CHEM 1008 INTRODUCTORY CHEMISTRY

Credit Points 10

Legacy Code 300808

Coordinator Richard Thomas (https://directory.westernsydney.edu.au/search/name/Richard Thomas/)

Description The chemical sciences underpin our understanding in the environmental, forensic, health, medical, biological and physical sciences. This subject familiarises students with the fundamental principles of chemistry and how chemistry shapes the world around us. Students will be introduced to the concepts of atomic structure, the reactivity of substances, the Periodic Table, stoichiometry, and will learn about the structure and reactivity of substances and mixtures in different chemical environments, and exposed to different forms of electromagnetic radiation. Students will explore real world problems and apply the fundamental principles of chemistry to better understand how we may shape our own future.

School Science

Discipline Chemical Sciences, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 1 subject

Restrictions

NOTE: Only External students can enrol in a composite offering for this subject.

Assumed Knowledge

General Mathematics or equivalent.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Identify key principles and concepts of general, inorganic, physical and electro chemistry.
2. Apply key principles and concepts of chemistry to identify, explain and examine the relationships between micro and macro chemical processes and observations in a number of scientific disciplines.
3. Conduct experiments and examine results to illustrate selected key principles and concepts of chemistry.
4. Safely handle and dispose chemical substances in lab environments.
5. Collaborate effectively in groups on experiments.
6. Communicate chemistry and chemical experiments to a range of audiences using scientific language, chemistry symbols, three - dimensional structures of compounds and conventions of general chemical nomenclature correctly.

Subject Content

1. Acquisition of Knowledge: demonstrating a knowledge of, and applying the principles and concepts of chemistry
2. Applications of knowledge: recognising that chemistry plays an essential role in society and underpins many industrial, technological and medical advances. Understanding and being able to articulate aspects of the place and importance of chemistry in the local and global community
3. Communication: presenting information, articulating arguments and conclusions, in a variety of modes, to diverse audiences, and for a range of purposes
4. Skills and applications of skills: synthesising and evaluating information from a range of sources, including traditional and emerging information technologies and methods; conducting experiments to illustrate key principles and concepts; incorporating qualitative and quantitative evidence into scientifically defensible arguments
5. Personal and Professional attributes: recognising the creative endeavour involved in acquiring knowledge, and the testable and contestable nature of the principles of chemistry; Demonstrating a capacity for self-directed learning; working collaboratively in teams.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Numerical Problem Solving	2 hour/ 6 weeks	20	N	Individual	N
Practical	3 hours/ 6 weeks	20	N	Individual	N
Participation	2 hour lecture 13 weeks. 3 hour tutorial 6 weeks	10	N	Individual	N
Final Exam	2 hours	50	N	Individual	N

Prescribed Texts

Chemistry3 : introducing inorganic, organic and physical chemistry. Burrows, A. et al., Oxford University Press; 4th edition.

Teaching Periods

Autumn (2025)

Campbelltown

On-site

Subject Contact Richard Thomas (https://directory.westernsydney.edu.au/search/name/Richard Thomas/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CHEM1008_25-AUT_CA_1#subjects)

Hawkesbury

On-site

Subject Contact Richard Thomas (https://directory.westernsydney.edu.au/search/name/Richard Thomas/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CHEM1008_25-AUT_HW_1#subjects)

Hybrid

Subject Contact Richard Thomas (https://directory.westernsydney.edu.au/search/name/Richard Thomas/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CHEM1008_25-AUT_HW_3#subjects)

Parramatta - Victoria Rd

On-site

Subject Contact Richard Thomas (https://directory.westernsydney.edu.au/search/name/Richard Thomas/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CHEM1008_25-AUT_PS_1#subjects)