

Liverpool John Moores University

Title: ADVANCED ANALYSIS
Status: Definitive
Code: **7001APCHEM** (121142)
Version Start Date: 01-08-2021

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

Team	Leader
Simon-Dieter Brandt	Y

Academic Level: FHEQ7
Credit Value: 20
Total Delivered Hours: 40
Total Learning Hours: 200
Private Study: 160

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	19
Seminar	2
Tutorial	2
Workshop	14

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Exam	70	3
Presentation	Oral pres.	Oral presentation	30	

Aims

The purpose of this module is to teach aspects of problem solving through the application of analytical techniques to specific problems related to research interests within the school. This may involve relatively simple techniques such as spot testing all the way through to hyphenated mass spectrometry. The students will discuss important aspects such as cost, speed and reliability of analysis.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically assess a specific real-world analytical problem and apply an appropriate analytical technique to solve this.
- 2 Demonstrate an appreciation of cost per analysis, speed and reliability of result required.
- 3 Demonstrate clear chemical acumen in problem solving via the creation of a suitable report and presentation of the data analysis.

Learning Outcomes of Assessments

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

Examination	1	2	3
Oral presentation	1	2	3

Outline Syllabus

The module will consider applications of analytical techniques to real world analytical problems. This will involve the selection of the technique bearing in mind the costs, speed and reliability of the data obtained. The issues under consideration will be the determination of total unknowns, discoloration of products, identification of black spots in pharmaceuticals. The analysis problems will come from the chemical, petrochemical, environmental, clinical and drugs of abuse areas. The module will involve practical applications and analysis. The teams will also consider validation of the results.

Learning Activities

Lectures, workshops, seminars and tutorials

Notes

This module aims to provide problem solving capability a skill much required by potential employers of graduates. This will be taught by considering real life issues that have been brought into the University through either research or consultancy examples. The students will carry out the work through a series of lectures and then workshops through small group work.