Module Descriptor

Title	Pollution Control		
Session	2025/26	**Status**	Published
Code	CEWM11006	**SCQF Level**	11
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	G Clayton		

Summary of Module

Human activities result in the release of pollutants to the environment and this module investigates the different pollution control mechanisms available to regulators and industries. This will include the management of landfills, contaminated land, air pollution and other emissions. Within each pollutant source, the relevant legislation will be highlighted, as well as the tools available to identify, investigate and remediate pollution. There will be a focus on hazards, waste cycle, pollutant mobility and their environmental fate.

This module provides students with an advanced view of sustainable pollution control, waste treatment technologies and wastewater issues and treatment and is an essential component for environmental professionals. They will gain an understanding of the realities of the physical and technical elements of pollution control and waste management, which could be beneficial for the MSc dissertation and future employment.

On completion of this module you will gain the following Graduate Attributes:

• Critical thinking by working collaboratively with colleagues on research

minded assignments

• Problem solving and effective communication

• Your research will be innovative and creative producing resilient solutions to our environmental challenges.

Module Delivery Method	On-Campus[1] ☒	Hybrid[2] ☐	Online[3] ☐	Work -Based Learning[4] ☐
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	Have a detailed and critical knowledge of 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	N/A
L5	N/A

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 11** Gain a critical understanding of the range and variety of pollution control techniques, with particular reference to industrial settings that deal with wastes. Evaluate the effectiveness of waste treatment techniques
Practice: Applied Knowledge and Understanding	**SCQF 11** Identify waste management/treatment/disposal options with particular regard to new technologies. Evaluate information and gain a coherent understanding of theories and practices in implementing a range of techniques for pollution control and the remediation of contaminated land

[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

Generic Cognitive skills	**SCQF 11** 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 an understanding of an issue and develop a solution to a potential pollution problem.
Communication, ICT and Numeracy Skills	**SCQF 11** 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 11** Work as part of a professional team to analyse information from an air, water or land pollution situation, formulate a solution and present it back to the group. 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** N/A	**Module Title** N/A
	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** N/A	**Module Title** N/A

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	30
Tutorial / Synchronous Support Activity	6
Independent Study	164
n/a	
n/a	
n/a	
TOTAL	200

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

Barbour Index on-line (UWS Library Electronic Resources) Chartered Institution of Wastes Management: http://www.ciwm.co.uk/CIWM/CIWMHome.aspx

Craig, J.R., Vaughan, D.J., Skinner, B.J. (2014) Earth Resources and the Environment

4th edn Pearson Harrison R.M. (2014) Pollution: causes, effects and control. 5th edn. RSC Publishing NetRegs: Environmental guidance for Northern Ireland and Scotland: https://www.netregs.org.uk/

Scottish Environment Protection Agency: http://www.sepa.org.uk/

UWS class notes on the Virtual Learning Environment

(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:

The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. You will scan your attendance via the scanners each time you are on-campus and you will login to the VLE several times per week. Where you are unable to attend a timetabled learning session due to illness or other circumstance, you should notify the Programme Leader that you cannot attend. Across the School an 80% attendance threshold is set. If you fall below this, you will be referred to the Student Success Team to see how we can best support your studies.

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.

Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. Specialist assistive equipment, support provision and adjustment to assessment practice in accordance with the University's policies and regulations.

(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	**Engineering Physical Sciences**
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	Physical Sciences
Moderator	L Sun
External Examiner	A Oke
Accreditation Details	N/A
Module Appears in CPD catalogue	☒ **Yes** ☐ **No**
Changes / Version Number	2.14 - Updates to Attendance and EDI sections

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Written report on pollutant emissions
Assessment 2
Written report on sector pollutants
Assessment 3
Oral Presentation
(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**
Essay	☒	☐	☐	☐	☐	40	

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

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

Change Control

What	When	Who
Updated statements for Attendance and EDI	21/03/2025	G Clayton
Updated timetabled contact hours for Assessment 3	21/03/2025	G Clayton