

**University of the West of Scotland
Module Descriptor**

Session: 2024/25

Title of Module: Engineering Management 2			
Code: ENGG10008	SCQF Level: 10 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Farhad Anvari		

Summary of Module

This module is the more indepth and advanced level of Engineering Management 1. A number of the topic areas in this module will be very similar to the previous module but the discussions and decisions required are at a higher level, far more strategic and more so involving service functions. Where Engineering Management 1 was predominately biased towards an SME , this module is applicable to a wider range of organisations, During the course of this module students will develop their UWS Graduate Attributes. Universal: Academic attributes - critical thinking and analytical & inquiring mind; Work-Ready: Academic attributes - knowledge of LSS, TPM and Strategic Planning and relevant tools ; Successful : autonomous, driven and resilient.

Content includes:

Review of functional areas in the Business organisation and inter-relationships. Functions such as Marketing, Sales, Finance, HR, Planning, QA and QC, Production and Shipping. Advanced layout design and analysis.

Appraisal of manufacturing / maintenance systems. (Variance analysis and prediction techniques.)

Critique of Continuous Improvement techniques and quality initiatives.:- Kaisen, QFD, Six Sigma, Lean Sigma, QFD, JIT, JIC and others.

The application of these tools and techniques will be followed by a reflective practice to ascertain if the tool or techniques were considered effective.

Systems for Operations Management.

Organisational structures and integration.

Managing Change

Global manufacturing strategic tools.

Teaching is by lectures and tutorials with significant group activity.

There will be significant investigative sections of current publications and practice assisted by guest practitioners.

Assessment is by 60% exam and 40% coursework.

- This module has been reviewed and updated, taking cognisance of the University's Curriculum Framework principles. Examples of this are found within the module such as active and engaging tutorial activity with contemporary industry examples of modular content, module assessment which reflects industry activities, learning synergies across modules and levels of study and recorded lecture content supporting students to organise their own study time. Due to some of the unique content, this module is of particular importance in relation to PSRB AHEP-4 learning outcomes.

Module Delivery Method		
Face-To-Face	Blended	Fully Online
✓	✓	
<p>Face-To-Face Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.</p> <p>Fully Online Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.</p> <p>Blended A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations</p>		

Campus(es) for Module Delivery						
The module will normally be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
			✓			

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	✓	Term 2		Term 3	

Learning Outcomes: (maximum of 5 statements)
<p>On successful completion of this module the student will be able to:</p> <p>L1. critically appraise an existing engineering entity and identify areas for continuous improvement.</p> <p>L2. research historical, existing and emerging improvement strategies and propose a CI strategy for a complex application.</p> <p>L3. prepare a operations strategy for a range of manufacturing or service organizations undergoing change.</p>

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:

Knowledge and Understanding (K and U)	SCQF Level 10. A greater knowledge of TQM principles, tools and techniques applied to a range of organisations.	
Practice: Applied Knowledge and Understanding	SCQF Level 10. Apply effective continuous improvement for a complex system or task	
Generic Cognitive skills	SCQF Level 10. Problem solving involving continuous improvement	
Communication, ICT and Numeracy Skills	SCQF Level 10. Presentations and reporting of complex issues.	
Autonomy, Accountability and Working with others	SCQF Level 10. Team based learning and presenting	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	or an equivalent module
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

Learning and Teaching	
see Moodle site for teaching plan	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	36
Independent Study	140
	176 Hours Total
**Indicative Resources: (eg. Core text, journals, internet access)	
<p>The following materials form essential underpinning for the module content and ultimately for the learning outcomes: This module requires drop in access to a computer lab for topic investigation and a teaching room with presentation facilities.</p> <p>Slack, N. et al (2006), Operations Management, London, Prentice Hall. Slack Lewis, Operations Strategy, Prentice Hall.</p>	

Brown, Lamming, Bessant, Jones (2004), Strategic Operations Management (2nd Ed) , Butterworth-Heinemann.
 Deming, W E, (2007), Out of the Crisis,(2nd Ed), Massachusetts Institute of Technology Cambridge University Press
 Feigenbaum, A V (2008), Total Quality Control (4th Ed),New York, McGraw-Hill
 Zairi, M (2003), The 4 Ps of Organizational Excellence, Bradford, TQM Publishing House
 Crosby, P.B.(2004).Quality is still free. New York: McGraw-Hill
 Brue, Greg. (2005), Six Sigma for small Business ,Wisconsin, Entrepreneur Press.
 Campbell D, et al (2005), Organisations and the business environment, Elsevier Butterworth-Heinemann

Useful web sites:

CEED

The Lean Institute

EFQM

Edinburgh virtual library www.eevl.ac.uk

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance Requirements

In line with the Academic Engagement and Attendance Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on Moodle, and complete assessments and submit these on time. Please refer to the Academic Engagement and Attendance Procedure at the following link: [Academic engagement and attendance procedure](#)

Supplemental Information

Programme Board	Engineering
Assessment Results (Pass/Fail)	No
Subject Panel	Engineering
Moderator	James Findlay
External Examiner	F Inam
Accreditation Details	
Changes/Version Number	2.10 Blended module delivery added. Delivery at the Paisley campus added. Pre-requisites deleted.

Assessment: (also refer to Assessment Outcomes Grids below)

Comprehensive coursework comprising 7 elements

Full formal Open Book exam

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.
(ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1					
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Unseen open book	✓	✓	✓	60	2
Component 2					
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Essay	✓	✓	✓	40	18
Combined Total For All Components				100%	20 hours

Footnotes

A. Referred to within Assessment Section above

B. Identified in the Learning Outcome Section above

Note(s):

1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

The programme leaders have considered how the programme meets the requirements of potential students from minority groups, including students from ethnic minorities, disabled students, students of different ages and students from under-represented groups. Students with special needs (including additional learning needs) would be assessed/accommodated and any identified barriers to particular groups of students discussed with the Enabling Support Unit and reasonable adjustments would be made for classes and site visits.

[UWS Equality and Diversity Policy](#)

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)