

Quantitative Methods

Module Information

2022.01, Approved

Summary Information

Module Code	5104MAR
Formal Module Title	Quantitative Methods
Owning School	Engineering
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	40
Tutorial	20

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To introduce the major models of management science/operations research and indicate their practical application to business problems.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate knowledge of broad application of management science to business environment
MLO2	2	Formulate, use and interpret a variety of quantitative models

Module Content

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.
Module Overview	This module will introduce the major models of management science/operations research and indicate their practical application to business problems.
Additional Information	A module which applies OR techniques within the Maritime and Logistics sectors

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Portfolio	Portfolio	100	0	MLO1, MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Trung Thanh Nguyen	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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