

### Summary Information

<b>Module Code</b>	3420FNDSCI
<b>Formal Module Title</b>	Further Chemistry
<b>Owning School</b>	Pharmacy & Biomolecular Sciences
<b>Career</b>	Undergraduate
<b>Credits</b>	20
<b>Academic level</b>	FHEQ Level 3
<b>Grading Schema</b>	40

### Module Contacts

#### Module Leader

Contact Name	Applies to all offerings	Offerings
Fyaz Ismail	Yes	N/A

#### Module Team Member

Contact Name	Applies to all offerings	Offerings
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#### Partner Module Team

Contact Name	Applies to all offerings	Offerings
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### Teaching Responsibility

<b>LJMU Schools involved in Delivery</b>
Pharmacy & Biomolecular Sciences

### Learning Methods

Learning Method Type	Hours
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Lecture	34
Practical	12
Workshop	12

## Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-CTY	CTY	January	12 Weeks

## Aims and Outcomes

<b>Aims</b>	To provide students with a grounding in organic chemistry.
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## Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Recall the properties and preparation of a range of organic functional groups.
MLO2	Describe the shapes and reaction mechanisms of a range of organic molecules.
MLO3	Apply knowledge of the properties and reactions of organic compounds.
MLO4	Classify biopolymers as natural or semi-synthetic.

## Module Content

Outline Syllabus
Isomerism: Empirical formula, homologous series. Application of IUPAC rules to nomenclature of simple organic compounds. Constitutional Isomers, geometric isomers, chirality and optical isomers. Hydrocarbons. Alkanes, mixtures of alkanes found in petroleum, industrial processes, properties, combustion, economic and environmental effects. Characteristic Organic Reactions. Functional groups, homolytic and heterolytic fission, bond making/breaking, Free radicals, nucleophiles and electrophiles, ionic mechanisms, types of organic reactions, Simple types of organic mechanism, addition, elimination, substitution. Preparation and reactions of simple organic functional groups such as alkenes, alkynes, halides, alcohols, ethers, carbonyl compounds, carboxylic acids and derivatives. Simple functional group interconversions.Redox in the context of organic chemistry: oxidation numbers and example redox reactions. Structure and reactions of benzene. Preparation of monosubstituted derivatives.Natural and semi-synthetic polymers.

## Module Overview

Additional Information
Module covers fundamental organic chemistry concepts.

## Assessments

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