University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Designer Drugs			
Code: CHEM09023	**SCQF Level: 9 (Scottish Credit and Qualifications Framework)**	**Credit Points: 20**	**ECTS: 10 (European Credit Transfer Scheme)**
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Carrie Mullen		

Summary of Module

This module looks at Designer Drugs and the related New Psychoactive Substances (NPS) to examine their legal status, use in society and the important aspects of chemistry, pharmacology and toxicology. Methods for synthesis of designer drugs, in addition to various chromatographic and spectroscopic methods for analysis and identification, are introduced.
The module is structured with a focus on encouraging the development of professional and research skills, ahead of the individual research projects at level 10. This module will strengthen several of the key 'I am UWS' Graduate Attributes, with students acquiring competencies in working to deadlines, making presentations and working in teams.
The module is continually assessed and involves the production of individual infographics and a group presentation on an NPS.

Module Delivery Method

Face-To-Face	**Blended**	**Fully Online**	**HybridC**	**Hybrid 0**	**Work-Based Learning**
☒	☒	☐	☐	☐	☐

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:
☒	☐	☐	☐	☐	☐	Add name

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	☒	Term 2	☐	Term 3	☐

Learning Outcomes: (maximum of 5 statements) **These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module.** At the end of this module the student will be able to:	
L1	Evaluate the global and national societal impact of an assigned designer drug, integrating pharmacological, toxicological, ethical and legal perspectives
L2	Apply knowledge of pharmacology and chemistry to investigate the synthesis, mechanisms of action, analysis and toxicology of an assigned designer drugs
L3	Utilise suitable software for effective research, data analysis, and communication.
L4	Collaborate effectively in group research, demonstrate professionalism and adherence to ethical standards
L5	Evaluate professional standards in science and prepare targeted job applications, showcasing alignment between personal skills and industry expectations

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 **9** Gaining a broad and integrated knowledge and understanding of the purpose and role of medicinal chemistry and toxicology. Acquiring a critical understanding of the methods by which illegal Designer Drugs are produced and discovered. Gaining knowledge of how the toxicology of drugs is studied
Practice: Applied Knowledge and Understanding	SCQF Level **9** Acquiring knowledge and understanding in the use of chemical software and applying that knowledge to tackle defined tasks. Gain an understanding of how infographics can be used to disseminate important information in an accessible way and aid education and intervention.

	Understanding of the best methods to research and present information from the scientific literature Prepare a job application and evaluate a CV	
Generic Cognitive skills	SCQF Level **9** Undertaking a critical evaluation of the synthesis, analysis and activity of a New Psychoactive Substance. Undertaking a critical analysis of various toxicology issues as applied to a New Psychoactive Substance	
Communication, ICT and Numeracy Skills	SCQF Level **9** Using molecular software packages to present chemical information and generate calculated data Presenting formal written and oral presentations that clearly illustrate a critical understanding of the topic involved. Bringing information together from a variety of sources, using information retrieval systems and appropriate IT skills to produce an infographic and presentation on for a New Psychoactive Substance. Development of skills for job interviews	
Autonomy, Accountability and Working with others	SCQF Level **9** Working effectively with others in an active-learning context which focuses on group work. Demonstrating an awareness of others' roles and responsibilities and their own impact on these. Identifying and addressing individual learning needs in the subject area associated with the module	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	**Module Title:**
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

*Indicates that module descriptor is not published.

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** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	12
Tutorial/Synchronous Support Activity	18
Personal Development Plan	6
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:

King LA (2003) *The misuse of drugs act: a guide for forensic scientists*, Royal Society of Chemistry

Negrusz A and Cooper GAA (Eds) (2013) *Clarke's Analytical Forensic Toxicology* (2nd Ed), Pharmaceutical Press

Silverman, R.B. (2014) *The organic chemistry of drug design and action*, 3rd edition, Elseviet.

(**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:

Regular communication with your group and keeping up with agreed group deadlines.

Attendance at lectures and tutorials, reflecting on what was covered and performing additional reading around the topic, relating it to your assigned NPS. Participation in, and contribution to, workshop tasks and discussions.

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. Staff are aware that students have different approaches to learning and will make every effort to ensure teaching is provided in a variety of formats and will use Aula to its fullest extent in this respect. Staff will make reasonable adjustments to suit individual student needs. The assessment strategy has inclusivity at its core. Working in groups students are expected to appreciate the different learning styles, practices and responsibilities of their peers and learn to make accommodations as necessary.
(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	Physical Sciences
Assessment Results (Pass/Fail)	Yes ☐No ☒
School Assessment Board	Physical Sciences
Moderator	Ciaran T Ewins
External Examiner	M Symes
Accreditation Details	This module is part of programmes Accredited and Recognised by the Chartered Society of Forensic Sciences
Changes/Version Number	2.21 General housekeeping to text across sections. Updated weight of assessments. Updated contact hours and mode of delivery. Rewording of ILOs for clarity.

Assessment: (also refer to Assessment Outcomes Grids below)
Assessment 1: Presentation 50 %
Assessment 2: Written Assignments 50%
(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.)

Assessment Outcome Grids (See Guidance Note)

Component 1							
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**
Presentation	✓	✓	✓	✓		50	

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**
Written Assignment	✓	✓	✓		✓	50	
Combined Total for All Components						**100%**	**XX hours**