

MODULE DESCRIPTOR

Module Title

Rational Drug Design

Reference	PL2002	Version	4
Created	March 2024	SCQF Level	SCQF 8
Approved	June 2022	SCQF Points	30
Amended	April 2024	ECTS Points	15

Aims of Module

To develop an understanding of the structure and properties of drugs and identify a link to their pharmacological properties.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Discuss the origins, structures and properties of pharmacologically important compounds and apply the principles of rational drug design to selected classes of drugs.
- 2 Manipulate, interpret and evaluate experimental data.
- 3 Discuss procedures for the synthesis, extraction, isolation, characterisation and/or quantification of molecules of biological importance.

Indicative Module Content

The topics within the module include: drug discovery; drug targeting; mechanisms of drug action and elements of xenobiotic metabolism. Overall the module highlights the need for ensuring health and well-being (SDG 3 good health and well-being), while making conscious decisions about the use and disposal of resources required to provide a quality learning experience with minimal environmental impact (SDG 12 responsible consumption and production).

Module Delivery

Lectures, coursework sessions (individual and group practicals, tutorials and online activities) and directed study activities.

Indicative Student Workload	Full Time	Part Time
Contact Hours	85	N/A
Non-Contact Hours	215	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	300	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type: Examination Weighting: 100% Outcomes Assessed: 1, 2, 3
 Description: Component 1 is a written exam.

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

Component 1 (EX1) comprises 100% of the module grade. A minimum of a Grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	Successful completion of MPharm Stage 1 or equivalent.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- PATRICK, G.L., 2017. *An Introduction to Medicinal Chemistry*. Sixth edition. Oxford: Oxford University Press.
- BRUICE, P.Y., 2016. *Essential Organic Chemistry*. Third edition. London: Pearson Education Ltd.
- McMURRY, J., 2007. *Fundamentals of general, organic, and biological chemistry*. Fifth edition. Upper Saddle River, N.J.: Pearson Prentice Hall.