



MONASH University

**FIT5157
Services science**

Unit guide

Semester 1, 2009

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Table of Contents

<u>FIT5157 Services science - Semester 1, 2009</u>	1
<u>Unit leader</u> :.....	1
<u>Lecturer(s)</u> :.....	1
<u>Caulfield</u>	1
<u>Clayton</u>	1
<u>Tutors(s)</u> :.....	1
<u>Caulfield</u>	1
<u>Introduction</u>	1
<u>Unit synopsis</u>	1
<u>Learning outcomes</u>	2
<u>Workload</u>	2
<u>Unit relationships</u>	2
<u>Prerequisites</u>	2
<u>Relationships</u>	2
<u>Continuous improvement</u>	2
<u>Student Evaluations</u>	2
<u>Unit staff - contact details</u>	3
<u>Unit leader</u>	3
<u>Lecturer(s)</u> :.....	3
<u>Tutor(s)</u> :.....	3
<u>Additional communication information</u>	3
<u>Teaching and learning method</u>	3
<u>Communication, participation and feedback</u>	3
<u>Unit Schedule</u>	4
<u>Unit Resources</u>	4
<u>Prescribed text(s) and readings</u>	4
<u>Recommended text(s) and readings</u>	5
<u>Equipment and consumables required or provided</u>	5
<u>Study resources</u>	5
<u>Library access</u>	5
<u>Monash University Studies Online (MUSO)</u>	5
<u>Assessment</u>	6
<u>Unit assessment policy</u>	6
<u>Assignment tasks</u>	6
<u>Examinations</u>	7
<u>Assignment submission</u>	8
<u>University and Faculty policy on assessment</u>	8
<u>Due dates and extensions</u>	8
<u>Late assignment</u>	8
<u>Return dates</u>	8
<u>Plagiarism, cheating and collusion</u>	8
<u>Register of counselling about plagiarism</u>	9
<u>Non-discriminatory language</u>	9
<u>Students with disabilities</u>	9
<u>Deferred assessment and special consideration</u>	9

FIT5157 Services science - Semester 1, 2009

Unit leader :

Rodney Martin

Lecturer(s) :

Caulfield

- Rodney Martin

Clayton

- Rodney Martin

Tutors(s) :

Caulfield

- Rodney Martin
- Suttisak Jantavongso
- Purnima Gadiyar

Introduction

Welcome to FIT5157 Services Science for semester 1, 2009. This 6 point unit is a core unit in the Business Systems professional track of the Master of Business Information Systems, Master of Business Systems and Master of Information Management and Systems degrees, and an elective unit for others studying these degrees and other masters degrees from within the Faculty of IT. The unit has been designed to provide you with an understanding of the management, design and operations of service organizations.

THE IBM DEFINITION: Services sciences, Management and Engineering (SSME) hopes to bring together ongoing work in computer science, operations research, industrial engineering, business strategy, management sciences, social and cognitive sciences, and legal sciences to develop the skills required in a services-led economy.

Unit synopsis

This course is about Services Sciences, Management and Engineering (SSME) for postgraduate students in information technology, science, management, engineering and other disciplines. SSME is the application of scientific, management, and engineering disciplines to services.

Services science is the application and extension of general operations management into the area of services. It draws from operations management, the social sciences, business, and engineering technology and applies scientific methods to the design and management of services. The use of IT in the operations of a service business is an essential part of services science. The focus of this unit is to provide students with sufficient knowledge of operations management, process design methods and business operations to work effectively in services and general operations management roles in industry.

Learning outcomes

At the conclusion of FIT5157 students will:

- Understand how service businesses operate and evolve;
- Understand basic operations and project management principles, concepts and standards and how these are applied to manage and design service businesses;
- Be able to specify organisational capabilities to support service operations management;
- Have the skills to design and develop an appropriate management structure for service operations and the management of service projects.

Workload

One two-hour lecture and aOne-hour tutorialA minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations. You will need to allocate up to 5 hours per week in some weeks, for use of a computer

Unit relationships

Prerequisites

Students are expected to have a background in IT, Engineering or Science.

Relationships

FIT5157 is a 6 point unit and is a core unit in the Business Systems professional track of the Master of Business Information Systems, Master of Business Systems and Master of Information Management and Systems degrees, and an elective unit for others studying these degrees and other masters degrees from within the Faculty of IT.

Continuous improvement

Monash is committed to 'Excellence in education' (Monash Directions 2025 - <http://www.monash.edu.au/about/monash-directions/directions.html>) and strives for the highest possible quality in teaching and learning.

To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. The University's Unit Evaluation policy (<http://www.policy.monash.edu/policy-bank/academic/education/quality/unit-evaluation-policy.html>) requires that every unit offered is evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Faculties have the option of administering the Unit Evaluation survey online through the my.monash portal or in class. Lecturers will inform students of the method being used for this unit towards the end of the semester.

Student Evaluations

If you wish to view how previous students rated this unit, please go to <http://www.adm.monash.edu.au/cheq/evaluations/unit-evaluations/>

Unit staff - contact details

Unit leader

Mr Rodney Martin

Lecturer

Phone +61 3 990 55289

Lecturer(s) :

Mr Rodney Martin

Lecturer

Phone +61 3 990 55289

Contact hours :

- Caulfield - Wednesdays 2:00 PM - 4:00 PM, Thursdays 2:00 PM - 4:00 PM
- Clayton - Mondays 2:00 PM - 4:00 PM, Tuesdays 2:00 PM - 4:00 PM

Tutor(s) :

Miss Purnima Gadiyar

Mr Rodney Martin

Lecturer

Phone +61 3 990 55289

Dr Suttisak Jantavongso

Additional communication information

Caulfield - Wednesdays 2:00 PM - 4:00 PM, Thursdays 2:00 PM - 4:00 PM

Clayton - Mondays 2:00 PM - 4:00 PM, Tuesdays 2:00 PM - 4:00 PM

Teaching and learning method

There will be a 2 hour lecture and a one hour tutorial per week.

The tutorials will cover each topic of the course.

There will be a numerical questions assignment consisting of a question on each of five numerical topics.

There will be a software assignment consisting of a small program to solve a business need for a service business.

There will be a case study assignment.

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, 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.

Unit Schedule

Week	Topic	Key dates
1	Introduction and Business Strategy	
2	Operations management, process design tools, services blueprint	
3	Project management techniques	
4	Inventory control	
5	Just In Time and barcoding	
6	Mathematical Optimization	
Mid semester break		
7	IT/internet in services operations	23 April - Submit numerical questions assignment: Project Management, Inventory Control, Just in Time and Barcoding
8	IT/internet in services operations	
9	IT/internet in services operations	
10	Accounting	14 May - Submit numerical questions assignment: Mathematical Optimization question
11	Accounting, Contract Law	
12	ISO9000, Advanced Topics	28 May - Submit IT/Internet assignment and Case Study assignment
13	Revision	

Unit Resources

Prescribed text(s) and readings

"Successful Service Operations Management", Metters et al, Thomson, South-Western, 2006, ISBN-10: 0324224370,
http://academic.cengage.com/cengage/student.do?product_isbn=9780324224375&disciplinenummer=412

Recommended text(s) and readings

The following references will be available on Blackboard:

ACM SERVICES SCIENCE PAPERS.pdf

Applied Mathematical Programming by Bradley, Hax, and Magnanti.pdf

BERKELY Service Science, Management, and Engineering Lecture Series.zip

ENGR 191A-291A Entrepreneurial Marketing - Spring 2008.pdf

UNIV-OF-SYD.pdf

Service Science, Management, and Engineering Lecture Series.pdf

Principles of Marketing - Chris Waller.pdf

ILOG OPL MANUALS.pdf

Optimization Modeling with LINGO.pdf

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 **n** 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:

Lecture notes, tutorial exercises and examples are available on the Blackboard site and ftp site <ftp://ftp.monash.edu.au/pub/rlmartin>

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to <http://www.lib.monash.edu.au>.

The Educational Library and Media Resources (LMR) is also a very resourceful place to visit at <http://www.education.monash.edu.au/library/>

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (<http://moodle.monash.edu.au>) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: <http://my.monash.edu.au>

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

For more information, please visit: <http://www.monash.edu.au/muso/support/students/downloadables-student.html>

You can contact the MUSO Support by phone : (+61 3) 9903 1268

For further contact information including operational hours, please visit:
<http://www.monash.edu.au/muso/support/students/contact.html>

Further information can be obtained from the MUSO support site:
<http://www.monash.edu.au/muso/support/index.html>

Assessment

Unit assessment policy

To pass this unit, a student must obtain :

- 40% or more in the unit's examination and
- 40% or more in the unit's 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 assessment then a mark of no greater than 44-N will be recorded for the unit.

Assignment tasks

• Assignment Task

Title : IT - Internet Assignment

Description :

A small program to solve a business need.

Weighting : 10%

Criteria for assessment :

The criteria for assessment will be a subjective assessment of your approach to the problem and involve writing code and your understanding of the SOAP protocol.

Due date : 28/05/2009

- **Assignment Task**

Title : Case Study

Description :

A case study of a service business. Groups of 2 students. The case study will involve planning out the operations of a service business, and preparing a project plan to build and start the business. Variations on this description are invited.

Weighting : 15%

Criteria for assessment :

The criteria for assessment will be a subjective assessment of your case study.

Due date : 28/05/2009

- **Assignment Task**

Title : Numerical Questions Assignment

Description :

A numerical question on each numerical topic of the course: (1) Project Management, (2) Inventory Control, (3) Just In Time, (4) Barcoding, (5) Mathematical Optimization - 5% for each topic, making 25% total

Weighting : 25%

Criteria for assessment :

Assessment will be based on about 50% correct answers and 50% on the method and logical approach to each question.

Due date : 23 April - numerical questions: Project Management, Inventory Control, Just in Time and Barcoding; 14 May - numerical questions: Mathematical Optimization question

Examinations

- **Examination 1**

Weighting : 50%

Length : 2 hours

Type (open/closed book) : Closed book

Assignment submission

Assignments should be submitted by paper submission to the assignment box in level 6 of H building, Caulfield Campus, or to your tutor in the tutorial. The appropriate cover sheet should be correctly filled out and attached.

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. 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 seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Late assignments will be accepted without penalty up to the date of the examination, or publication of the solution, whichever is earlier.

Arrangements will be made in the case of illness or other serious reasons.

Late assignment

Late assignments will be accepted without penalty up to the date of the examination, or publication of the solution, whichever is earlier.

Return dates

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

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at <http://www.policy.monash.edu/policy-bank/academic/education/assessment/>

We will aim to have assignment results made available to you within two weeks after assignment receipt.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with the University Plagiarism policy and procedure (<http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html>) which applies to students detected plagiarising.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with

another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- [Disabilities Liaison Unit](#)

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at

FIT5157 Services science - Semester 1, 2009

<http://www.monash.edu.au/exams/special-consideration.html>. Contact the Faculty's Student Services staff at your campus for further information and advice.