

FIT5160
Business process modelling, design and simulation

Unit Guide

Semester 2, 2015

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FIT5160 Business process modelling, design and simulation - Semester 2, 2015

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)
- Caulfield (Online)
- 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.

See also Unit timetable information

Unit Relationships

Prerequisites

FIT9131 or 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 insights 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	Tools for Business Process Modelling and Design	
5	Analysing process flows	
6	Queuing Systems and Business Process Design	
7	Business Process Simulation I	Assignment 1: A report on business process improvements due Friday 11 September 2015 11pm
8	Business Process Simulation II	
9	Managing Process Flow	
10	Process Modelling and Petri Nets	
11	Guest Lecture	
12	Summary and Review	Assignment 2: Modelling and Simulation with ExtendSim due Friday 16 October 2015 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 11 September 2015 11pm
Assignment 2: Modelling and Simulation with ExtendSim	20%	Week 11, Friday 16 October, 2015 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-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: 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.

This assessment relates to Learning Outcomes 1 and 2.

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 11 September 2015 11pm

• Assessment task 2

Title:

Assignment 2: Modelling and Simulation with ExtendSim

Description:

This is a group assignment (for Day/Evening cohort) and individual assignment (for DE/Online cohort) involving the design and simulation of a system using the techniques and tools of the unit content.

This assessment relates to Learning Outcomes 3 and 4.

Assignment Aim and Objectives:

Assessment Requirements

The aim of this assignment is to provide students with an opportunity to develop their analytical and modelling skills in a simulated business environment. In so doing, the following objectives are sought:

- ◆ To develop skills in understanding queuing systems and the effects of variability on waiting times and queue length.
- ◆ To develop skills at modelling the business processes using ExtendSim simulation software.
- ◆ To develop skills in analysing the results generated and providing recommendation that would be useful for the business.

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.

The assignment will be assessed based on the following criteria:

1. Model: ExtendSim models that accurately represent the different elements/scenarios in the business case.
2. Report: A business report which will be assessed based on:
 - ◆ Report format - Well-presented and coherent
 - ◆ Technical content – proper presentation of result tables and graphs
 - ◆ Results discussion based on the model (including any limitations and assumptions)
 - ◆ Recommendation(s) and conclusion
3. Presentation (for Day/Evening cohort) during Tutorial in Week 12 and will be assessed based on:
 - ◆ Poise and professionalism (including team work and good coordination)
 - ◆ Presentation contents and flow (including proper timing)
 - ◆ Clarity and good presentation skills.

A peer assessment form is also completed by all (Day/Evening) 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.

DE/Online cohort are not required to perform a face-to-face presentation but would be required to present their models to the lecturer via video conferencing/Skype.

Due date:

Week 11, Friday 16 October, 2015 11pm

Examinations

Assessment Requirements

• 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>

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

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 electronic submission). 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.

Recommended text(s)

Wisner J D, Stanley L L. . (2008). *Process Management - Creating Value along the supply chain..* (1st) Thomson South-Western Publishing.

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

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.h>

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 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