Module Descriptor

Title	Control of Pollution		
Session	2024/25	**Status**	
Code	CEWM10001	**SCQF Level**	10
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**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	**On-Campus[1]**	**Hybrid[2]**	**Online[3]**	**Work -Based Learning[4]**
	☐	☒	☐	☐

[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

Campuses for Module Delivery	☐ Ayr ☐ Dumfries		☒ Lanarkshire ☐ London ☐ Paisley		☐ Online / Distance Learning ☐ Other (specify)	
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	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
L4	
L5	

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** 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 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 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 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	**SCQF 10** Work as part of a team to analyse information from an air, water or land pollution situation and formulate a solution. 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.

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.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning 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
Please select	
Please select	
Please select	
TOTAL	200

Indicative Resources
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)

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:** Attendance at synchronous sessions (lectures, workshops, and tutorials), completion of asynchronous activities, and submission of assessments to meet the learning outcomes of the module.

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

Divisional Programme Board	**Biological Sciences Health**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☐ **Yes** ☒ **No** **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	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).
Module Appears in CPD catalogue	☒ **Yes** ☐ **No**
Changes / Version Number	1.12

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Assignment 1 Focuses on methods of controlling and treatment of emerging pollutants. 40% of overall mark
Assessment 2
Assignment 2 Looks at techniques into the management of air, land and water, with links to sustainable resource management. 40% of overall mark

Assessment 3
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 Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☒	☐	☐	☐	☐	40	0

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☒	☐	☐	☐	40	0

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☒	☐	☐	20	0
Combined total for all components						100%	0 hours

Change Control

What	**When**	**Who**