**Module Descriptor**

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|---|---|---|---|
| **Title** | Engineering Management 2 | | |
| **Session** | 2025/26 | **Status** | Published |
| **Code** | ENGG10008 | **SCQF Level** | 10 |
| **Credit Points** | 20 | **ECTS (European Credit Transfer Scheme)** | 10 |
| **School** | **Computing, Engineering and Physical Sciences** | | |
| **Module Co-ordinator** | F Anvari | | |

**Summary of Module**


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 critique of Continuous Improvement techniques and quality initiatives: Kaizen, QFD, Six Sigma, Lean Sigma, QFD, JIT, SMED 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.

Organisational structures and integration. Organisational culture and managing change. Gorporate strategic planning and the application of different tools such as PESTEL, SWOT and Porter's Five Forces.

Teaching is by lectures and tutorials with group activity. There will be significant investigative sections of current publications and practice assisted by guest practitioners. Assessment is by 60% class test and 40% coursework.

During the course of this module students will develop their UWS Graduate Attributes (https://www.uws.ac.uk/current- students/your-graduate-attributes/) in the following areas-

Universal: Academic - Critical thinking, analytical & inquiring mind; Personal- Ethical; Professional- Research Minded

Work-Ready: Academic - Knowledgeable, Digitally Literate, Problem Solver; Personal - Effective Communicator; Professional - Ambitious

Successful : Academic - Autonomous; Personal - Resilient; Professional- Driven

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.

| Module Delivery Method | On-Campus[1] ☒ | Hybrid[2] ☐ | Online[3] ☐ | Work -Based Learning[4] ☐ |
|---|---|---|---|---|
| **Campuses for Module Delivery** | ☐ Ayr<br>☐ Dumfries | ☐ Lanarkshire<br>☐ London<br>☒ Paisley | ☐ Online / Distance Learning<br>☐ Other (specify) | |

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| **Terms for Module Delivery** | Term 1 | ☒ | Term 2 | ☐ | Term 3 | ☐ |
| **Long-thin Delivery over more than one Term** | Term 1 – Term 2 | ☐ | Term 2 – Term 3 | ☐ | Term 3 – Term 1 | ☐ |

| **Learning Outcomes** | |
|---|---|
| **L1** | Critically appraise an existing engineering entity and identify areas for continous improvement. |
| **L2** | Research historical, existing and emerging improvement strategies and propose a CI strategy for a complex application. |
| **L3** | Prepare an operations strategy for a range of manufacturing or service organisations undergoing change. |
| **L4** | N/A |
| **L5** | N/A |

| **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 10**<br>A great knowledge of TQM principles, tools and techniques applied to a range of organisations. |
| **Practice: Applied Knowledge and Understanding** | **SCQF 10**<br>Apply effective continuous improvement for a complex system. |
| **Generic Cognitive skills** | **SCQF 10**<br>Problem solving involving continuous improvement. |

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

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| **Communication, ICT and Numeracy Skills** | **SCQF 10**<br>Presentations and reporting of complex issues. |
| **Autonomy, Accountability and Working with Others** | **SCQF 10**<br>Work effectively as a team member or leader demonstrating a high level of ability. |

| **Prerequisites** | **Module Code** | **Module Title** |
|---|---|---|
| | **Other** | |
| **Co-requisites** | **Module Code** | **Module Title** |

**Learning and Teaching**

In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours.

The module delivery framework strikes a balance between in-person events and synchronous online activities. The learning and teaching engagement for this module includes the following:

- Lectures / Core Content Delivery: 20 hours
- Tutorials / Synchronous Activities: 12 hours
- Case Syudy/Workshop: 4 hours
- Independent Study: 164 hours

Independent study encompasses coursework, problem-based learning, self-study, examination preparation, and activities such as feedback and reflection.

Formative feedback will be provided to support academic activities. This feedback may take various forms, such as question-and-answer sessions during lectures or core content delivery, worked examples, design exercises, and feedback on presentations. It may also involve discussion groups during tutorials. Additional opportunities for feedback include submitting coursework to receive formative reports, comments on tutorial or practical work during sessions and responses to email queries.

| **Learning Activities**<br>During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below: | **Student Learning Hours**<br>(Note: Learning hours include both contact hours and hours spent on other learning activities) |
|---|---|
| Lecture / Core Content Delivery | 20 |
| Tutorial / Synchronous Support Activity | 12 |
| Laboratory / Practical Demonstration / Workshop | 4 |
| Independent Study | 164 |
| n/a | 0 |
| n/a | 0 |
| **TOTAL** | 200 |

**Indicative Resources**

**The following materials form essential underpinning for the module content and ultimately for the learning outcomes:**


Slack, N. et al (2022), Operations Management, Pearson.

Slack & Lewis, Operations Strategy, Prentice Hall.

Brown, S (2018), Strategic Operations Management (4 th Ed), Routledge.

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 ButterworthHeinemann


**(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 and Engagement Requirements**

**In line with the Student Attendance and Engagement Procedure, Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.**

**For the purposes of this module, academic engagement equates to the following:**

The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. Students will scan their attendance, via the attendance scanners, each time they are on-campus, they will have their attendance recorded in class and they will be expected to login to the VLE several times per week. Students who are unable to attend a timetabled session, due to illness or other circumstance, should notify their Programme Leader. Across the School an 80% attendance threshold is set. Students who fall below this, will be referred to the Student Success Team to see how they can be best supported in their studies.

**Equality and Diversity**

**The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code.**

Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice in accordance with the University's policies and regulations.

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

**Supplemental Information**

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| **Divisional Programme Board** | **Engineering Physical Sciences** |
| **Overall Assessment Results** | ☐ **Pass / Fail** ☒ **Graded** |
| **Module Eligible for Compensation** | ☐ **Yes** ☒ **No**<br>**If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.** |
| **School Assessment Board** | Design |
| **Moderator** | M Ayat |
| **External Examiner** | B Bryant |
| **Accreditation Details** | N/A |
| **Module Appears in CPD catalogue** | ☐ **Yes** ☒ **No** |
| **Changes / Version Number** | 2.11<br>Module Descriptor copied to 2025/26 template. Resources list updated to reflect ILR feedback. Attendance and Engagement and EDI statements updated. |

| **Assessment (also refer to Assessment Outcomes Grids below)** |
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| **Assessment 1** |
| Unseen open book class test that contributes 60% to the final mark. |
| **Assessment 2** |
| Essay that contributes 40% to the final mark. |
| **Assessment 3** |
| N/A |
| (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.<br>(ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.) |

| **Component 1** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **Weighting of Assessment Element (%)** | **Timetabled Contact Hours** |
| Unseen open book class test | ☒ | ☒ | ☒ | ☐ | ☐ | 60 | 2 |

| **Component 2** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **Weighting of Assessment Element (%)** | **Timetabled Contact Hours** |
| Essay | ☒ | ☒ | ☒ | ☐ | ☐ | 40 | |

| Component 3 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **Weighting of Assessment Element (%)** | **Timetabled Contact Hours** |
| N/A | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| **Combined total for all components** | | | | | | 100% | 2 hours |

**Change Control**

| What | When | Who |
|---|---|---|
| Module Descriptor copied to 2025/26 template. Resources list updated to reflect ILR feedback. Attendance and Engagement and EDI statements updated. | March 2025 | F.Anvari |
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