

Liverpool John Moores University

Title: PHARMACEUTICAL ANALYSIS
Status: Definitive
Code: **5005PHASCI** (122597)
Version Start Date: 01-08-2019

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
Simon-Dieter Brandt	Y
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Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 57
Total Learning Hours: 200 **Private Study:** 143

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	30
Practical	20
Workshop	5

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Written examination	60	2
Report	Report	Practical report	40	

Aims

To develop knowledge, practical experience and the interpretation skills necessary for the quantitative and qualitative analysis of chemical species relevant to the pharmaceutical industry.

Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate the quality of analytical data produced by analytical methods
- 2 Demonstrate an understanding of the principles and applications of spectroscopic and chromatographic techniques, together with their advantages and limitations
- 3 Demonstrate an understanding of problem solving skills related to analytical techniques applied to hands-on, real world, examples

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Examination	1	2	3
Practical report	1	2	3

Outline Syllabus

Chromatographic principles and application of instrumental chromatography techniques

Validation of techniques using ICH regulations for APIs

Function and instrumentation of gas chromatography

Function and instrumentation of high performance liquid chromatography

Introduction to the instrumentation of mass spectrometry for use in GC/LC -MS

Principles and applications of atomic spectroscopy

Sample preparation techniques

Learning Activities

Lectures covering each topic within the module

Practical sessions giving students first-hand experience of relevant analytical techniques and their application pharmaceutical analysis

Workshops to support practical sessions and to consider the mathematical manipulation of data and their interpretation

Notes

Practical sessions will involve students developing hands-on experience of analysis from sample preparation through to acquisition of data and its interpretation.

Exam will assess students understanding of the principles through data interpretation and problem solving questions

Indicative text: Quantitative Chemical Analysis, D.C. Harris, 2015, W. H. Freeman, ISBN-10: 1429239891