

Module Specification

Module Title Module Code

Credit Value Level Mode of Delivery

Module Organiser

Pre-requisite modules	Co-requisite modules	Overlapping modules
CHE206A	None	None

Content Description

Selected topics in pharmaceutical chemistry are discussed in this module. We will review some of the major classes of drugs and their mechanism of actions in treating disease. Prototypical drugs and those developed to refine the properties of earlier examples are also considered. The rationale behind the development of particular drugs is presented along with their discovery and optimisation. Undesirable effects of drugs, pharmacokinetics and drug-drug interactions are also discussed where appropriate.

Aims of the module

This module will provide a fundamental understanding about drug design and the molecular mechanisms by which drugs act, highlighting key medicinal/pharmaceutical chemistry principles. The module covers the discovery, optimisation and mechanism of actions of several major classes of drug and the disease(s) they are used to treat.

Learning Outcomes

Academic Content:	
A 1	Knowledge of the major neurotransmitters of the peripheral and central nervous system; their function, their receptors and other important sites at which drugs act; exploitation of such knowledge in the design and use of drugs to treat common ailments and disease associated
A 2	Selected topics in pharmaceutical chemistry. Knowledge and understanding of some of the main groups of drugs, how they were discovered, optimised and how they act.
A 3	New entities in clinical trials.

Disciplinary skills - able to:	
B1	Identify suitable drugs for treatment of specific conditions and rationalize their use, modes of action and any side effects. Be able to suggest alternatives where appropriate.
B2	Exemplify and discuss unwanted effects of drugs, including drug-drug interactions.
B3	Rationalise structure activity relationships of specific drug examples and suggest modifications to potentially improve pharmacodynamics and/or pharmacokinetics.

Attributes:	
C1	Acquire and apply knowledge relating to the principles and practices of pharmaceutical/medicinal chemistry.
C2	Explain and argue clearly and concisely.
C3	Use information for evidence-based decision-making.

Reading List

An Introduction to Medicinal Chemistry by G. L. Patrick (Oxford University Press)
 Foye's Principles of Medicinal Chemistry by T. L. Lemke and D. A. Williams (Lippincott Williams & Wilkins)
 Pharmacology by H. P. Rang, M. M. Dale, J. M Ritter, R. Flower, R (Churchill Livingstone)
 Medical Pharmacology at a Glance by M. J. Neal (Blackwell Science)

Teaching and Learning Profile

Activity Type	KIS Category	Time Spent (in hours)
Lecture	Scheduled	22
Practical Classes and workshops	Scheduled	8
Guided independent study	Independent	120
	Total	150

Activity Type	Total Time Spent (in hours)	Percentage of Time Spent
Scheduled learning and teaching	30	20
Independent Study	120	80
Total	150	100

Assessment Profile

Brief Description of Assessment	Assessment Type	KIS Category	Duration / Length	% Weighting	Final element of assessment?	Qualifying Mark
Coursework	Written assignment	Coursework		20%	No	N/A
Examination	Written Exam	Written	2 h	80%	Yes	N/A

Reassessment

- Standard Reassessment
 Synoptic Reassessment

Synoptic reassessment details

Brief Description of Assessment	Assessment Type	Duration / Length of Examination / Coursework
Resit Examination	Written Exam	2h