

# University of the West of Scotland

## Module Descriptor

Session: 2023/24

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Status: Published

**Title of Module: Safety Technology**

<b>Code: CEWM08003</b>	<b>SCQF Level: 8</b> (Scottish Credit and Qualifications Framework)	<b>Credit Points: 20</b>	<b>ECTS: 10</b> (European Credit Transfer Scheme)
<b>School:</b>	School of Health and Life Sciences		
<b>Module Co-ordinator:</b>	Jan Miller		

### Summary of Module

This is a continually assessed module.

This module is a practical and essential part of the occupational safety and health suite of modules and focuses on the technology to ensure safety in the workplace. Material science leads off the module with consideration of materials, structures and strength and testing for material failure. Types of failure and their consequences are discussed and will include the properties and effects/impact of gases, liquids and solids. Testing methods (destructive and non-destructive) are reviewed within the legislative requirements for testing, and the methods include X-ray, gamma ray, ultraviolet, ultrasonic, vibration and infrared. Chemical safety and sources of information leads on to safe systems for handling and transporting hazardous chemicals within the workplace and procedures appropriate to follow in an emergency. Integrity of machinery, plant and structures is also part of this module. Component failure, causes and avoidance are discussed, leading to elements of design and operation to ensure safety make up the remainder of the module.

The module provides the students with a range of skills from problem solving to testing materials and report writing which will proved beneficial in all areas of health and safety management, it will also help to develop a range of 'I am UWS' Graduate Attributes.

**U**niversal – development of critical thinking, ethically and research minded.

**W**ork Ready – an effective problem solver, communicator and ambitious.

**S**uccessful – by being autonomous, resilient and driven.

### Module Delivery Method

Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
			✓		

**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.

**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

**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.

**HybridC**

Online with mandatory face-to-face learning on Campus

**HybridO**

Online with optional face-to-face learning on Campus

**Work-based Learning**

Learning activities where the main location for the learning experience is in the workplace.

**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)**

On successful completion of this module the student will be able to:

- L1. Outline and review key elements of material science in relation to failure modes and material testing.
- L2. Demonstrate a working knowledge of plant and equipment used on industrial sites, including their practical applications and their potential impact on health and safety.
- L3. Summarise and discuss aspects of chemical safety and other related areas of health and safety management.

**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)	<p>SCQF Level 8.</p> <p>Demonstrate a knowledge and understanding of material science</p> <p>Understand the core principles and practices in relation to safety technology as used within the workplace</p>

Practice: Applied Knowledge and Understanding	<p>SCQF Level 8.</p> <p>Synthesise information from a number of sources in order to gain a coherent understanding of theory and practice</p> <p>Identify failure modes through material testing</p>	
Generic Cognitive skills	<p>SCQF Level 8.</p> <p>Apply strategies for the appropriate selection of relevant information from a wide source and large body of knowledge</p> <p>Apply the skills needed for academic study and enquiry</p> <p>Critically evaluate evidence from a variety of topic</p>	
Communication, ICT and Numeracy Skills	<p>SCQF Level 8.</p> <p>To be able to make appropriate written presentations, using IT as required</p>	
Autonomy, Accountability and Working with others	<p>SCQF Level 8.</p> <p>Work as part of a group to analyse information and manage the outcome</p> <p>Take a supervisory role for the work of others in defines areas of work</p>	
<b>Pre-requisites:</b>	Before undertaking this module the student should have undertaken the following:	
	<b>Module Code:</b> BIOL07021	<b>Module Title:</b> Investigation & Communication
	<b>Other:</b>	OR appropriate knowledge and experience, including NEBOSH Certificate
<b>Co-requisites</b>	<b>Module Code:</b>	<b>Module Title:</b>

\* Indicates that module descriptor is not published.

<b>Learning and Teaching</b>	
<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	18
Tutorial/Synchronous Support Activity	9
Laboratory/Practical Demonstration/Workshop	9
Independent Study	164
	200 Hours Total
<b>**Indicative Resources: (eg. Core text, journals, internet access)</b>	

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

Virtual Learning Environment: Timetables, lecture summaries, seminar, assignments, staff contact information and other information associated with the running of the Module.

“Safety at Work”, Eighth Edition, J Channing, 2014 ISBN 978 0 415 65696 2\*

Useful web sites:

www.iosh.co.uk

www.hse.gov.uk

www.netregs.gov.uk

www.defra.gov.uk

Referencing: Pears, R. and Shields, G. (2019) Cite them right: the essential referencing guide. 11th rev. edn. London: Red Globe Press. Print and electronic copies are available from UWS Library.

(\*\*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](#)

Where a module has Professional, Statutory or Regulatory Body requirements these will be listed here: Attendance at synchronous sessions (lectures, workshops, and tutorials), completion of asynchronous activities, and submission of assessments to meet the learning outcomes of the module.

### Supplemental Information

<b>Programme Board</b>	Biological Sciences and Health
<b>Assessment (Pass/Fail) Results</b>	No
<b>Subject Panel</b>	Biology L7-11
<b>Moderator</b>	Richard Thacker
<b>External Examiner</b>	S Boyd
<b>Accreditation Details</b>	This module is accredited by Institution of Occupational Safety and Health (IOSH) if taken as part of the BSc (Hons) in Occupational Safety and Health programme.
<b>Changes/Version Number</b>	2.14 Changed from Blended to Hybrid C

**Assessment: (also refer to Assessment Outcomes Grids below)**

Three assignment (20% each) worth 60% of the final mark.  
The assignments will focus on three key areas, material science, plant and equipment and chemical safety.

Two short answer class tests (20% each) worth 40% of the final mark.  
Each class test will consist of 3 questions that the students are required to answer.

(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
Essay	✓	✓	✓	60	0

**Component 2**

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test (written)	✓	✓	✓	40	2
<b>Combined Total For All Components</b>				100%	2 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**

In line with current legislation (Equality Act, 2010) and the UWS Equality, Diversity, and Human Rights Code, our modules are accessible and inclusive, with reasonable adjustment for different needs where appropriate. Module materials comply with University guidance on inclusive learning and teaching, and specialist assistive equipment, support provision and adjustment to assessment practice will be made in accordance with UWS policy and regulations. Where modules require practical and/or laboratory based learning or assessment required to meet accrediting body requirements the University will make reasonable adjustment such as adjustable height benches or assistance of a 'buddy' or helper. Please refer to the UWS Equality and Diversity Policy at the following link: [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)