assignment will be available on the unit web site.

Weighting:

10%

Criteria for assessment:

The assignment will be assessed using the following main criteria:

- ◆ Clarity, completeness, accuracy and consistency of the design specification and models;
- ◆ Completeness and comprehensiveness of the test cases;
- ◆ Comprehensive consideration of implementation issues;
- ◆ Presentation and professionalism of the submission and supporting documentation

Marks for individual group members may vary based on peer assessment, contribution assessment and tutor observation and discussion with group. All team members must complete the self and peer assessment for each component of the assignment.

Due date:

Weeks 10 and 11 for different assignment components. Refer to Unit Schedule and Assignment Specification for details.

• **Assessment task 3**

Title:

Tutorial participation

Description:

Assessment will be based on both tutor observations and peer assessment. This assessment task will encourage you to demonstrate your understanding and knowledge of systems development practice by actively engaging in the tutorial activities.

Weighting:

10%

Criteria for assessment:

You are expected to have completed any pre-tutorial activities, and bring any required documentation to the tutorial. You must be prepared to discuss your findings in a tutorial review group, and use the knowledge to analyse and design a case study system during the tutorials.

The assessment for this item is based on the peer evaluation and tutor observation of your performance in the review tutorials, including preparation, participation and contribution, the ability to allow and encourage others to contribute, and the ability to share your understanding of systems development practice with other students.

Due date:

Every week in tutorials, starting Week 1

Examinations

• **Examination 1**

Weighting:

60%

Length:

3 hours

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

None

Learning resources

Reading list

Booch, G., Rumbaugh, J. and I. Jacobson (1999) *The Unified Modeling Language User Guide* Addison Wesley Professional.

Dennis, A., Wixom, B.H. and D. Tegarden (2008) *Systems Analysis and Design with UML Version 2.0: An Object-Oriented Approach*, 3rd Edition, Wiley.

Hoffer, J.A., George, J.F. and J.S. Valacich (2001) *Modern Systems Analysis and Design* 3rd Edition, Prentice Hall.

George, J.F., Batra, D., Valacich J.S. and J.A. Hoffer, (2004) *Object-Oriented System Analysis and Design* Prentice-Hall.

Lee, R. and W. Tepefhart (2002) *Practical Object-Oriented Development with UML and Java*, Prentice Hall.

Maciaszek, L. (2004) *Requirements Analysis and System Design*, 2nd Edition, Addison-Wesley.

Page-Jones, M. (1988) *The Practical Guide to Structured Systems Design* 2nd Edition, Prentice-Hall.

Page-Jones, M. (2000) *Fundamentals of Object-Oriented Design in UML* Addison-Wesley.

Shelley, G.B. and H.J. Rosenblatt (2010) *Systems Analysis and Design*, 8th Edition, Thomson Course Technology.

Monash Library Unit Reading List (if applicable to the unit)
<http://readinglists.lib.monash.edu/index.html>

Faculty of Information Technology [Style Guide](#)

Feedback to you

Examination/other end-of-semester assessment feedback may take the form of feedback classes, provision of sample answers or other group feedback after official results have been published. Please check with your lecturer on the feedback provided and take advantage of this prior to requesting individual consultations with staff. If your unit has an examination, you may request to view your examination script booklet, see <http://intranet.monash.edu.au/infotech/resources/students/procedures/request-to-view-exam-scripts.html>

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments

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.

Assignment submission

It is a University requirement

(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-managing-pla>) 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.

Students will also require access to standard personal productivity tools (word processing , graphics and presentation).

Recommended text(s)

John W Satzinger, Robert B Jackson, Stephen D Burd. (2012). *Systems Analysis And Design In A Changing World*. (6th Edition) Course Technology Cengage Learning.

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:

- Student Academic Integrity Policy and Student Academic Integrity: Managing Plagiarism and Collusion Procedures ;
<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>

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

www.opq.monash.edu.au/ep/student-charter/monash-university-student-charter.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 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](http://my.monash.edu) 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