



UNSW

UNSW Course Outline

ZPEM1101 Chemistry 1A - 2024

Published on the 11 Feb 2024

General Course Information

Course Code : ZPEM1101

Year : 2024

Term : Semester 1

Teaching Period : Z1

Is a multi-term course? : No

Faculty : UNSW Canberra

Academic Unit : UC Science

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : UNSW Canberra at ADFA

Campus : UNSW Canberra

Study Level : Undergraduate

Units of Credit : 6

[Useful Links](#)

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

The course commences with chemical reactions, concepts involved in chemical equations and an introduction to nomenclature of inorganic and organic substances. The gas laws are presented and then the electronic structure of gaseous atoms is developed. This leads to the concept of an orbital and provides a basis for the later description of ionic and covalent bonding

and molecular geometry. Intermolecular forces are introduced which then leads to the chemistry of solutions and their properties. Finally, the chemistry of carbon, organic chemistry, is studied. Sub-topics include classes of organic compounds and common functional groups.

Course Aims

The course aims to provide students with specific knowledge regarding chemical reactions, concepts involved in chemical equations and an introduction to nomenclature of inorganic and organic substances.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Perform a range of chemical calculations pertaining to stoichiometry, composition and concentration
CLO2 : Explain the nature of chemical bonding in organic and inorganic systems and the nature of different types of intermolecular forces
CLO3 : Identify and classify organic molecules and determine the types of reactions they are likely to undergo
CLO4 : Become familiar with a range of basic laboratory procedures

Course Learning Outcomes	Assessment Item
CLO1 : Perform a range of chemical calculations pertaining to stoichiometry, composition and concentration	<ul style="list-style-type: none">• Class Tests• Final Examination• Laboratory
CLO2 : Explain the nature of chemical bonding in organic and inorganic systems and the nature of different types of intermolecular forces	<ul style="list-style-type: none">• Class Tests• Final Examination• Laboratory
CLO3 : Identify and classify organic molecules and determine the types of reactions they are likely to undergo	<ul style="list-style-type: none">• Class Tests• Final Examination• Laboratory
CLO4 : Become familiar with a range of basic laboratory procedures	<ul style="list-style-type: none">• Laboratory

Learning and Teaching Technologies

Moodle - Learning Management System | Echo 360

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Class Tests Assessment Format: Individual	40%	
Final Examination Assessment Format: Individual	40%	
Laboratory Assessment Format: Individual	20%	

Assessment Details

Class Tests

Assessment Overview

marked class tests

Course Learning Outcomes

- CLO1 : Perform a range of chemical calculations pertaining to stoichiometry, composition and concentration
- CLO2 : Explain the nature of chemical bonding in organic and inorganic systems and the nature of different types of intermolecular forces
- CLO3 : Identify and classify organic molecules and determine the types of reactions they are likely to undergo

Detailed Assessment Description

Class tests will be weighted according to number of lectures. Relative ratios are in parentheses: Module 1 (1), Module 2 (1), Module 3a/b(1), Module 3c (0.5), Module 4 (1).

All marks obtained for assessment items during the session are provisional. The final mark as published by the university following the assessment review group meeting is **the only official mark**.

Given the nature of tests no assistance from generative artificial intelligence will be possible. See UNSW policy [UNSW_guidelines_Use-of-Generative-AI-in-assessments_8.02.23.pdf](https://www.unsw.edu.au/staff/unsw-guidelines-use-of-generative-ai-in-assessments-8.02.23.pdf)

Final Examination

Assessment Overview

Comprehensive final exam

Course Learning Outcomes

- CLO1 : Perform a range of chemical calculations pertaining to stoichiometry, composition and concentration
- CLO2 : Explain the nature of chemical bonding in organic and inorganic systems and the nature of different types of intermolecular forces
- CLO3 : Identify and classify organic molecules and determine the types of reactions they are likely to undergo

Detailed Assessment Description

The 2 hour final exam will be scheduled in the final exam period with a time and date advertised closer to this period.

Given the nature of exams no assistance from generative artificial intelligence will be possible.

See UNSW policy [UNSW_guidelines_Use-of-Generative-AI-in-assessments_8.02.23.pdf](https://www.unsw.edu.au/staff/guidelines-use-generative-ai-assessments-8.02.23.pdf)

Laboratory

Assessment Overview

marked laboratory pro-formas

Course Learning Outcomes

- CLO1 : Perform a range of chemical calculations pertaining to stoichiometry, composition and concentration
- CLO2 : Explain the nature of chemical bonding in organic and inorganic systems and the nature of different types of intermolecular forces
- CLO3 : Identify and classify organic molecules and determine the types of reactions they are likely to undergo
- CLO4 : Become familiar with a range of basic laboratory procedures

Detailed Assessment Description

Laboratory sessions will be held throughout semester. Within each session the labwork must be undertaken and worksheets submitted before leaving. The use of generative artificial intelligence will be permissible for lab reports, but kept to simple editing assistance. See UNSW policy

[UNSW_guidelines_Use-of-Generative-AI-in-assessments_8.02.23.pdf](https://www.unsw.edu.au/staff/guidelines-use-of-generative-ai-in-assessments-8.02.23.pdf)

General Assessment Information

The theory component of Chemistry 1A is made up of 5 content modules, and students are tested on each module before the next one commences. For each module, at least 2 test opportunities will generally be available. Lectures will first be given on each new module, then in a following lecture period a test on the module will be offered. At the following lecture period a tutorial will be given, with another test opportunity being available at the subsequent lecture

period. The best test score is recorded for the module.

Grading Basis

Standard

Requirements to pass course

Students who obtain 40 or more marks (50%) in the theory component and receive 10 (50%) or more in the laboratory component will pass the subject.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 26 February - 1 March	Lecture	Tuesday - Module 1
	Lecture	Wednesday - Module 1

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

The course schedule consists of 4 x 1 hour lecture slots and 7 x 3 hours of lab distributed throughout the semester. The lecture schedule will consist of approximately 7 lectures followed by a test. There will then be a revision session followed by a second test and the best test score from the two is recorded for that module. Lab sessions are scheduled appropriately to match the lecture material.

A full lecture, lab and test schedule is available on Moodle once enrolled in the course.

Alternatively, you can contact the course convenor for the lecture schedule.

Course Resources

Prescribed Resources

Chang, R., *Chemistry* (14th ed.), McGraw-Hill, ISBN 978-1-265-57756-0

Recommended Resources

Blackman A., Gahan L.; Aylward & Findlay's SI Chemical Data Book (7th ed.), Wiley.

Course Evaluation and Development

Students will be asked to complete the myExperience survey towards the end of this course. Student opinions really do make a difference. Refer to the Moodle site for this course to see how the feedback from previous students has contributed to the course development.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Lecturer	Tristan Reekie		Building 22, Room 214	(02) 5114 5067	As requested	No	Yes
	Anthony Day					No	No
	Morphy Dumlaao					No	No
	S.M.Parvez Mahbub					No	No

Other Useful Information

Academic Information

Course Evaluation and Development

One of the key priorities in the 2025 Strategy for UNSW is a drive for academic excellence in education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students will be asked to complete the myExperience survey towards the end of each course.

Students can also provide feedback during the semester via: direct contact with the lecturer, the “On-going Student Feedback” link in Moodle, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups (where applicable). Student opinions really do make a difference. Refer to the Moodle site for your course to see how the feedback from previous students has contributed to the course development.

Important note: Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct.

<https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf>

Equitable Learning Services (ELS)

Students living with neurodivergent, physical and/or mental health conditions or caring for someone with these conditions may be eligible for support through the Equitable Learning Services team. Equitable Learning Services is a free and confidential service that provides practical support to ensure your mental or physical health conditions do not adversely affect your studies.

Our team of dedicated **Equitable Learning Facilitators (ELFs)** are here to assist you through this process. We offer a number of services to make your education at UNSW easier and more equitable.

Further information about ELS for currently enrolled students can be found at: <https://www.student.unsw.edu.au/equitable-learning>

Academic Honesty and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. All students are expected to adhere to UNSW's Student Code of Conduct.

Find relevant information at: [Student Code of Conduct \(unsw.edu.au\)](https://student.unsw.edu.au)

Plagiarism undermines academic integrity and is not tolerated at UNSW. It is defined as using the words or ideas of others and passing them off as your own, and can take many forms, from deliberate cheating to accidental copying from a source without acknowledgement.

For more information, please refer to the following:

<https://student.unsw.edu.au/plagiarism>

Submission of Assessment Tasks

Special Consideration

Special Consideration is the process for assessing and addressing the impact on students of short-term events, that are beyond the control of the student, and that affect performance in a specific assessment task or tasks.

Applications for Special Consideration will be accepted in the following circumstances only:

- Where academic work has been hampered to a substantial degree by illness or other cause;

- The circumstances are unexpected and beyond the student's control;
- The circumstances could not have reasonably been anticipated, avoided or guarded against by the student; and either:
 - (i) they occurred during a critical study period and was 3 consecutive days or more duration, or a total of 5 days within the critical study period; or
 - (ii) they prevented the ability to complete, attend or submit an assessment task for a specific date (e.g. final exam, in class test/quiz, in class presentation)

Applications for Special Consideration must be made as soon as practicable after the problem occurs and at the latest within three working days of the assessment or the period covered by the supporting documentation.

By sitting or submitting the assessment task the student is declaring that they are fit to do so and cannot later apply for Special Consideration (UNSW 'fit to sit or submit' requirement).

Sitting, accessing or submitting an assessment task on the scheduled assessment date, after applying for special consideration, renders the special consideration application void.

Find more information about special consideration at: <https://www.student.unsw.edu.au/special/consideration/guide>

Or apply for special consideration through your [MyUNSW portal](#).

Late Submission of assessment tasks (other than examinations)

UNSW has a standard late submission penalty of:

- 5% per day,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Electronic submission of assessment

Except where the nature of an assessment task precludes its electronic submission, all assessments must be submitted to an electronic repository, approved by UNSW or the Faculty,

for archiving and subsequent marking and analysis.

Release of final mark

All marks obtained for assessment items during the session are provisional. The final mark as published by the university following the assessment review group meeting is the only official mark.