

Module specification

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Module code	ENG4AW
Module title	Engineering & Operations Management
Level	4
Credit value	20
Faculty	FAST
Module Leader	N Vidmer
HECoS Code	100209
Cost Code	GAME

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BEng (Hons) Production Engineering	Core
BEng (Hons) Industrial Engineering Design (mechanical)	Core
BEng (Hons) Industrial Engineering Design (Electrical and Electronic)	Core
BEng (Hons) Low Carbon Energy, Efficiency and Sustainability	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	36 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	36 hrs
Placement / work based learning	0 hrs
Guided independent study	164 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	11/09/2019
With effect from date	11/09/2019
Date and details of revision	30/01/20 Admin update of derogation Approved on 21/09/20 for addition of BEng Low Carbon Energy, Efficiency and Sustainability Oct 22 minor modification to LO wording through the revalidation and template update
Version number	3

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.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Demonstrate an understanding of organisational structures and the structure of the students' own company
2	Justify the value of engineering technology investments and apply calculations and estimations to evaluate the Operating Expenses (OPEX) and benefits management
3	Describe the role of inventory in manufacturing systems.
4	Plan and schedule activities efficiently and manage resources effectively to respond to demand

In addition to the module learning outcomes, students will also cover the following accreditation of higher education programme (AHEP) fourth edition learning outcomes: C8, C11, C15 & C16.

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment One: Work Based Assessment - 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 the studies undertaken, results of investigations, details of management structures and procedures, ethical considerations in management, diversity and inclusivity within engineering etc., as directed by the module leader. The portfolio should be presented in the form of a technical report at the end of the module and also as a group presentation.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1,2	Written Assignment	50
2	3,4	Portfolio	50

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%.

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.

Indicative Syllabus Outline

- Organisational structures within companies
- Supply chain management
- Inventory systems
- Just in time manufacture
- Lean manufacture principals
- Strategic spares management systems
- Costing methods and systems
- Procurement procedures
- An understanding of the importance of cyber security

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

Slack, N. and Johnston, R. (2019), *Operations Management*. 9th ed. Harlow: Pearson.

Other indicative reading

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes

Engaged
Ethical

Key Attitudes

Commitment
Resilience
Confidence
Adaptability

Practical Skillsets

Organisation
Critical Thinking
Communication