

<b>Module Code:</b>	ENG498
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<b>Module Title:</b>	Engineering Standards, Business & Operations Management
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<b>Level:</b>	4	<b>Credit Value:</b>	20
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<b>Cost Centre(s):</b>	GAME	<b>JACS3 code:</b> <b>HECoS code:</b>	H700 100209
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<b>Faculty</b>	FAST	<b>Module Leader:</b>	N. Vidmer
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Scheduled learning and teaching hours	36 hrs
Guided independent study	164 hrs
Placement	0 hrs
<b>Module duration (total hours)</b>	<b>200 hrs</b>

<b>Programme(s) in which to be offered (not including exit awards)</b>	Core	Option
BEng (Hons) Production Engineering	✓	<input type="checkbox"/>
BEng (Hons) Industrial Engineering Design (mechanical)	✓	<input type="checkbox"/>
BEng (Hons) Industrial Engineering Design (Electrical and Electronic)	✓	<input type="checkbox"/>
BEng (Hons) Low Carbon Energy, Efficiency and Sustainability	✓	<input type="checkbox"/>

<b>Pre-requisites</b>
None

**Office use only**

Initial approval: 11/09/19

Version no:1

With effect from: 11/09/19

Date and details of revision:

Version no:3

30/01/20 Admin update of derogation

Approved on 21/09/20 for addition of BEng Low Carbon Energy, Efficiency and Sustainability

**Module Aims**

To develop knowledge and understanding of management systems that occur within the student's workplace and be able to interpret their roles of the engineer as a manager of himself/herself and of others, ensuring the highest level of professional and ethical conduct and acting within the legal framework governing engineering activities.

**Intended Learning Outcomes**

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

**At the end of this module, students will be able to****Key Skills**

1	Demonstrate knowledge of organisational structures relevant for engineering business and demonstrate an understanding of own employer's structure and the role of its senior leadership team	KS1	
		KS5	KS9
		KS6	
2	Justify the value of engineering technology investments and apply calculations and estimations to evaluate the Operating Expenses (OPEX) and benefits management	KS1	KS6
		KS3	KS10
		KS4	
3	Describe the role of inventory in manufacturing systems, procurement in supply management system and apply basic ordering, replenishment, and forecasting techniques	KS3	KS8
		KS4	KS9
		KS5	
4	Plan and schedule activities efficiently and manage resources effectively to respond to demand and be able to address gaps in performance through the application of appropriate tools and techniques	KS3	KS9
		KS5	
		KS85	

**Transferable skills and other attributes**

Communication skills  
 Decision making  
 Evaluation and analysis skills  
 Networking  
 Research skills  
 Time Management skills  
 Reflective practice skills

## Derogations

A derogation from regulations has been approved for this module which means that whilst the pass mark is 40% overall, each element of assessment (where there is more than one assessment) requires a minimum mark of 30%.

## Assessment:

Indicative Assessment Tasks:

Assessment One: A report to investigate and analyse the operational and organisational structure in a chosen industry (Normally the students own company).

Assessment Two: portfolio to cover outcomes 3, 4

A portfolio of work should be accumulated over the duration of the module; this will evidence all of the studies undertaken, results of investigations, details of management structures and procedures etc. as directed by the module leader. The integrated portfolio should be presented in the form of a single technical report at the end of the module.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration or Word count (or equivalent if appropriate)
1	1,2	Report	50	2500
2	3,4	Portfolio	50	2500

## Learning and Teaching Strategies:

The student will investigate topics listed in the syllabus outline, within their place of work and treat them as 'mini' case studies. The student will research the theoretical aspects of the topics and make comparisons with their practicalities in the workplace.

Also the module will be presented to students through a specified series of lectures assisted by notes via the University's VLE platform. Lectures will deliver key concepts, ideas, theories and examples. Relevant videos will also be used to aid the learning process.

## Syllabus outline:

- Resource planning and control
- Strategic spares management systems
- Costing methods and systems
- Procurement procedures
- Maintenance strategies
- Fault management systems
- Process system failure management
- Software – systems for managing revisions, upgrades and access to edit/modify
- Develop an awareness of the systems in place to manage the carbon footprint of the business

<b>Indicative Bibliography:</b>
<b>Essential reading</b>
Slack, N. and Johnston, R. (2019), <i>Operations Management</i> . 9th ed. Harlow: Pearson.
<b>Other indicative reading</b>
<i>K. A. Gupta, (2007) Engineering Management, S Chand &amp; Co Ltd</i>