

Session: 2022/23

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Title of Module: GA-Engineering Management			
Code: GRLA08009	SCQF Level: 8 (Scottish Credit and Qualifications Framework)	Credit Points: 10	ECTS: 5 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Adelaide Marzano		

Summary of Module
<p>This module brings together the technological problem-solving savvy of engineering and the organizational, and planning abilities of management in order to oversee the operational performance of complex engineering driven enterprises.</p> <p>This module provides students with an introduction to management and organisation; to new product development, the design process and Design for Manufacture (DFM). Applications for Continuous Improvement techniques and quality initiatives:-Kaisen, QFD, six sigma and Lean. During the course of this module students will develop their UWS Graduate Attributes (https://www.uws.ac.uk/current-students/your-graduate-attributes/). Universal: Academic attributes - critical thinking and analytical & inquiring mind; Work-Ready: Academic attributes - knowledge of DFM and LEAN manufacturing and relevant operational management skills; Successful : autonomous, driven and resilient.</p> <ul style="list-style-type: none"> • Design for Manufacture: designing a part, assembly or process to be more effective,better quality and meeting schedule requirements. utilizing DFM methods to ensure quality, reduce delivery lead-time and provide a reduction in the product cost. • Process Improvement : Applications for Continuous Improvement techniques and quality initiatives,Lean production techniques to the design of production systems Quality Management methods Standardisation

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
	✓	✓			
<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>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> <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>HybridC Online with mandatory face-to-face learning on Campus</p> <p>HybridO Online with optional face-to-face learning on Campus</p> <p>Work-based Learning Learning activities where the main location for the learning experience is in the workplace.</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		

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Learning Outcomes: (maximum of 5 statements)	
<p>On successful completion of this module the student will be able to:</p> <p>L1. L1. Have knowledge and understanding of the management ideas and techniques applied to the operation of industrial organizations. Have knowledge and understanding of the application quality management and quality improvement techniques</p> <p>L2. L2 Have knowledge of basic industrial economic and financial principles applied to operations management</p> <p>L3. L3 Research, analyse and present information using appropriate technology and services.</p> <p>L4. L4. Have developed interpersonal skills through coursework, effective time management and clarity of communication.</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 8. Lean production techniques to the design of production systems Quality Management methods Overview of management concepts
Practice: Applied Knowledge and Understanding	SCQF Level 8. Demonstrate an understanding on financial and economical skills Apply lean and quality management techniques to case studies Demonstrate an understanding of combining management concepts in engineering projects
Generic Cognitive skills	SCQF Level 8. Demonstrate the ability to monitor, interpret and apply the results of analysis and financial modelling. Ability to identify and analyse the roles required to manage a sustainable business process in terms of planning, control, decision making, problem solving and optimisation.
Communication, ICT and Numeracy Skills	SCQF Level 8. Communication skills honed via written reports demonstrating the ability to communicate engineering ideas and concepts.

Autonomy, Accountability and Working with others	SCQF Level 8. Develop individual autonomy, group-working, time management, initiative and self-directed learning skills.	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

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Learning and Teaching	
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	24
Asynchronous Class Activity	12
Tutorial/Synchronous Support Activity	12
Independent Study	52
	100 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:</p> <p>Engineering Management: Meeting the Global Challenges, . M. Chang, 2016</p> <p>Operations Management, Prof Nigel Slack, Dr Alistair Brandon-Jones, Prof Robert Johnston, 2016</p> <p>Ulrich, KT & Eppinger, SD, 2000; Product Design & Development 2nd Edition, McGraw-Hill</p> <p>Scallan, P, 2002; Process Planning – the Design/Manufacture Interface, Butterworth-Heinemann</p> <p>BOOKS BY DR. ANDERSON Design for Manufacturability: How to Use Concurrent Engineering to Rapidly Develop Low-Cost, High-Quality Products for Lean Production</p> <p>Product Design for Manufacture and Assembly Geoffrey Boothroyd, Peter Dewhurst.</p>	

(**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)

Engagement Requirements

In line with the Academic Engagement 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 the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: [Academic engagement procedure](#)

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Supplemental Information

Programme Board	Engineering
Assessment Results (Pass/Fail)	No
Subject Panel	Engineering
Moderator	James Findlay
External Examiner	
Accreditation Details	
Version Number	1.08

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Assessment: (also refer to Assessment Outcomes Grids below)

Assignment 1

Assignment 2

(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)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Portfolio of written work	✓	✓	✓		70	0

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Presentation	✓			✓	30	0
Combined Total For All Components					100%	0 hours

Footnotes

A. Referred to within Assessment Section above

B. Identified in the Learning Outcome Section above

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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

[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)