## University of the West of Scotland

## Module Descriptor

**Session: 2024/25**

| **Title of Module: WBL1: Introduction to Engineering** | | | |
|---|---|---|---|
| **Code: ENGG07017** | **SCQF Level: 7 (Scottish Credit and Qualifications Framework)** | **Credit Points: 40** | **ECTS: 20 (European Credit Transfer Scheme)** |
| **School:** | School of Computing, Engineering and Physical Sciences | | |
| **Module Co-ordinator:** | Andrzej Wrzesien | | |

**Summary of Module**


This module is intended to provide apprentices (hereafter, students) with an introduction to engineering as a profession.

Part 1(Term 1): Foremost, students will be able to review and analyse current practices in their organisation's project(s) or the selected portfolio. Then, they will be able to demonstrate how those could lead positive impacts of economic, societal and environmental aspects on the organisation's future directions, relevant business sector, the nation and beyond, to meet with UN Sustainable Development Goals (SDGs) (regarding L1). This module also allows students to develop individual skill and mind sets to contribute to the organisation by reflecting their own motivations, preferences, values, working styles and so on, through the self-awareness assessment (regarding L3).

Part 2 (Term 2): In the engineering industry, it is well known that making better-informed decisions is a key to success in any of stages of project. To address this, students will be able to improve the ability of formal and structured decision-making skills, by applying a multi-criteria decision analysis (MCDA) method for their workplace activities (regarding L2). Meanwhile, to make a sounder decision-making by maintaining high ethical standards as an engineering profession, they will be able to demonstrate an understanding of ethical behaviour (regarding L3).

This module will support students to develop their UWS graduate attributes, namely: Academic (critical and analytical thinking, inquiring, knowledgeable, innovation, and problem solving); Personal (effective communicator, creative, imaginative); Professional (Collaborative, research-minded, and socially responsible).


**Module Delivery Method**

| **Face-To-Face** | **Blended** | **Fully Online** | **HybridC** | **Hybrid 0** | **Work-Based Learning** |
|---|---|---|---|---|---|
| ☒ | ☒ | ☐ | ☐ | ☐ | ☒ |

| **See Guidance Note for details.** |
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| **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) (tick as appropriate) | | | | | | |
| Paisley: | Ayr: | Dumfries: | Lanarkshire: | London: | Distance/Online Learning: | Other: |
| ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | Add name |

| **Term(s) for Module Delivery** | | | | | |
|---|---|---|---|---|---|
| (Provided viable student numbers permit). | | | | | |
| Term 1 | ☒ | Term 2 | ☒ | Term 3 | ☐ |

| **Learning Outcomes: (maximum of 5 statements)**<br>**These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module.**<br>At the end of this module the student will be able to: | |
|---|---|
| L1 | Recognise the organisation's current practice and develop creative and critical thinking ability for its future directions towards sustainable development. |
| L2 | Demonstrate an understanding of multi-criteria decision analysis and develop skills to make informed and structured decisions when selecting engineering solutions. |
| L3 | Improve individual skill and mind set as an engineering professional, based on the self-awareness assessment and ethical standards. |

| **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 **7**<br>Develop a broad knowledge of the workplace environment. Develop learning awareness and consider key aspects present in learning experiences as basis for critical evaluation of current approach to learning. Develop an active learning style to conduct deep level learning in the learning environment. Develop an understanding of personal and inter-personal skills development. Understanding of e-portfolio design. |
| Practice: Applied Knowledge and Understanding | SCQF Level **7**<br>Carry out routine lines of enquiry, development or investigation related to the workplace. |

| | | |
|---|---|---|
| | Creating a learner log and implementing an online e-portfolio. | |
| Generic Cognitive skills | SCQF Level **7**<br><br>Developing learner awareness of active deep learning approaches necessary for deep level skill development. Develop inter-personal skills. Develop personal active learning strategies. | |
| Communication, ICT and Numeracy Skills | SCQF Level **7**<br><br>Communicating knowledge effectively. interpreting issues and stating solutions. Making effective use of tools and information. | |
| Autonomy, Accountability and Working with others | SCQF Level **7**<br><br>Manage time and resources effectively. Work on own to gain concepts, identifying own learning needs. Work as part of a group as required. | |
| **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.

| **Learning and Teaching** | |
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| Through this module, the student will develop a set of learning activities in conjunction with their workplace mentor and academic tutor in order to meet the module's learning outcomes. To ensure that the apprenticeship is effectively managed, UWS has set various engagement points (EP) to involve the workplace mentor for work-based learning (WBL) modules. In addition to common EP1 for the WBL modules, the mentor will be invited to the final presentation (EP2) and provide formative feedback on the student submission (EP3) for this module at the end of Term 2. Lecture and support material is contained in course notes available on the UWS virtual learning environment (VLE) platform. | |
| **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>(Normally totalling 200 hours):<br>(Note: Learning hours include both contact hours and hours spent on other learning activities) |
| Practice Based Learning | 378 |

| | |
|---|---|
| Lecture/Core Content Delivery | 12 |
| Tutorial/Synchronous Support Activity | 10 |
| | 400 Hours Total |

****Indicative Resources: (eg. Core text, journals, internet access)**

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

Hepworth, Studying for Your Future - Successful Study Skills, Time Management, Employability Skills and Career Development - A Guide to Personal Development ... Skills. (Skills Training Course), Universe of

Learning Ltd., 2011

Satty, T. L. and Vargas, L. G. (2012) Models, Methods, Concepts & Applications of the Analytical Hierarchy Process, Springer, 2nd Ed.
Trought, F. (2017) Brilliant Employability Skills, Prentice Hall.

Kirton, B. (2011) Brilliant Workplace Skills for Students & Graduates, Prentice Hall.
Hepworth, Studying for Your Future - Successful Study Skills, Time Management, Employability Skills and Career Development - A Guide to Personal Development ... Skills. (Skills Training Course), Universe of
Learning Ltd., 2011

Please ensure the list is kept short and current. Essential resources should be included, broader resources should be kept for module handbooks / Aula VLE.

Resources should be listed in Right Harvard referencing style or agreed professional body deviation and in alphabetical order.

(**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:

Attending all timetabled classes

Notifying the Module Coordinator of absence in advance

Engaging with all module assessments or submitting an ECS

| Equality and Diversity |
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| The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code. |
| (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 |
| **Assessment Results (Pass/Fail)** | Yes ☐No ☒ |
| **School Assessment Board** | Civil Engineering and Quality Management |
| **Moderator** | John Hughes |
| **External Examiner** | M Bock |
| **Accreditation Details** | This module is accredited by Joint Board of Moderators as part of GA-BEng (Hons) Civil Engineering |
| **Changes/Version Number** | 1.08 (was 1.07)<br><br>Module Delivery Changed to Face-To-Face from Hybrid C.<br><br>Module hours amended to better reflect the delivery. |

| Assessment: (also refer to Assessment Outcomes Grids below) |
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| Term 1 Assessment includes Industry Review Essey (50%) related to Learning Outcome (LO) 1 and LO 3.<br>Term 2 Assessment includes two parts as 50% out of the final module mark: Project Review Report (30%) and Presentation (20%) examining LO 2.<br>With regards to LO2, the student's workplace mentor will be engaged in Term 2. |
| Assessment 1 – Industry Review Essay (50%) |
| Assessment 2 – Project Review Report (30%) |
| Assessment 3 – Presentation (20%) |
| (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.) |

**Assessment Outcome Grids (See Guidance Note)**

| **Component 1** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type (Footnote B.)** | **Learning Outcome (1)** | **Learning Outcome (2)** | **Learning Outcome (3)** | **Learning Outcome (4)** | **Learning Outcome (5)** | **Weighting (%) of Assessment Element** | **Timetabled Contact Hours** |
| Essay | √ | | √ | | | 50 | 0 |

| **Component 2** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type (Footnote B.)** | **Learning Outcome (1)** | **Learning Outcome (2)** | **Learning Outcome (3)** | **Learning Outcome (4)** | **Learning Outcome (5)** | **Weighting (%) of Assessment Element** | **Timetabled Contact Hours** |
| Report | | √ | | | | 30 | 0 |

| **Component 3** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type (Footnote B.)** | **Learning Outcome (1)** | **Learning Outcome (2)** | **Learning Outcome (3)** | **Learning Outcome (4)** | **Learning Outcome (5)** | **Weighting (%) of Assessment Element** | **Timetabled Contact Hours** |
| Presentation | | | √ | | | 20 | 2 |
| **Combined Total for All Components** | | | | | | **100%** | **2 hours** |