MONASH University
Information Technology

FIT5160
Business process modelling, design and simulation

Unit Guide

Semester 2, 2014

Last updated: 15 Jul 2014

Table of Contents

FIT5160 Business process modelling, design and simulation - Semester 2, 2014

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.

Mode of Delivery

- Caulfield (Evening)
- Malaysia (Evening)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

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

- Two hours of lectures
- One 2-hour laboratory

(b.) 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

Prerequisites

FIT5131 or FIT9004 or FIT9017 or a least one quantitative unit such as mathematics or statistics at undergraduate level

Chief Examiner

Dr Yen Cheung

Campus Lecturer

Caulfield

Poh Lim

Malaysia

Leong Hing Tam

Tutors

Caulfield

Peter Huynh

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

Previous feedback has highlighted the following strengths in this unit:

- use of simulation software to analyse problems;
- guest speaker who provided practical insghts to business process improvements;
- combination of theory and practical knowledge and experience provided in this unit.

Student suggestions for improvements to this unit include:

- more guest speakers to provide more practical applications of concepts;
- less numerical analysis in this unit.

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

On successful completion of this unit, students should be able to:

- describe business processes, their structures and how they fit in to the overall organisation objectives;
- use analytical tools for modelling, analysing, understanding and designing business processes;
- use simulation software as a tool for analysing business processes;
- report to and advise management on business process design and re-engineering issues.

Unit Schedule

Week	Activities	Assessment
0	Register for a FIT5160 tutorial - these start in week 2.	No formal assessment or activities are undertaken in week 0
1	Introduction to business processes and modelling	No tutorial this week
2	Process Improvements and BPR	
3	Business Process Management	
4	Business Process Simulation I	
5	Tools for Business Process Modelling and Design	
6	Analysing process flows	
7	Queuing Systems and Business Process Design	Assignment 1: A report on business process improvements due Friday 12 September 2014 11pm
8	Process Modelling and Petri Nets	
9	Managing Process Flow	
10	Business Process Simulation II	
11	Summary and Review	
12	Guest Lecture	Assignment 2: Modelling and Simulation with ExtendSim due Friday 24 October 2014 11pm
	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.

Assessment Summary

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

Assessment Task	Value	Due Date
Assignment 1: A report on business process improvements	20%	Week 7, Friday 12 September 2014 11pm
Assignment 2: Modelling and Simulation with ExtendSim	20%	Week 12, Friday 24 October, 2014 11pm

Unit Schedule

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-hurd

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: A report on business process improvements
    Description:
    This assignment involves writing a report on business process improvements and
    conducting some literature review on the topic with practical cases of business process
    improvements. The report should be approximately 15 - 30 pages including references
    and bibliography. Full details of the assignment are available on the unit web site.
    Weighting:
    20%
    Criteria for assessment:
    The assignment will be assessed using the following main criteria:

    - ♦ the quality and presentation of the report,
    - ♦ the quality of the readings/references and
    - ♦ analysis of findings from the readings.

    The professionalism of the submission and supporting documentation will also be
    considered.   For full details see the unit web site.
    Due date:
    Week 7, Friday 12 September 2014 11pm

- **Assessment task 2**

    Title:
    Assignment 2: 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:
    20%
    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:

Week 12, Friday 24 October, 2014 11pm

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.

Examinations

- **Examination 1**

Weighting:

60%

Length:

3 hours

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

The use of the standard calculator is permitted in the examination of this unit.

Learning resources

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
- 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

Once submitted officially, students will not be allowed to re-submit their assignments unless they are requested to do so.

Referencing requirements

The Harvard Referencing style is preferred, otherwise information on referencing can be found at http://www.monash.edu.au/lls/llonline/quickrefs/19-styles.xml

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.

The ExtendSim simulation software is provided in this unit for building simulation models. The software is installed in the designated laboratories used for the tutorials of this unit.

ExtendSim software for building simulation models.
A limited, non-expiring working copy of the software can be download
from http://www.extendsim.com/prods_demo.html
This limited copy will be sufficient for the purposes of this unit.

Prescribed text(s)

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

Laguna, Manuel, Marklund, Johan. (2013). *Business Process Modeling, Simulation & Design*. (2nd Edition) Chapman and Hall/CRC.

Examination material or equipment

The use of the standard calculator is permitted in the examination of this unit.

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.h
- Assessment in Coursework Programs; http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-po
- Special Consideration; http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.ht
- 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.h

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.ht

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 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 Commuity 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

Other

Recommended Reading:

Wisner J D, Stanley L L(2008). *Process Management - Creating Value along the supply chain*. Thomson South-Western Publishing.