

Liverpool John Moores University

Title: INDUSTRIAL ANALYSIS
Status: Definitive
Code: **6002APCHEM** (121136)
Version Start Date: 01-08-2021

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

Team	Leader
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Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 39
Total Learning Hours: 200 **Private Study:** 161

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	19
Workshop	18

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Report	Report	30	
Exam	Exam	Exam	70	2

Aims

To understand how a range of sample types can be analysed using advanced instrumental techniques. Knowledge will be gained on the whole concept of analysis from sample preparation techniques through to data interpretation, quality control and quality assurance issues.

Learning Outcomes

After completing the module the student should be able to:

- 1 Interpret and appraise data obtained from a broad range of advanced instrumental techniques.
- 2 Discriminate between and employ correctly a broad range of advanced instrumental and sample preparation techniques.
- 3 Evaluate critically the quality of analytical data and determine if it is fit for purpose.

Learning Outcomes of Assessments

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

Report	1	2	3
Examination	1	2	3

Outline Syllabus

Liquid Chromatography-Mass Spectrometry (LC-MS)
Gas Chromatography-Mass Spectrometry (GC-MS)
Inductively coupled plasma optical emission spectrometry(ICP-MS)
Advanced sample prep.
Advanced NMR
Ion mobility techniques
Advanced chromatography
Gel Permeation Chromatography
Quality control/assurance

Learning Activities

Lectures / Workshops

Notes

Lectures will cover the theory and relevant examples, from the chemical and allied industries, of each analytical technique. Data interpretation workshops will be linked to these techniques.

The coursework and exam will assess ability to interpret data and a theoretical understanding of the techniques.