

MODULE DESCRIPTOR

Module Title

Rational Drug Design

| | | | |
|-----------|--------------|-------------|--------|
| Reference | PL2002 | Version | 2 |
| Created | October 2022 | SCQF Level | SCQF 8 |
| Approved | June 2022 | SCQF Points | 30 |
| Amended | October 2022 | 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

Topics include: Drug discovery, drug targeting, mechanisms of drug action and elements of xenobiotic metabolism.

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: 50% Outcomes Assessed: 1, 3
 Description: Component 1 is a written exam.

Component 2

Type: Coursework Weighting: 50% Outcomes Assessed: 2
 Description: Component 2 is an individual report

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 (EX1) comprises 50% of the module grade. A minimum of a Grade D or better is required to pass this assessment. Component 2 (CW1) comprises 50% of the module grade. A minimum of a Grade D or better is required to pass this assessment. Overall Grade D or better is required to pass this module. Non-submission of either component will result in an NS grade for the module.

| | | Examination: | | | | | | |
|-------------|----|--|---|---|---|---|---|----|
| | | A | B | C | D | E | F | NS |
| Coursework: | A | A | A | B | B | E | E | |
| | B | A | B | B | C | E | E | |
| | C | B | B | C | C | E | E | |
| | D | B | C | C | D | E | E | |
| | E | E | E | E | E | E | E | |
| | F | E | E | E | E | E | 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.