Structure and Analysis

Module Information

2022.01, Approved

Summary Information

Module Code	5005APCHEM
Formal Module Title	Structure and Analysis
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	50
Tutorial	2

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To develop knowledge, practical experience and the interpretation skills necessary for the quantitative and qualitative analysis of chemical species relevant to chemical industries. This module will also introduce the concepts of molecular modelling and computational analysis

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Evaluate the quality of analytical data produced by analytical methods
MLO2	2	Demonstrate an understanding of the principles and applications of spectroscopic and chromatographic techniques, together with their advantages and limitations
MLO3	3	Demonstrate an understanding of problem solving skills related to analytical techniques applied to hands-on, real world, examples
MLO4	4	Should be able to utilise group theory and molecular symmetry
MLO5	5	Demonstrate an understanding of industrial inorganic chemistry

Module Content

Outline Syllabus	This module covers a number of key topics including:• Chromatographic principles and application of instrumental chromatography techniques• 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• Industrial inorganic chemistry• Symmetry and group theory and molecular modelling
Module Overview	In this module you will develop your knowledge, practical experience and interpretation skills necessary for the quantitative and qualitative analysis of chemical species relevant to chemical industries. You will be introduced to the concepts of molecular modelling and computation analysis. You will also develop your understanding of the principles and applications of spectroscopic and chromatographic techniques, together with their advantages and limitations.
Additional Information	A module designed to outline analytical chemistry, molecular modelling and inorganic industrial chemistry

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Centralised Exam	Examination	60	2	MLO1, MLO2, MLO3, MLO4, MLO5
Report	Report	40	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Steven Enoch	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings