

Module Details	
Module Title	Pharmacology and Therapeutics
Module Code	CLS5013-B
Academic Year	2022/3
Credits	20
School	School of Pharmacy and Medical Sciences
FHEQ Level	FHEQ Level 5

Contact Hours	
Type	Hours
Lectures	23
Tutorials	18
Directed Study	159

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims	
The module aims to develop an understanding of pharmacokinetics, drug metabolism and transport, dosage requirements in different population and patient groups, drug delivery strategies and selected modern therapeutics.	

Outline Syllabus	
Clinical Pharmacokinetics. Compartmental and non-compartmental analysis of drug distribution. Drug absorption and bioavailability. Effect of renal and liver disease on pharmacokinetics. Pathways of drug metabolism. Population pharmacokinetics. Pharmacogenomics - metaboliser phenotypes and clinical implications for response and dosing. Drug interactions, inhibition, induction. Drug therapy and clearance in pregnant and nursing women, neonates and children, elderly patients. Routes of administration. Prodrugs. Modern therapeutics - targeted cancer therapeutics, pain management, inflammation.	

Learning Outcomes

Outcome Number	Description
LO1	Discuss how drugs are absorbed, distributed, metabolised and eliminated from the body and explain how these processes may differ in various sub-populations.
LO2	Evaluate the basis of drug interactions based on pharmacokinetic and metabolic parameters.
LO3	Discuss how different drug delivery methods can be used to modify pharmacokinetic and pharmacodynamic properties.
LO4	Discuss the mechanism of action and pharmacological properties of modern treatments for cancer, pain and inflammation.
LO5	Interpret individual and population pharmacokinetic profiles.
LO6	Evaluate critically and draw conclusions from clinical and scientific data.
LO7	Interpret numerical data; select and perform appropriate data analysis and presentation techniques.

Learning, Teaching and Assessment Strategy

Information outlining the knowledge and understanding required of this module is delivered in lectures, seminars, and online learning ahead of tutorials ('flipped delivery'). Self-directed learning during directed study time and in-class exercises will develop your cognitive skills and tutorials will be used to reinforce the taught component.

Formative assessment workshops will prepare for the summative assessments by allowing you to discuss your approach to exam-style problems with module tutors. Knowledge base and ability to apply material will be assessed by an open-book examination and case study evaluation.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Examination - Open Book	Seen paper examination (1 hour): Pharmacokinetic case study evaluation	20%
Summative	Examination - Open Book	Open book examination (2 hours): Structured long-answer questions	80%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

