Module Definition Form (MDF)

Module code: MOD003628	**Version:** 4 **Date Amended:** 26/Oct/2019

1. Module Title
Engineering Management Systems

2a. Module Leader
Mohamed Yehia

2b. School
School of Engineering and the Built Environment

2c. Faculty
Faculty of Science and Engineering

3a. Level
7

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

For any business to operate efficiently and satisfy the customer's needs it must have reliable operating systems in place and this is particularly important for engineering businesses with technological changes and global markets. You will develop a critical awareness and understanding of engineering operatingsystems, including production, manufacturing, planning and plant resources required for a business to operate efficiently and reliably satisfy customers' needs. You will be provided with an in-depth study of the operating systems used in complex technical organisations with a view to identifying good practice and the tools and techniques to systematically develop and improve the efficiency of such systems, including the use of discrete event simulation.

6b. Outline Content

Critically evaluate a company strategy and determine an appropriate operational system to economically fulfil that strategy. Model an organisation as a system and critically review the efficiency of the systems. Systematically understand the economic consequences of inefficiency and suggest viable alternative systems. Use discrete event simulation software to identify system bottlenecks and economic solutions to problems.

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Module Study Guide

7. Learning Outcomes (threshold standards)

No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Critically evaluate an organisations strategy and suggest an appropriate operating system
2	Knowledge and Understanding	Critically analyse the economic requirements of a sound operating system
3	Knowledge and Understanding	Map, critically evaluate and systematically optimise an operational system in an organisation
4	Intellectual, practical, affective and transferrable skills	Use computer simulation to critically evaluate and optimise a complex system

8a. Module Occurrence to which this MDF Refers

Year	Occurrence	Period	Location	Mode of Delivery
2026/7	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	24	All	2 hours lectures per week
Other teacher managed learning	12	All	1 hours tutorials and lab work
Student managed learning	114	All	Private study
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	1-4	90 (%)	Fine Grade	40 (%)
A case study based assignment of max 2500 words					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Practical	3-4	10 (%)	Fine Grade	40 (%)
10 minute oral presentation					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]