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Refer to guidance notes for completion of each section of the specification.

Module Code:	SCI625
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Module Title:	Drugs and Toxicology
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Level:	6	Credit Value:	20
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Cost Centre(s):	GAFS	JACS3 code: HECoS code:	Forensic Science: JACS3 F410 HECoS 100417
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Faculty	FAST	Module Leader:	Dr Amiya Chaudhry
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Scheduled learning and teaching hours	24 hrs
Placement tutor support	0hrs
Supervised learning eg practical classes, workshops	6 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total contact hours	30 hrs
Placement / work based learning	
Guided independent study	170 hrs
Module duration (total hours)	Click here to enter TOTAL hours. 200hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BSc(Hons) Forensic Science	✓	<input type="checkbox"/>
		<input type="checkbox"/>

Pre-requisites
None

Office use only

Initial approval: March 2018 Version no 1:
 With effect from: 01/09/2018
 Date and details of revision: 5/8/20 Temporary change to assessment for 2020/21 post Covid. Version no:2
 22/9/21 Temporary assessment change extended for 21/22

Module Aims

The module is intended to:

- Introduce the chemistry of drugs and poisons.
- Consider the classification methods of drugs and poisons.
- Discuss methods utilised in forensic drug analysis.
- Outline the forensic toxicology of the above area, including pharmacokinetics.
- Broaden the scientific and technical knowledge of students through the exploration of high-profile drug related case studies.

Module Learning Outcomes - at the end of this module, students will be able to

1	Obtain a systematic understanding of the chemistry of drugs and poisons and methods of classification.
2	Critically appraise sampling and analytical techniques that are used to solve drugs and poison cases.
3	Apply pharmacokinetic principles to solve numerical problems.
4	Critically evaluate evidence and demonstrate the role played by forensic toxicologists in investigations.

Employability Skills The Wrexham Glyndŵr Graduate	I = included in module content A = included in module assessment N/A = not applicable
<i>Guidance: complete the matrix to indicate which of the following are included in the module content and/or assessment in alignment with the matrix provided in the programme specification.</i>	
CORE ATTRIBUTES	
Engaged	I & A
Creative	I & A
Enterprising	I & A
Ethical	I
KEY ATTITUDES	
Commitment	I & A
Curiosity	I & A
Resilient	I & A
Confidence	I & A
Adaptability	I & A
PRACTICAL SKILLSETS	
Digital fluency	I & A
Organisation	I & A
Leadership and team working	I
Critical thinking	I & A
Emotional intelligence	I & A
Communication	I & A

Derogations

None

Assessment:

Indicative Assessment Tasks:

Guidance: please ensure you add indicative word count and durations within the narrative body of this section

Assessment 1: Presentation based on a high profile self-drug abuse case study or a high profile murder case study (50%).

Assessment 2: Exam (2 hours) (50%)

Post Covid-19 Temporary modification valid for 20/21 only:

Assessment 1: Online Panopto Presentation (20 min) based on a case study (50%).

Assessment 2: Open book online test (2 hours) (50%)

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	4	Presentation	50
2	1,2 and 3	Exam	50
Post Covid-19 Temporary modification valid for 20/21 and 21/22			
1	4	Presentation	50
2	1,2 and 3	In-class test	50

Learning and Teaching Strategies:

Students will be taught by a series of online and onsite timetabled lectures throughout the semester. Problem solving exercises and case studies will help reinforce fundamental principles. Students will research case studies and present information to peers. Guidance will be provided for directed learning.

Syllabus outline:

Drugs and evidence:

- Drug definition and classification.
- Legal classification of drugs of abuse within the UK system, including examples.
- Drugs as evidence, physical evidence, biological evidence and importance of drug profiling.

Drug analysis:

- Types of samples that are analysed (bulk and trace).
- Presumptive tests such as chromatography
- Confirmatory tests using mass spectroscopy and infrared spectroscopy

Forensic toxicology:

- Poisoning: types of poison and routes through the body.

Introduction to basic pharmacokinetics:

- Toxic dose: sampling
- Factors affecting toxicity

Researching and presenting case studies

Indicative Bibliography:**Essential reading**

Bell, S. (2014), Forensic Chemistry. 2nd ed. Harlow: Pearson Education.

Other indicative reading

- *Bell, S. (2019), Forensic Science: An Introduction to Scientific and Investigative Techniques 5th ed. CRC Press*
- *Dhillon, S. and Kostrzewski, A. (2006), Clinical Pharmacokinetics. London: Pharmaceutical Press.*
- *Jackson, A.R.W. and Jackson, J.M. (2017), Forensic Science. 4th ed. Harlow: Prentice Hall.*
- *Lappas, N.T. and Lappas, C.M. (2016) Forensic Toxicology: Principles and Concepts. Academic Press Elsevier*
- *Negrusz, A. and Cooper, C. (2013), Clarke's Analytical Forensic Toxicology. 2nd ed. London: Pharmaceutical Press.*
- *Case studies and court papers.*