

## MODULE DESCRIPTOR

### Module Title

Drug Discovery and Design

Reference	PLM344	Version	1
Created	June 2023	SCQF Level	SCQF 11
Approved	July 2022	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

### Aims of Module

To enable students to critically understand and evaluate aspects of drug design and the drug discovery process.

### Learning Outcomes for Module

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

- 1 Critically evaluate and understand modern and historic approaches to drug discovery.
- 2 Critically discuss the chemical and physical properties of organic functional groups with respect to drug design and critically review the 'drug journey'.
- 3 Critically evaluate and analyse organo-synthetic and spectroscopic characterisation data.

### Indicative Module Content

A history of drug discovery; medicinal chemistry; an overview of the drug discovery process; natural products as pharmaceutical lead compounds; SAR studies; bench to clinic case studies.

### Module Delivery

The module will be delivered by lectures and tutorials, including visiting speakers. There will also be practical laboratory sessions.

### Indicative Student Workload

	Full Time	Part Time
Contact Hours	40	N/A
Non-Contact Hours	110	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	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: Coursework Weighting: 100% Outcomes Assessed: 1, 2

Description: A critical review of the drug discovery and design process.

**Component 2**

Type: Practical Exam Weighting: 0% Outcomes Assessed: 3

Description: Successful completion of a laboratory book, detailing and recording data from laboratory sessions.  
This is a competency based assessment graded pass (P) or fail/unsuccessful (U).

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

The first grade represents Component 1 (CW1) weighted as a major and the second, Component 2 (CW2) weighted as a minor. CW2 is pass (P)/unsuccessful(U). A minimum module grade of D or better for CW1 and a 'P' for CW2 is required to pass the module. Non-submission of either component will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	A grade A in component 1 (CW1) and a Pass in component 2 (CW2).
<b>B</b>	A grade B in component 1 (CW1) and a Pass in component 2 (CW2).
<b>C</b>	A grade C in component 1 (CW1) and a Pass in component 2 (CW2).
<b>D</b>	A grade D in component 1 (CW1) and a Pass in component 2 (CW2).
<b>E</b>	A grade E in component 1 (CW1) and a Pass in component 2 (CW2).
<b>F</b>	A grade F in component 1 (CW1) and a Pass in component 2 (CW2) or an Unsuccessful (U) attempt at Component 2.
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module None, in addition to course entry requirements.

Corequisites for module None.

Precluded Modules None.

**INDICATIVE BIBLIOGRAPHY**

- Patrick, G.L., (2017). 'An introduction to medicinal chemistry', 6th edition, Oxford University Press.
- Afonso, C., Candeias, N., Simao, D., Trindade, A., Coelho, J., Tan, B. and Franzen, R. (2017). 'Comprehensive organic chemistry experiments for the laboratory classroom', Cambridge: Royal Society of Chemistry.