

Module specification

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Module Code	SCI648
Module Title	Drugs & the Human Body
Level	6
Credit value	20
Faculty	FAST
HECoS Code	100350
Cost Code	GAFS

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Forensic Science	optional
BSc (Hons) Forensic Science with Placement Year	optional

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	24 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	6 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	24 hrs
Placement / work based learning	0 hrs
Guided independent study	176 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	10/05/2023
With effect from date	September 2023
Date and details of revision	
Version number	1

Module aims

This module will develop an understanding of the mechanisms by which major drug categories affect the human body. Drug characteristics, route of administration, mechanism of action, and interactions will be investigated. The module is also intended to develop a strong understanding of contribution that pharmacology makes to other biomedical sciences and forensic science.

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

1	Explain the key mechanisms by which commonly used drugs in the major drug categories affect the human body
2	Apply theory of pharmacokinetic and pharmacodynamic principles to solve problems
3	Critically evaluate the action of drugs and factors affecting the interactions of drugs with the human body.
4	Critically appraise the evidence of drug impact on the human body in relation to the fields of Forensic and Biosciences

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment 1: Coursework

Short-answered and problem-solving questions near the end of semester.

Assessment 2: Presentation (20 min)

Students will present a case study of a commonly used drug and evaluate key factors affecting the interaction of the chosen drug with the human body. Students will also be asked to critically evaluate data on how current knowledge and understanding of the drug mechanism and its impact on the human body is contributing to the fields of forensic or biosciences.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-2	Coursework	50
2	3-4	Presentation	50

Derogations

None

Learning and Teaching Strategies

Methods of delivery:

- Lectures
- Directed study via Moodle VLE
- Independent student directed study

The module will be delivered using a variety of methods including lectures and group-based activities. 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. Students will be able to further develop their knowledge and understanding by reading additional course materials on the Moodle VLE. Independent student-directed learning will enable them to delve more deeply into the subject material, enhancing their learning, while developing their academic transferrable and IT skills. Moodle will act as a repository for session materials.

Indicative Syllabus Outline

- Drug definition and classification
- The relationship between pharmacokinetics and pharmacodynamics
- Pharmacokinetics:
 - Absorption, Distribution, Biotransformation, Elimination
- Pharmacodynamics:
 - Principles of Drug Action, Mechanisms of drug action
- Toxicology and damage produced by exogenous chemicals.
- Drug - Drug interactions
- Current research and suitable case studies for the specific programme of study

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

Gaskell, E. & Rostron, C. (2013), *Therapeutics and Human Physiology: How drugs work (Integrated Foundations of Pharmacy)*, 1st Edition. Oxford: OUP.

Other indicative reading

Rosenbaum, S. (2017), *Basic Pharmacokinetics and Pharmacodynamics: An Integrated Textbook and Computer Simulations*, 2nd Edition, John Wiley and Sons Ltd, United States.

Suitable research papers, case studies and court papers.

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes

Engaged
Enterprising
Creative
Ethical

Key Attitudes

Commitment
Curiosity
Resilience
Confidence

Practical Skillsets

Digital Fluency
Organisation
Critical Thinking
Emotional Intelligence
Communication