Advanced Pharmaceutical Analysis

Module Information

2022.01, Approved

Summary Information

Module Code	6002PHASCI
Formal Module Title	Advanced Pharmaceutical Analysis
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	30
Practical	16
Workshop	14

Module Offering(s)

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

Aims and Outcomes

Aims	To develop knowledge and practical experience of advanced techniques available for the analysis of pharmaceutical products.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Discuss the principles and practice of a range of advanced analytical techniques typical of those used in the pharmaceutical industry
MLO2	2	Propose and justify a suitable programme of testing for pharmaceuticals
MLO3	3	Critically evaluate the quality of analytical data and determine whether an analytical method is fit for purpose
MLO4	4	Demonstrate the ability to perform analyses of pharmaceuticals and report the data

Module Content

Outline Syllabus	Procedures for quality control with regard to current pharmaceutical regulations. Method validation, analytical validation criteria and monitoring of data quality and processes. Issues of sample preparation of different sample types. Application of mass spectrometry to the analysis of pharmaceutical compounds. The theory and operation of mass spectrometers will be discussed including the use of coupled techniques. This will build upon the chromatography material from previous levels. Analysis of metals in pharmaceuticals with reference to current pharmaceutical industry regulations. The module will cover the theory and application of atomic spectroscopy and mass spectrometry methods including coupled methods. The testing of biologicals relevant to pharmaceuticals, including vaccines, therapeutic immunoglobulins and monoclonal antibodies using ELISA and radio-immunoassay techniques.
Module Overview	The module is designed to provide you with the concepts and practical experience necessary to pursue a career in an analytical role in the pharmaceutical industry, and to be aware of the limitations of analytical techniques upon which you may rely for information.
Additional Information	The module is designed to provide students with the concepts and practical experience necessary to pursue a career in an analytical role in the pharmaceutical industry, and to be aware of the limitations of analytical techniques upon which they may rely for information. Study includes in-depth treatment of selected current analytical techniques, developing many of the subjects and concepts introduced at Level 5. Lectures supported by practicals and workshops.

Assessments

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

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Alistair Fielding	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings