

#### Summary Information

Module Code	4005APCHEM
Formal Module Title	Properties of Matter
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

#### Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

#### Learning Methods

Learning Method Type	Hours
Lecture	55
Tutorial	5

#### Module Offering(s)

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

#### Aims and Outcomes

Aims	This module provides candidates with an outline of some basic principles of inorganic aqueous chemistry and solid state structures. It also indicates how the interaction of radiation with such matter leads to spectroscopic properties widely used in analytical chemistry.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Identify the characteristics of acids, bases and materials that undergo oxidation and reduction processes.
MLO2	2	Discuss the analytical techniques that can be used for inorganic materials.
MLO3	3	Apply chemometrics and statistics to chemical processes.
MLO4	4	Discuss the structures and properties of inorganic solids.

### Module Content

Outline Syllabus	Acids and bases, inorganic solids, molecular symmetry, oxidation, reduction and half equations. The basic interaction of radiation with matter, illustrated by associated analytical techniques. Chemometrics and statistics.
Module Overview	This module provides you with an outline of the basic principles of Inorganic Aqueous Chemistry and solid state structures. It indicates how the interaction of radiation with matter leads to spectroscopic properties widely used in analytical chemistry. Through lectures, tutorials, workshops and seminars, you will also be introduced to areas underpinning the ideas of compound symmetry.
Additional Information	This module will provide a solid introduction to Inorganic Chemistry and various analytical techniques specific to this branch. Other introductory areas underpinning the ideas of compound symmetry and the interaction of radiation with matter will also be covered. The syllabus is supported by standard lectures, tutorials, workshops and seminars, together with teaching materials held on Canvas and books from the standard literature. The module is assessed by one open-book comprehensive written assignment, together with one closed-book formal examination of 2 hours duration, held within 4 weeks of the module's conclusion. The pass mark is set at 40% for the whole module. There is no lower limit set for the individual components.

### Assessments

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

### Module Contacts

#### Module Leader

Contact Name	Applies to all offerings	Offerings
Barry Nicholls	Yes	N/A

#### Partner Module Team

Contact Name	Applies to all offerings	Offerings
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