

## University of the West of Scotland

### Module Descriptor

**Session: 2024/25**

<b>Title of Module: Technical Communications</b>			
<b>Code: ENGG07004</b>	<b>SCQF Level: 7 (Scottish Credit and Qualifications Framework)</b>	<b>Credit Points: 20</b>	<b>ECTS: 10 (European Credit Transfer Scheme)</b>
<b>School:</b>	School of Computing Engineering and Physical Sciences		
<b>Module Co-ordinator:</b>	Dr Asraf Uzzaman		
<b>Summary of Module</b>			
<p>The accurate and timely communication of technical information is necessary for the success of any engineering project. That technical communication can take the form of oral, written and pictorial (manually or digitally created) for both technical and non-technical audiences. This module develops the technical communication knowledge, understanding and skills in the context of the specific engineering degree the students are undertaking. Due to the multidisciplinary nature of the module i.e. all engineering degree students undertake the module, students are made aware of the concept and implications of 'professional' (chartered) engineers and the role of Professional Engineering Institutions.</p> <p>Outcome 1 focusses on the students ability to select, critically evaluate and produce technical documentation. The specific interpretation and production of the documentation will consist of generic and specific degree related examples.</p> <p>Outcome 2 allows students to demonstrate their skills using digital design software within the context of their specific engineering degree with examples and problems related to this.</p> <p>Outcome 3 introduces students to technical communication knowledge, skills and use i.e. presentation and report writing which they may utilise across other modules and programme levels.</p> <p>Outcome 4 provides students with an awareness of the techniques, operations, equipment and safety awareness within a workshop and laboratory.</p> <p>Outcome 5 introduces students to the importance of ethical, inclusive and technical practice on a projects ability to provide positive environmental, social and economic impact.</p> <p>During the course of this module students will develop their UWS Graduate Attributes (<a href="https://www.uws.ac.uk/current-students/your-graduate-attributes/">https://www.uws.ac.uk/current-students/your-graduate-attributes/</a>) in the following areas-</p> <p>Universal: Academic - Critical thinking, analytical &amp; inquiring mind; Personal- Ethical; Professional- Collaborative</p> <p>Work-Ready: Academic - Knowledgeable, Digitally Literate, Problem Solver; Personal - Effective Communicator; Professional - Ambitious</p>			

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 laboratory and tutorial activity, module assessment which reflects industry problems/activities, development of digital intelligence meta-skills, recorded lecture content supporting students to organise their own study time, the use of integrated group activities supporting learning communities- particularly useful as this is a programme entry level module and the use of practical engineering workshops to provide authentic environments for assessment.

### Module Delivery Method

Face-To-Face	Blended	Fully Online	HybridC	Hybrid 0	Work-Based Learning
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

See Guidance Note for details.

### 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:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1	Term 2	Term 3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Learning Outcomes: (maximum of 5 statements)

At the end of this module the student will be able to:

L1	Select, critically evaluate and produce technical documentation.
L2	Demonstrate practical skills using digital design software.
L3	Produce effective oral and written technical presentations using appropriate digital toolsets for both technical and non-technical audiences individually and as a group.
L4	Identify the principal techniques, operations, equipment and potential safety concerns within engineering workshops & laboratories.

L5	Demonstrate technical, ethical and inclusive practice to ensure a projects positive environmental, social and economic impact.
<b>Employability Skills and Personal Development Planning (PDP) Skills</b>	
<b>SCQF Headings</b>	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	<p><b>SCQF Level 7</b></p> <p>Knowledge and understanding of the basic principles of producing technical documentation in a number of forms.</p> <p>Introduction to the use of digital design software.</p> <p>Knowledge of techniques, operations, equipment and potential safety concerns within workshops and laboratories.</p> <p>Knowledge of technical and ethical practices related to positive environmental, social and economic impact.</p>
Practice: Applied Knowledge and Understanding	<p><b>SCQF Level 7</b></p> <p>Develop knowledge, understanding and practical engineering skills acquired through work carried out in a design office environment.</p> <p>Develop practical engineering presentation skills acquired through individual and group project work and the use of digital design packages for both technical and non-technical audiences.</p> <p>Interpret and produce technical literature/other information sources.</p> <p>Select and critically evaluate technical literature and other sources of information to solve complex problems.</p> <p>Evaluate the environmental and societal impact of solutions to complex problems (to include the entire life-cycle of a product or process) and minimise adverse impacts.</p> <p>Demonstrate appropriate behaviours in a range of settings.</p>
Generic Cognitive skills	<p><b>SCQF Level 7</b></p> <p>Develop transferable skills that will be of value in problem solving.</p> <p>Be able to apply appropriate engineering drawing skills to basic problems. Ability to read and interpret complex technical literature.</p>

Communication, ICT and Numeracy Skills	<p>SCQF Level 7</p> <p>Develop transferable skills in oral and written communication the use of IT facilities and information retrieval skills. Be able to apply computer software relevant to engineering, construction and related disciplines. Awareness of security related to software and systems.</p>	
Autonomy, Accountability and Working with others	<p>SCQF Level 7</p> <p>Exercise autonomy and initiative in carrying out the defined activities at a professional level.</p> <p>Develop transferable skills that will be of value in a working with others. Function effectively as an individual, and as a member or leader of a team and be able to evaluate effectiveness of own and team performance.</p> <p>Develop skills in planning, self-learning and improving performance, as the foundation for lifelong learning/CPD.</p> <p>Adopt an inclusive approach to engineering practice and recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion</p>	
<b>Pre-requisites:</b>	Before undertaking this module the student should have undertaken the following:	
	<b>Module Code:</b>	<b>Module Title:</b>
	<b>Other:</b>	Or equivalent
<b>Co-requisites</b>	<b>Module Code:</b>	<b>Module Title:</b>

\*Indicates that module descriptor is not published.

<b>Learning and Teaching</b>
<p>This module covers a wide variety of conceptual and practical areas, which require a range of knowledge and skills to be displayed and exercised. Delivery of its syllabus content therefore involves a diversity of teaching and assessment methods suitable to the learning outcomes of the module; these include formal lectures, structured practical sessions to demonstrate the production of technical documentation and digital design software, open ended problem solving, flipped class teaching directly related to assessment tasks, completion and submission of written coursework making use of appropriate forms of IT and VLE, equipment/process/environment familiarisation and independent study.</p>

<b>Learning Activities</b> During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	<b>Student Learning Hours</b> (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	6
Tutorial/Synchronous Support Activity	18
Laboratory/Practical Demonstration/Workshop	24
Independent Study	152
	Hours Total 200

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

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

Drawing equipment

Digital Design software and a range of Microsoft applications Various handout material.

(\*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.

**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](#).

(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**

<b>Divisional Programme Board</b>	Engineering and Physical Sciences
<b>Assessment Results (Pass/Fail)</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>School Assessment Board</b>	Engineering
<b>Moderator</b>	Ashwini Konanahalli
<b>External Examiner</b>	L Supramaniam
<b>Accreditation Details</b>	This module is accredited by Joint Board of Moderators of the ICE, IStructE, IHE and CIHT as part of BEng (Hons) Civil Engineering. This module is accredited by IMechE as part of BEng/MEng (Hons) Mechanical Engineering and BEng/MEng (Hons) Aircraft Engineering. This module is accredited by IChemE as part of BEng/MEng (Hons) Chemical Engineering
<b>Changes/Version Number</b>	3.06 (was 3.05)  Module Delivery Changed to Face-To-Face from Hybrid C.

<b>Assessment: (also refer to Assessment Outcomes Grids below)</b>
Assessment for the module includes both formative and summative assessment. Formative assessment is provided during practical sessions in the form of feedback on class activities and in preparation for written submissions, and when preparing their presentations.
Summative assessment is provided by Design/Drawing, Report and Associated Presentation and Class Test. Assessment Category 1: Design/Drawing 50%
Assessment Category 2: Group Report 20% and Group Presentation 15%
Assessment Category 3: Class Test 15% A minimum of 30% applies to each of these three components. A minimum overall 40% is required to achieve a pass in this module.
(N.B. (i) <b>Assessment Outcomes Grids</b> 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 <b>indicative schedule</b> 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)

<b>Component 1</b>
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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
Design/ Diagram/ Drawing/ Photograph / Sketch	✓	✓				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 of practical/ field/ clinical work	✓	✓	✓		✓	20	0
Presentation	✓	✓	✓		✓	15	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
Class test (written)				✓		15	1
<b>Combined Total for All Components</b>						<b>100%</b>	<b>2 hours</b>