

Summary Information

Module Code	5002PHASCI
Formal Module Title	Synthetic and Natural Drugs
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	32
Practical	15
Tutorial	5
Workshop	6

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	To present and illustrate the principles and processes involved in the discovery, acquisition and analysis of a range of natural, synthetic and biotechnological products.
------	--

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate an understanding of the discovery process for both synthetic and natural products
MLO2	2	Demonstrate an understanding of the synthetic route to selected small molecular weight molecules and the technology used for obtaining and purifying natural and biotechnological products
MLO3	3	Apply knowledge of, and interpret data from, spectroscopic techniques used to determine molecular structures
MLO4	4	Perform key practical experiments, analyse the data and report the findings.

Module Content

Outline Syllabus	Drug discovery, targets, screening and design, synthetic drugs, plant, animal and microbiologically derived products, Examples of simple synthetic routes to small molecular weight drugs, peptide synthesis, synthetic analogues Natural products of relevance to pharmaceutical and cosmetic science: Sources, extraction, purification Bioengineering, biotechnology and production of biopharmaceuticals and biomaterials of relevance to cosmetics Structural elucidation: Introduction to NMR and mass spectroscopy. Practical experience of the synthesis, isolation, purification and spectroscopic identification of molecules
Module Overview	This module aims to present and illustrate the principles and processes involved in the discovery, acquisition of, and analysis of a range of natural, synthetic and biotechnologically produced drugs.
Additional Information	Practical sessions supported by workshops will involve students gaining experience of synthesis and extraction of molecules and evaluating their structure and/or activity. Exam will assess students understanding of the principles of the production, properties and analysis of synthetic and naturally occurring molecules.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Portfolio	Practical report	40	0	MLO4
Centralised Exam	Exam	60	2	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Raymond Fox	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------