



MONASH University
Information Technology

FIT5160
Business process modelling, design and simulation

Unit Guide

Semester 2, 2010

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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FIT5160 Business process modelling, design and simulation - Semester 2, 2010

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Introduction

Welcome to FIT5160 Business Process Modelling, Design and Simulation for Semester 2, 2010. This 6 point unit is a core unit in the Business Systems professional track for the MBIS, MBusSys and MIMS degrees, and an elective unit for others studying these degrees and other postgraduate courses with the Faculty of IT. The unit has been designed to provide you with an understanding of analytical techniques and tools that can be used to model, analyse, understand and design business processes. You will also gain hands-on experience in using software tools for modelling and analysing business processes.

Unit synopsis

Business processes must be designed to ensure that they are effective and meet customer requirements. A well-designed process will improve efficiency and deliver greater productivity. This unit will introduce students to analytical tools that can be used to model, analyse, understand and design business processes. Students will also gain hands-on experience in using simulation software as a tool for analysing business processes.

Learning outcomes

At the completion of this unit students will:

- have a thorough understanding of business organisations, their functional structure and the advantage of considering the process oriented view of organisations;
- demonstrate a thorough knowledge of business processes, their structure and how processes fit in to the overall organisation objectives;
- be able to use analytical tools for modeling, analysing, understanding and designing business processes;
- have acquired skills to use simulation software as a tool for analysing business processes;
- be able to report to and advise management on business process design and re-engineering issues.

Contact hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload

For on campus students, workload commitments are:

- two-hour lecture;
- two-hour tutorial in a laboratory;
- a minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.

Unit relationships

Prerequisites

FIT9004 or FIT9017 or BUS9520

Prohibitions

BUS5502

Teaching and learning method

Teaching approach

The teaching and learning in the unit is structured in the traditional manner around lectures and laboratory-based workshops. Each week there is reading set from the text, you will find the unit isn't too difficult if you study consistently through the semester and keep up with the lectures, tutorials, readings, tutorial exercises and assigned work.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are intensive, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Your learning is also supported by web-based resources including a Moodle-based web site. All your unit resources are available at this site.

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.its.monash.edu.au/>

Unit Schedule

Week	Date*	Topic	Study guide	Key dates
1	19/07/10	Introduction to Business Process Design	Lecture Materials	21 July
2	26/07/10	Process Management and Process Oriented Improvement Programs	Lecture Materials	28 July
3	02/08/10	Simulating Business Process Design	Lecture Materials	4 August
4	09/08/10	Tools for Process Analysis and Design	Lecture Materials	11 August
5	16/08/10	Managing Process Flows	Lecture Materials	18 August
6	23/08/10	Introduction to Statistical modelling and Queuing	Lecture Materials	25 August
7	30/08/10	Business Process Simulation 1	Lecture Materials	1 September
8	06/09/10	Business Process Simulation 2	Lecture Materials	8 September
9	13/09/10	Business Process Simulation 3	Lecture Materials	15 September
10	20/09/10	Analyzing Process Input	Lecture Materials	22 September
Mid semester break				
11	04/10/10	Analyzing Process Output	Lecture Materials	6 October
12	11/10/10	Optimizing Process Performance	Lecture Materials	13 October, Assignment due 17

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				Oct 5pm
13	18/10/10	Revision	Lecture Materials	20 October

*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.

Unit Resources

Prescribed text(s) and readings

Prescribed Text: Wisner, J.D., Stanley, L.L., Process Management - Creating value along the supply chain, Thomson South-Western, 2008, 13-978-0-324-29157-5

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

1. Laguna, M., Marklund, J. Business Process Modeling, Simulation and Design, Pearson Prentice Hall, 2005, 0-13-091519-X
2. Weske, M., Business Process Management: Concepts, Languages and Architectures, Springer, 2007

Required software and/or hardware

The simulation software, ExtendSim will be used in this unit. On-campus students may use this software which is installed in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook.

Equipment and consumables required or provided

Students will need access to:

- * a personal computer with Windows XP
- * the internet via dial-up connection or preferably by broadband
- * a printer for assignments

On-campus students 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.

Study resources

Study resources we will provide for your study are:

The following are available from the unit website (Moodle):

- Weekly detailed lecture notes outlining the learning objectives, discussion of the content, required readings and exercises
- Weekly tutorial or laboratory tasks and exercises
- Assignment specifications
- A sample exam questions
- This Unit Guide outlining the administrative information for the unit

Assessment

Overview

Examination (3 hours): 60%; In-semester assessment: 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 50% then a mark of no greater than 49-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 submission and preparation requirements will be detailed in each assignment specification. 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>.

• Assignment task 1

Title:

Tutorial Exercises assigned each week

Description:

A maximum of 10% is awarded for all the 12 weekly tutorials that are submitted.

Weighting:

10%

Criteria for assessment:

Tutorials in the unit are fully described, along with the assessment criteria on the tutorial page of the Moodle-based unit web site

Due date:

One week after each tutorial

• **Assignment task 2**

Title:

Assignment : Modelling and Simulation with ExtendSim

Description:

This is a group assignment involving the design and simulation of a system using the techniques and tools of the unit content.

Weighting:

30%

Criteria for assessment:

Assignment work in the unit is fully described, along with the assessment criteria, on the assignment page of the Moodle-based unit web site. A peer assessment form is also completed by all students to ensure fair distribution of marks. Guidelines on undertaking a group assignment such as conducting meetings and recording processes will be given to students.

Besides submitting a complete ExtendSim model for the problem, the assignment will also be assessed based on the following criteria:

- ◆ References or websites used in the assignment
- ◆ Minutes/memos of meetings held to discuss the assignment
- ◆ Tasks performed by each individual member of the group
- ◆ Any other information relevant to the assignment (such as assumptions the group have made about the case, etc
- ◆ Completed peer assessment form by all members of the group.

Due date:

17 October, 5pm

Remarks:

Students who are unable to participate in a group assignment will discuss their options with the lecturer/tutor where alternative assignment arrangements will be provided.

Examination

•

Weighting:

60%

Length:

3 hours

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

None

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 received after the due date will be subject to a penalty of 5% per day, including weekends. Assignments received later than one week (seven days) after the due date will not normally be accepted.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Feedback

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

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