



**MONASH** University  
Information Technology

**FIT2027**  
**Systems design and implementation**

**Unit Guide**

**Semester 2, 2012**

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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# **FIT2027 Systems design and implementation - Semester 2, 2012**

This unit focuses on the nature of systems design and implementation as phases within the systems development process. By the end of the unit, students know the principles of how to design and implement a system, have the knowledge and skills required to conduct the main tasks typically required in these phases, and have experience in selecting and using the most suitable design and implementation techniques to develop a system from a requirements specification.

Design topics include: Transition from Analysis to Design; Preparation and Selection of design alternatives; Definition of System architecture requirements; Design Strategies-Structured, Object-oriented, Design patterns; Object-oriented design modelling; Interface Design; Systems security and access controls. Implementation topics include: Implementation planning, testing overview; data conversion; training; documentation-user and help systems; systems installation; transition to maintenance.

## **Mode of Delivery**

Caulfield (Day)

## **Contact Hours**

2 hrs lectures/wk, 2 hrs laboratories/wk

## **Workload**

Students will be expected to spend a total of 12 hours per week during semester on this unit as follows:

- Lectures: 2 hours per week
- Tutorials/Lab Sessions: 2 hours per week per tutorial
- and up to an additional 8 hours in some weeks for completing lab and project work, private study and revision.

## **Unit Relationships**

### **Prohibitions**

BUS2021, CPE2003, CSE2200, CSE3308, GCO2813, GCO2816, FIT2005, IMS2805

### **Prerequisites**

One of FIT1002, CSE1203, IMS1906 or equivalent and one of FIT1004, CSE2132, IMS1907 or equivalent and one of FIT2001, CSE1205, IMS1805 or equivalent

## **Chief Examiner**

Mr Peter O'Donnell

## **Campus Lecturer**

### **Caulfield**

**David Grant**

### **Sunway**

## **Tutors**

### **Caulfield**

**Jacob Zhivov**

# Academic Overview

## Outcomes

At the completion of this unit students will have:

A theoretical and conceptual understanding of:

- the purpose and objectives of the systems design and implementation phases of the systems development lifecycle, and the activities which they involve;
- the purpose, strengths and weaknesses, and the use of the main techniques which are used in systems design and implementation;
- the key issues involved in systems design and implementation.

Developed attitudes that enable them to:

- recognise the value of a team-based approach to the development of information systems;
- value the importance of the systems design and implementation phases of the systems development lifecycle;
- appreciate the importance of a systematic approach to the design and implementation phases of systems development.

Developed the skills to:

- prepare suitable design and implementation approach alternatives to the development of a business system
- use basic design techniques in the development of elements of an information system;
- prepare and present a design specification for a business system;
- prepare and present an implementation plan for a business system;
- construct and implement a quality business system;
- develop expertise in IT practitioner tools.

Demonstrated the communication skills necessary to:

- work effectively as part of a team responsible for carrying out systems design and implementation activities;
- present oral and written design and implementation deliverables with confidence to the relevant stakeholders.

## 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%

Assessment Task	Value	Due Date
Portfolio	40%	Partial submission of portfolio at end of week 7 (a minimum of 10% of the value points is required.) The final submission is due at the end of week 12.
Examination 1	60%	To be advised

## Teaching Approach

- **Lecture and tutorials or problem classes**

Lectures will be used to introduce and explain the central concepts of the unit. The aim of the lectures is to prepare students for the work they will undertake in each week's studio class.

- **Studio teaching**

Studio teaching is a facilitated active, participatory, peer learning approach. In the studio classes, students will be strongly encouraged to take responsibility for organising and directing their learning with support from their supervisors and peers.

## 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
- Solutions to tutes, labs and assignments

### 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

The unit ran for the first time in 2007. Students (and staff) were very happy with the way the unit ran and the students didn't want any major changes to the method of delivery. The one suggestion that students did make - which has been adopted - is to introduce a early delivery of a component of the portfolio to help stop students from leaving the portfolio till the last few weeks.

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

## Prescribed text(s)

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

Satzinger, Jackson and Burd. (2012). *Systems Analysis and Design in a Changing World*. (6th) Course.com.

## Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Introduction to the unit; The role of infrastructure	
2	Design and implementation revisited	
3	Design UML I	
4	Design UML II	
5	Application design with UML	
6	The role of walkthroughs	
7	Reporting system development	Partial submission of portfolio at end of week 7
8	Advanced topics in UML	
9	Designing and conducting tests	
10	Developing documentation	
11	Change management	
12	Packaged software and enterprise resource planning	Portfolio submission at end of week 12
	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 MUSO (Blackboard or Moodle) learning system.



# 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:**

Portfolio

**Description:**

In this unit, the assignment submission will take the form of a portfolio. The portfolio is really a series of assignments that are submitted together as one package at the end of the semester. It is different to a normal assignment in that each student gets to choose what they do from a list of tasks (available on the unit web site). Each week's studio class instructions include links to the assessment tasks; they are based on the work performed in the studio. The full task list is available on the Moodle web site. Note that you can also create your own tasks - provided they are approved by the teaching staff.

In the week 1 lecture and studio time will be devoted to exemplifying how the portfolio works and what is expected from students. For full details refer to the unit web site on Moodle.

**Weighting:**

40%

**Criteria for assessment:**

Each task will have a description and a deliverable and will also have a series of points associated with it. The points will include

- ◆ Learning objectives points (design or implementation)
- ◆ Individual points
- ◆ Team points
- ◆ Presentation points &
- ◆ Value points

You must perform and prepare for submission tasks that ensure you meet the minimum amount of point value for each criteria. This way - while you choose what you do, you will do a minimum amount of group work, individual work, work on each of the relevant learning objectives and practice written and oral presentations. There are no set maximum points (you can do as much as you want). A partial submission of at least 10 value points must be made by the end of week 7.

Each item you choose to do can be submitted for feedback as many times as you want. This feedback will include a grade.

The final mark given for the portfolio will be sum of all items submitted by their value

## Assessment Requirements

points by the grade.

For each group submission, each member of the group will be asked to also submit a form allowing them to assess the contribution of each group member to the submission. The allocated to a group item might be different for different members of the group depending on their individual contributions.

For further details refer to the unit web site on Moodle.

### **Due date:**

Partial submission of portfolio at end of week 7 (a minimum of 10% of the value points is required.) The final submission is due at the end of 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

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).

## Online submission

If Electronic Submission has been approved for your unit, please submit your work via the VLE site for this unit, which you can access via links in the my.monash portal.

## 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.

## 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:

<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>)
- Codes of Practice for Teaching and Learning  
(<http://www.policy.monash.edu.au/policy-bank/academic/education/conduct/suppdocs/code-of-practice-tea>)

### 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). For Sunway see <http://www.monash.edu.my/Student-services>, and for South Africa see <http://www.monash.ac.za/current/>

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. 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/>.

Academic support services may be available for students who have a disability or medical condition. Registration with the Disability Liaison Unit is required. Further information is available as follows:

- Website: <http://monash.edu/equity-diversity/disability/index.html>;
- Email: [dlu@monash.edu](mailto:dlu@monash.edu)
- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus
- Telephone: 03 9905 5704, or contact the Student Advisor, Student Community Services at 03 55146018 at Sunway