MONASH University
Information Technology

FIT3102
Operations management systems

Unit Guide

Semester 1, 2010

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FIT3102 Operations management systems - Semester 1, 2010

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Introduction

Welcome to FIT 3102 Operations Management Systems for Semester 1, 2010. This 6 point unit is optional to all undergraduate degrees in the Faculty of IT. The unit has been designed to provide you with an understanding of the management, operational aspects, and software used in manufacturing and service organizations. It covers the organizational structure, financial calculations, projects, inventory control, material requirements planning, just in time, barcoding, contract law and business strategy.

Unit synopsis

This unit presents operations management in manufacturing and service organisations. Topics include: Financial calculations, funds employed, product pricing, budgets, cash flow. Accounting terms, definitions. Contracts and contract law. An introduction to computer software systems in a management context. Production scheduling, planning and control. Students will prepare sales, purchasing and productions schedules. Materials requirements planning. History, methods, uses . Project management with cash flow, financial statements, quotations and costing. Students will learn how to plan and manage small to medium sized projects. Students will study project network calculations, critical path, floats, barcharts, scheduling. Just-in-time systems. The unit concentrates on the mechanics of material flow in Just-in-Time systems. Barcoding. EAN-13, Code 39, TUNs and Interleaved 2-of-5. Students will learn how to encode and decode the most common types of linear barcodes. Two dimensional barcodes will be described. The ISO9000 standards and quality standards. The unit will also explain different types of organisations and their business strategies.

Learning outcomes

At the completion of this unit students will:

- have sufficient understanding of operations to do computing, management and operational work in a manufacturing or service organisation;
- understand the differences between business strategies of different organisations;
- appreciate the structure and functionality of management software. Assist in the design and programming of software for management of operating organisations;
- understand the essential aspects of contemporary productive systems;
- be familiar with international quality standards;
- understand how to do a literature search on an operations management topic.

Contact hours

2 hr lecture/wk, 1 hr laboratories/wk

Workload

One two-hour lecture and

One one-hour tutorial

A 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

FIT1006 or ETC1000 or BUS1100 or equivalent.

Prohibitions

BUS3530, BUS4630, BUS5630, BUS4560, MBA5470, GCO3806

Teaching and learning method

Teaching approach

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

The tutorials will concentrate on the numerical topics and the software VISUAL Enterprise.

There will be a numerical questions assignment where students will do a practice exercise on each numerical topic.

There will be a software assignment where students will learn how to use modern management software.

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	Key dates
1	01/03/10	Introduction, process control tools	
2	08/03/10	Financials, costing, pricing	
3	15/03/10	Project networks	
4	22/03/10	Project financials	
5	29/03/10	Inventory control	01/04/10: Submit NQA1 Financials assignment
Mid semester break			
6	12/04/10	Inventory Control	16/04/10: Submit NQA2 Project Networks assignment
7	19/04/10	Materials Requirements Planning	
8	26/04/10	Materials Requirements Planning	30/04/10: Submit NQA3 Project financials assignment
9	03/05/10	Materials Requirements Planning and JIT	
10	10/05/10	JIT and Barcoding	14/05/10: Submit NQA4 Inventory Control assignment

11	17/05/10	Contract Law and Business Strategy	21/05/10: Submit NQA5 MRP assignment
12	24/05/10	Business Strategy	28/05/10: Submit VISUAL Enterprise software assignment

*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.

Improvements to this unit

The course has been revised based on student feedback.

Unit Resources

Prescribed text(s) and readings

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

Recommended text(s) and readings

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

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, examples and past exams with solutions are available on the Blackboard site and ftp site ftp://ftp.monash.edu.au/pub/rlmartin

Assessment

Overview

Examination (2 hours): 80%; In-semester assessment: 20%

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 task 1**

  Title:
  NQA1 Financials
  Description:
  A practice question on the first numerical topic Financial Calculations
  Weighting:
  2%
  Due date:
  01/04/2010

- **Assignment task 2**

  Title:
  NQA2 Project Networks
  Description:
  A practice question on the second numerical topic Project Networks
  Weighting:
  2%
  Due date:
  16/04/2010

- **Assignment task 3**

  Title:
  NQA3 Project Financials
  Description:
  A practice question on the third numerical topic Project Financials
  Weighting:
  2%
  Due date:
  30/04/2010

- **Assignment task 4**

  Title:
  NQA4 Inventory Control
  Description:
  A practice question on the fourth numerical topic Inventory Control.
  Weighting:
  2%
  Due date:
  14/05/2010

- **Assignment task 5**

  Title:
  NQA5 MRP
  Description:
  A practice question on the 5th numerical topic Materials Requirements Planning.
  Weighting:
  2%
  Due date:
  21/05/2010

- **Assignment task 6**

  Title:
  Description:
  VISUAL Enterprise software assignment.
  Weighting:
  10%
  Due date:
  28/05/2010

Examination

- **Weighting:** 80%
  Length: 2 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

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