Practical Laboratories 3

Module Information

2022.01, Approved

Summary Information

Module Code	5003APCHEM
Formal Module Title	Practical Laboratories 3
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
Practical	77

Module Offering(s)

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

Aims and Outcomes

Aims	Building on Level 4 practical modules, the course will focus on more complex molecular/compound synthesis, thus entailing the use of chromatographic and spectroscopic analytical techniques.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Rationalise and demonstrate functional group interconversion.
MLO2	2	Demonstrate and explain the involvement of inorganic compounds in organic synthesis.
MLO3	3	Select the correct methods of analysis for organic and inorganic compounds and interpret the resulting data.

Module Content

Outline Syllabus	Carbonyl chemistry; heterocyclic chemistry; organometallic chemistry; chromatographic purification and analysis; structural elucidation; transition metal chemistry; kinetics and thermodynamics of chemical processes. Areas covered will include the synthesis and reactions of carbonyl, heterocyclic, organometallic compounds and metal complexes; physical measurements involving more complex kinetics.
Module Overview	This module exposes you to intermediate synthetic approaches and compound analysis, building on work carried out in Level 4 practical modules. Work will include multi-step synthesis, based on reactions of the carbonyl group, and will introduce you to the facility of organometallic reagents and complexes in synthesis. You will also cover the industrially important area of heterocyclic synthesis, as well as methods regarding the physical measurement of kinetics and thermodynamics.
Additional Information	The course provides exposure to intermediate synthetic approaches and compound analysis, building on work carried out in the Level 4 practical modules. Work will include multi-step synthesis, based on reactions of the carbonyl group and will introduce the facility of organometallic reagents and complexes in synthesis. The industrially-important area of heterocyclic synthesis will also be covered, as well as methods of physical measurement of kinetics and thermodynamics.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Test	Online Test	50	0	MLO1, MLO2, MLO3
Report	Practical Report	50	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