MONASH University

FIT2051
Analysis and design methods

Unit Guide

Semester 2, 2009

Last updated : 10 Jul 2009

Table of Contents

FIT2051 Analysis and design methods - Semester 2, 2009

Chief Examiner:

Ms Chris Gonsalvez
Associate Head of School
Phone: +61 3 990 32554

Lecturer(s) / Leader(s):

Caulfield

Ms Gail Bourne

Malaysia

Mr Boon Yeap

Unit synopsis

This unit will examine the process of information system development and the key tasks in systems analysis and design from a problem-solving perspective. It will identify the key overall features which are common to all system development approaches and analytical and design techniques as problem-solving activities. From this foundation, it will examine, compare and contrast specific development approaches and analysis and design methods/techniques in the context of these problem-solving requirements.

Learning outcomes

At the completion of this unit students will have a sound theoretical and conceptual understanding of:

1. the purpose, objectives and tasks of analysis and design as problem-solving activities in the context of the development of information systems;
2. key issues involved in addressing informational, organizational, human and technological problems that arise in information systems development;
3. a range of problem-solving approaches relevant to the identification, definition, representation and addressing of informational, organisational, human and technological problems that arise in information systems development;
4. a range of problem solving techniques relevant to the problems that arise in information systems development;
5. the problem-solving strategies and approaches embodied in some of the key analysis and design techniques used in information system development;
6. the importance of the identification and definition phases in the problem solving process;
7. key differences between problem solving approaches and techniques, and their strengths and weaknesses in relation to their use as part of the system development process;
8. the importance of communication, interpersonal skills and ethical and professional behaviour in addressing the problems that arise in system development.

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

1. recognise the value of a systematic, critical and reflective approach to analysis and design as problem solving activities within the systems development process;
2. recognise the ethical and organizational issues that may accompany the identification, definition, representation and addressing of problems that arise in an organisational context;
3. appreciate the subjective nature of problem interpretation by organizational stakeholders and would-be problem solvers, and its impact on system development approaches and techniques for analysis and design;
4. appreciate the importance of the ability to approach system development problems from a variety of perspectives.

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

1. evaluate the overall context of information systems development problems in a critical manner, and identify appropriate methods for addressing those problems;
2. apply a range of general analysis and design techniques relevant to the identification, definition, representation and addressing of problems that arise in information systems development.

At the completion of this unit students will:

1. know the team skills necessary for successful development and implementation of IT solutions to information system development problems;
2. appreciate the importance of the inter-relationships between IT professionals and other stakeholders involved in the development of information systems.

Contact hours

4 x contact hrs/week (comprising 2 hrs formal lectures, 2 hrs tutorials and/or studio sessions).

Workload

Workload commitments are:

- 2 hour lecture
- 2 hour tutorial
- 8 hours of personal study for the reading and assignment expectations

Unit relationships

Prerequisites

24 points of FIT first year common core units

Co-requisites

FIT2001 or equivalent

Prohibitions

IMS3230

Relationships

FIT2051 is a core unit in the Information Systems major of the BITS.

Before attempting this unit you must have satisfactorily completed 24 points of FIT first year common core units.

You may not study this unit and IMS3230 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	References/Readings	Key dates
1	Introduction, concepts and overview of systems development , traditional SDLC; evolution of system development methodologies -	Chapters 1,2, 3 from Avison, D., Fitzgerald, G. (2006). Information systems development: Methodologies, techniques and tools.(4th edition) McGraw Hill. ISBN:-13 978-0-07-711417-6	
2	Understanding the problem - Organisational dimensions	Chapter 4.1,4.2,4.3,4.4 from Avison and Fitzgerald	
3	Understanding the problem - People dimensions	Chapter 5.1, 5.2 from Avison and Fitzgerald	
4	Understanding the problem - Requirements dimensions - Modelling: SA, IE, OO; JAD	Chapters 5.6, 6, 7, 8.3, 19 from Avison and Fitzgerald	
5	Understanding the problem - Requirements dimensions - Rapid and evolutionary development	Chapter 7 from Avison and Fitzgerald	
6	Solving the problem - External development (applicatiopn packages, out sourcing, off shoring)	Chapter 9 from Avison and Fitzgerald	Assignment 1 due
7	Solving the problem - Methodologies - Process, blended, object oriented, rapid	Chapters 20, 21, 22, 23 from Avison and Fitzgerald	
8	Solving the problem - Methodologies - People oriented, organisational	Chapters 24.1, 25 from Avison and Fitzgerald	
9	Solving the problem - Methodologies - Matching the solution to the problem	Chapters 20 -25 from Avison and Fitzgerald	
10	Methodology issues	Chapter 27 from Avison and Fitzgerald	
Mid semester break			
11	Methodology comparisions	Chapter 28 from Avison and Fitzgerald	Assignment 2 due
12	Current practices	To be provided	
13	Summary and review		Hurdle requirement (portfolios) due

Unit Resources

Prescribed text(s) and readings

Avison, D., Fitzgerald, G., 2006. Information systems development: Methodologies, techniques and tools.(4th edition) McGraw Hill. ISBN:-13 978-0-07-711417-6

Text books are available from the Monash University Book Shops. Availability from other suppliers cannot be assured. The Bookshop orders texts in specifically for this unit. You are advised to purchase your text book early.

Recommended text(s) and readings

Please refer to the weekly reference reading list on the FIT 2051 website. Appropriate references will be added during the semester.

Required software and/or hardware

Students will be required to use Word processing to complete their assignments.

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 **2** 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:

- Unit guide

- The FIT2051 website on Muso where lecture slides, weekly tutorial requirements, assignment specifications and supplementary material will be posted.

Assessment

Overview

Exam 60%, practical assignment work 40%

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:
  Assignment 1: Evaluation
  Description:
  This will be an individual assignment. Specific tasks and marking criteria will be distributed at the appropriate time during the semester.
  Weighting:
  20%
  Due date:
  Week 6, semester 2, 2009

- **Assignment task 2**

  Title:
  Assignment 2: Problem solving using a case study
  Description:
  The assignment will be a group assignment and will involve reports and a presentation. Specific tasks and marking criteria will be distributed at the appropriate time during the semester.
  Weighting:
  20%
  Due date:
  Week 11, semester 2, 2009

- **Assignment task 3**

  Title:
  Assignment 3: Tutorial portfolio
  Description:
  This will be the documentation of the collection of weekly tutorial discussions. Specific requirements will be distributed at the appropriate time during the semester.
  Weighting:
  A hurdle requirement - must be handed in to achieve a pass in this unit.
  Due date:
  Week13. semester 2, 2009

Examination

- **Weighting:** 60%
  Length: 3 hours
  Type (open/closed book): Closed book

See Appendix for End of semester special consideration / deferred exams process.

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 in this unit are no less important than those of other units. Your inability to manage your time or computing resources will not be accepted as a valid excuse. (Several assignments falling due at the same time is an unavoidable fact of university life.)

Hardware failures are not normally recognised as a valid reason for obtaining an extension or handing in a late assignment.

Late assignments submitted without an approved extension **may** be accepted up to one week late at the discretion of your lecturer, but will be penalised at the rate of 5% of total assignment marks per day (including weekends).

Example:

FIT2051 Analysis and design methods - Semester 2, 2009

Total marks available for the assignment = 100 marks

Marks received for the assignment = 70 marks

Marks deducted for 2 days late submission (10% of 100) = 10 marks

Final mark received for assignment = 60 marks

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