

Liverpool John Moores University

Title: Quantitative Methods
Status: Definitive
Code: **5104MAR** (121818)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Trung Thanh Nguyen	Y

Academic Level: FHEQ5
Credit Value: 10
Total Delivered Hours: 60
Total Learning Hours: 100
Private Study: 40

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	40
Tutorial	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Portfolio	100	

Aims

To introduce the major models of management science/operations research and indicate their practical application to business problems.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate knowledge of broad application of management science to business environment
- 2 Formulate, use and interpret a variety of quantitative models

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Portfolio	1	2
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Outline Syllabus

Discussion of mathematical formulation of decision problems under resource constraints.

Introduction of Operations Research (OR) / Management Science (MS) models.

Mathematical programming, in particular linear/integer programming to solve business problems. Use of computer packages in solving OR problems; interpretation of output.

Application of OR/MS in business and its validity. Limited case study and evaluation.

Learning Activities

Integrated series of formal lectures, tutorials and presentation seminars.

Notes

A module which applies OR techniques within the Maritime and Logistics sectors