

University of the West of Scotland

Module Descriptor

Session: 2023/24

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Status: Published

Title of Module: Control of Pollution

Code: CEWM10001	SCQF Level: 10 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Health and Life Sciences		
Module Co-ordinator:	Jan Miller		

Summary of Module

The module provides technical aspects of waste management and control of pollution to air, land and water. Waste management facility site engineering and closure are covered along with impacts and controls on pollution from a range of waste treatment methods and facilities. This includes management of leachate, emissions and residues as well as procedures for site closure and long-term management. Contaminated land will be introduced and legislation, identification, investigation and remediation all covered. Waste is introduced with a focus on hazards, the waste cycle, modelling, pollutant mobility, types of contaminants, their transport and transformation. New technologies for waste management are reviewed. Effluent management for domestic and industrial waste waters and sewage treatment and disposal are included.

Class materials, research resources, exercises, class communications, administrative information and assignment handling will be supported by a Virtual Learning Environment

This module provides students with an advanced view of the control of pollution, waste treatment technologies and wastewater issues and treatment. They will gain an understanding of the realities of the physical and technical elements of controlling pollution and waste management, which could be beneficial for the honours project and future employment.

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	
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Learning Outcomes: (maximum of 5 statements)

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

L1. Demonstrate a clear understanding of the methods of controlling and disposing of domestic and industrial wastes, including emerging technologies

L2. Incorporate pollution control techniques into the management of air, land and water, with links to sustainable resource management

L3. Integrate planning issues of facility site selection with the selection of appropriate technologies for control of pollution from any type of waste handling facility

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 10. Detailed knowledge and understanding of the range and variety of pollution control techniques, with particular reference to industrial settings that deal with wastes Critical understanding of sustainable waste treatment techniques.
Practice: Applied Knowledge and Understanding	SCQF Level 10. Identify waste management/treatment/disposal options with regard to new technologies. Evaluate information and gain a coherent understanding of theories and practices in implementing a range of techniques for controlling pollution and the remediation of contaminated land.
Generic Cognitive skills	SCQF Level 10. Develop and demonstrate an ability to communicate effectively in a variety of professional settings and provide clear guidance on appropriate techniques for pollution control as it applies to waste management sites and facilities. Demonstrate some originality in developing solutions to potential pollution problems.
Communication, ICT and Numeracy Skills	SCQF Level 10. Gain a full understanding of the process of preparing oral and written reports, using IT. Communicate pollution control options in a professional setting.

Autonomy, Accountability and Working with others	<p>SCQF Level 10.</p> <p>Work as part of a team to analyse information from an air, water or land pollution situation and formulate a solution.</p> <p>Work independently to develop a plan to manage a specific pollution issue and prepare a presentation that would be suitable to present to an industrial or business client.</p>
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Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	All applicants must satisfy the qualification and/or experience requirements as established in the admission criteria. See Reg. 6.3
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

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	20
Tutorial/Synchronous Support Activity	16
Independent Study	164
	200 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:

Class notes on the Virtual Learning Environment

As the University moves towards e-books, an updated list will be made available on the Virtual Learning Environment

Chartered Institution of Wastes Management monthly journal on-line at <http://www.ciwm.co.uk/CIWM/CIWMHome.aspx>

Barbour Index on-line (UWS Library Electronic Resources)

Scottish Environmental Protection Agency: <http://www.sepa.org.uk/>

www.contamlinks.co.uk

www.environmentalchemistry.com

(**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

Programme Board	Biological Sciences and Health
Assessment Results (Pass/Fail)	No
Subject Panel	Biology L7-11
Moderator	Iain McLellan
External Examiner	S Boyd
Accreditation Details	This module is part of the BSc (Hons) Environmental Health with Professional Practice programme; accredited by The Royal Environmental Health Institute of Scotland (REHIS).
Changes/Version Number	1.11 Change to HybridO delivery and removed attendance based from the general details section.

Assessment: (also refer to Assessment Outcomes Grids below)

Assignment 1 Focuses on methods of controlling and treatment of emerging pollutants.
40% of overall mark

Assignment 2 Looks at techniques into the management of air, land and water, with links to sustainable resource management.
40% of overall mark

A presentation based on planning issues on pollution control.
20% of overall mark

(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	✓			40	0

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours

Essay		✓		40	0
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Component 3

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Presentation			✓	20	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

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](#)

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