

### Summary Information

<b>Module Code</b>	3517IFESG
<b>Formal Module Title</b>	Chemistry 2
<b>Owning School</b>	Engineering
<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
Jack Mullett	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

LJMU Schools involved in Delivery
LJMU Partner Taught

## Partner Teaching Institution

Institution Name
Study Group

## Learning Methods

Learning Method Type	Hours
Lecture	26
Seminar	39

## Module Offering(s)

Offering Code	Location	Start Month	Duration
APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks

## Aims and Outcomes

<b>Aims</b>	To provide students with an understanding of the core concepts of chemistry. This will include physical, inorganic and organic chemistry, with an overview of contemporary science.
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## Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Develop competence and confidence in a variety of practical, mathematical, and problem-solving Skills, such as pH calculations, isotopes and stoichiometry.
MLO2	Use knowledge and understanding to pose scientific questions and define and solve scientific problems involving enthalpy and Gibbs free energy.
MLO3	Apply chemical concepts to practical tasks by carrying out experimental and investigative activities, including appropriate risk management.
MLO4	Analyse and interpret data to provide evidence, recognise correlations and evaluate the methodology, evidence, and data, and resolve conflicting evidence.

## Module Content

### Outline Syllabus

Acids and bases – pH, buffers, calculating pH  
Thermodynamics – basic energetics, enthalpy, entropy, Gibbs free energy  
Redox – oxidation and reduction, half-reactions, redox potential  
More Organic Chemistry - addition, substitution, elimination, free radicals, enzyme catalysis  
Metals – extraction and recycling  
Weighing, measuring, titrations, and chromatography  
Transition metal chemistry  
Presentation of chemical data

### Module Overview

### Additional Information

### Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Exam	Examination	60	1.5	MLO2, MLO1
Report	Report	40	0	MLO4, MLO3