

## Liverpool John Moores University

Title: FROM ATOMS TO MOLECULES  
Status: Definitive  
Code: **4002APCHEM** (121124)  
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:** FHEQ4      **Credit Value:** 20      **Total Delivered Hours:** 63  
**Total Learning Hours:** 200      **Private Study:** 137

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	55
Tutorial	6

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Examination	60	2
Report	Report	Report	40	

### Aims

*This is an introductory module for Organic and Analytical Chemistry, covering basic sources, reactions and analytical approaches to identification and properties of molecules.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Discuss the use and simple identification of functional groups.
- 2 Use simple organic mechanisms to explain reaction.
- 3 Use simple analytical data in compound identification.

## Learning Outcomes of Assessments

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

Examination	1	2	3
Report	1	2	3

## Outline Syllabus

*Organic nomenclature, petrochemicals, bonding in Organic Chemistry, shapes of molecules. Functional groups 1 / acidity/basicity; simple reactions - SN1, SN2. E1, E2. Polarity / ionisation, chromatography, IR/UV/Fluorescence spectroscopy. Extraction, pH, CHN analysis, spot testing and basic NMR.*

## Learning Activities

Lectures, workshops and tutorials

## Notes

This module gives an introduction to Organic Chemistry and the ways in which we can analyse organic chemicals and materials. As an introductory level module, the work will be closely tied to laboratory practice and will also link to the second semester organic-containing module in order to build experience and understanding.