CHEM40079 *Introductory Chemistry*
Term 1 - 2026

Profile information current as at 12/11/2026 11:56 am

All details in this unit profile for CHEM40079 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student).The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview
Introductory Chemistry will provide you with a foundation for university study in the chemical sciences. This unit will provide fundamental principles of chemistry by introducing topics such as matter, molecules, bonding, chemical reactions, stoichiometry, acids and bases, and organic chemistry. In addition to gaining an introductory understanding of chemical concepts, you will learn to perform chemical calculations.

Details
Career Level: *Non-award*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
There are no requisites for this unit.
Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 1 - 2026
- Online

Attendance Requirements
All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website
This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Non-award unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. Assessment 1 (Online Quiz) (Online Quiz(zes))
Weighting: 20%
2. Assessment 2 (Written Assessment)
Weighting: 30%
3. Assessment 3 (Written Assessment)
Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the CQUniversity Policy site.
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Academic Progression Policy and Procedure
- Student Refund and Credit Balance Policy and Procedure
- Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Students

Feedback
Positive feedback for the way that academic staff check in with students.

Recommendation
Continue to regularly communicate with students, checking progress and providing information and advice where appropriate.

Feedback from Students

Feedback
Occasional errors and issues with presentation of some sections of the textbook.

Recommendation
Continue to revise and edit the textbook to fix errors and improve clarity and presentation where issues are identified.

Feedback from Unit Coordinators

Feedback
Some students not presenting answers according to the requirements.

Recommendation
Continue to emphasise the necessity to use the symbols and conventions as shown in the unit materials.

Feedback from Unit Coordinators

Feedback
Students attending online tutorials and turning cameras on in live sessions achieves positive results.

Recommendation
Continue to encourage students to attend live tutorials and turn their cameras on as it builds connection, improves communication and enhances learning.

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Explain fundamental chemical concepts including matter, atomic structure, molecules, bonding, physical and chemical properties, stoichiometry, acids and bases, chemical reactions and organic compounds
2. Interpret the periodic table of the elements
3. Apply chemical concepts and calculations of quantities to solve chemistry problems.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level • Introductory Level • Intermediate Level • Graduate Level ◦ Professional Level ◦ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes		
	1	2	3
1 - Online Quiz(zes) - 20%	•	•	
2 - Written Assessment - 30%	•	•	

Assessment Tasks	Learning Outcomes		
	1	2	3
3 - Written Assessment - 50%	•		•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
1 - Self Management	—	—	—
2 - Communication	—		—
3 - Information Literacy	—	—	—
4 - Information Technology Competence	—		
5 - Problem Solving			—
6 - Critical Thinking			
7 - Cross-Cultural Competence			
8 - Ethical Practice			
9 - First Nations Knowledges			

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes								
	1	2	3	4	5	6	7	8	9
1 - Online Quiz(zes) - 20%	—			—					
2 - Written Assessment - 30%	—	—	—						
3 - Written Assessment - 50%	—	—	—		—				

Textbooks and Resources

Textbooks

CHEM40079

Prescribed

CHEM40079 Introductory Chemistry Textbook
Edition: 6.1 (2025)
Authors: CQUniversity, School of Access Education
School of Access Education, CQUniversity Australia
Rockhampton , Queensland , Australia
ISBN: xxxx

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Paul St Quintin Unit Coordinator
p.stquintin@cqu.edu.au

Schedule

Week 1 - 09 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: Matter	1	Read textbook Module 1. Complete Week 1 module review quiz.

Week 2 - 16 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: Atoms and the periodic table	2	Read textbook Module 2. Complete Week 2 module review quiz.

Week 3 - 23 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: Molecules and ions	3	Read textbook Module 3. Complete Week 3 module review quiz. Assessment 1 (Online Quiz) - available Week 3 Friday (27 Mar 2026).

Week 4 - 30 Mar 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 4: Ionic and covalent compounds	4	Read textbook Module 4. Complete Week 4 module review quiz.

Week 5 - 06 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic

		Read textbook Module 5. Complete Week 5 module review quiz.
Module 5: Chemical reactions	5	
		Assessment 1 (Online Quiz) Due: Week 5 Tuesday (7 Apr 2026) 11:59 pm AEST

Week 6 - 13 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 6: Redox reactions	6	Read textbook Module 6. Complete Week 6 module review quiz.

Vacation Week - 20 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic
Study week		Revision of Modules 1-6.

Week 7 - 27 Apr 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 7. The mole	7	Read textbook Module 7. Complete Week 7 module review quiz. Assessment 2 available Week 7 Friday (1 May 2026).

Week 8 - 04 May 2026

Module/Topic	Chapter	Events and Submissions/Topic
		Read textbook Module 8. Complete Week 8 module review quiz.
Module 8: Concentration and molarity	8	
		Assessment 2 Due: Week 8 Friday (8 May 2026) 11:59 pm AEST

Week 9 - 11 May 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 9. Reactions and calculations	9	Read textbook Module 9. Complete Week 9 module review quiz.

Week 10 - 18 May 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 10. Acids and bases	10	Read textbook Module 10. Complete Week 10 module review quiz.

Week 11 - 25 May 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 11. Organic chemistry	11	Read textbook Module 11. Complete Week 11 module review quiz. Assessment 3 - available Week 11 Friday (29 May 2026).

Week 12 - 01 Jun 2026

Module/Topic	Chapter	Events and Submissions/Topic
Module 12. Chemical equilibrium	12	Assessment 3 Due: Week 12 Friday (5 June 2026) 11:59 pm AEST

Exam Week - 08 Jun 2026

Module/Topic	Chapter	Events and Submissions/Topic

Vacation/Exam Week - 15 Jun 2026

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Unit Coordinator: Paul St Quintin
p.stquintin@cqu.edu.au
(08) 9260 4043

Assessment Tasks

1 Online Quiz(zes)

Assessment Title
Assessment 1 (Online Quiz)

Task Description
Assessment 1 (Online Quiz) is a 30-question online quiz that covers material from Modules 1, 2 and 3. The quiz has a 1.5-hour time limit, and once commenced, it cannot be paused. Only one attempt is allowed, so it's important to choose a time that you can complete the quiz uninterrupted.
The Quiz will be available on the CHEM40079 Moodle site on the date specified in the schedule above.
Please note the following requirements and advice:

- This is an individual assessment designed for you to demonstrate your core skills, knowledge and understanding of the unit content.
- The CHEM40079 Textbook and resources on the unit Moodle site contain all the relevant material (content, examples and practice quizzes) required to complete this assessment.
- Use of Artificial Intelligence (AI):
  Level 1. No AI - You must not use AI at any point during the assessment. You must demonstrate your core skills and knowledge.
  (Source: Perkins, M., Roe, J. and Furze, L. 2024, “The AI Assessment Scale Revisited: A framework for educational assessment”)
  Not only could external sources be unreliable or not in the format required for this assessment, detected breaches could result in a loss of marks or a fail grade for the assessment or unit. Further information about this requirement will be provided by the teaching staff in the unit.
- Use formulas and display your answers in the format as they are shown in the CHEM40079 Textbook and resources on the unit Moodle site.
- Show all working to demonstrate the development of your answers.
- Moodle automatically generates a mark for this assessment, but the answers are manually checked to ensure that answers are marked correctly.

Number of Quizzes
1

Frequency of Quizzes
Other

Assessment Due Date
Week 5 Tuesday (7 Apr 2026) 11:59 pm AEST
This quiz closes at 11:59 pm on Tuesday 7/4/26. Ensure you complete and submit the quiz by this time. After this time, the quiz will only be available to students with an extension.

Return Date to Students
This assessment will be returned within two weeks of the assessment due date or received date, whichever is later.

Weighting
20%

Assessment Criteria
Marks will be awarded for the correct response to multiple choice and short answer questions. Responses are scored based on:

- correct use of science conventions
- correct use of terminology
- application of foundation concepts to the question asked
- logic of explanations and problem-solving
- calculations which include chemical formulas using correct symbols and units

Referencing Style
Harvard (author-date)

Submission
Online

Learning Outcomes Assessed
- Explain fundamental chemical concepts including matter, atomic structure, molecules, bonding, physical and chemical properties, stoichiometry, acids and bases, chemical reactions and organic compounds
- Interpret the periodic table of the elements

Graduate Attributes
- Self Management
- Information Technology Competence

2 Written Assessment

Assessment Title
Assessment 2

Task Description
Assessment 2 will be available on the CHEM40079 Moodle site on the date specified in the schedule above. It is a compulsory written assessment that covers material from Modules 4, 5, 6 and 7, in addition to fundamental concepts covered in earlier modules. The assessment comprises various question types that require handwritten responses. Depending on the question, you may be required to do one or more of the following:
- perform calculations using the same symbols as in the CHEM40079 textbook and Moodle site, providing units where relevant
- balance equations
- interpret graphical information
- provide logical worded explanations to support your answer
- use examples and draw diagrams to support your answer
- write chemical formulas using appropriate subscripts and superscripts.

Please note the following requirements and advice:
- This is an individual assessment designed for you to demonstrate your knowledge and understanding of the unit content.
- The CHEM40079 Textbook and resources on the unit Moodle site contain all the relevant material (content, examples and practice quizzes) required to complete this assessment.
- Use of Artificial Intelligence (AI):
  Level 1. No AI - You must not use AI at any point during the assessment. You must demonstrate your core skills and knowledge.
  (Source: Perkins, M., Roe, J. and Furze, L. 2024, “The AI Assessment Scale Revisited: A framework for educational assessment”)
  Not only could external sources be unreliable or not in the format required for this assessment, detected breaches could result in a loss of marks or a fail grade for the assessment or unit. Further information about this requirement will be provided by the teaching staff in the unit.
- Use formulas and display your answers using the same symbols and the same format as shown in the CHEM40079 Textbook and resources on the unit Moodle site.
- Show all working and provide logical explanations to demonstrate the development of your answers.
- Paraphrase (use your own words to express) the information found in the CHEM40079 Textbook and the resources on the unit Moodle site rather than copying it word for word. Conveying the information in your own words will demonstrate your understanding of topics.

Assessment Due Date
Week 8 Friday (8 May 2026) 11:59 pm AEST
Download and print the document, address the questions with handwritten responses, scan the pages and upload as one document.

Return Date to Students
This assessment will be returned within two weeks of the assessment due date or received date, whichever is later.

Weighting
30%

Assessment Criteria
Marks are allocated for the following:
- succinct responses that clearly answer the question and demonstrate understanding of the concepts involved
- appropriate setting out of the solution showing correct notation conventions
- presentation of a logical sequence of steps
- appropriate use of formulas with correct symbols and units.

The number of marks allocated to each question is detailed in the assessment task on Moodle. Answers to all questions

must be handwritten on the assessment task sheets, using additional paper if extra space is required, and clearly presented with full working including correct symbols and logical explanations in order to obtain the maximum allocation of marks.

Referencing Style
Harvard (author-date)

Submission
Online

Submission Instructions
Assessment 2 is to be uploaded as a single pdf document through the CHEM40079 Moodle site.

Learning Outcomes Assessed
- Explain fundamental chemical concepts including matter, atomic structure, molecules, bonding, physical and chemical properties, stoichiometry, acids and bases, chemical reactions and organic compounds
- Interpret the periodic table of the elements

Graduate Attributes
- Self Management
- Communication
- Information Literacy

3 Written Assessment

Assessment Title
Assessment 3

Task Description
Assessment 3 will be available via the CHEM40079 Moodle site on the date specified in the schedule above. It is a compulsory written assessment that covers material from Modules 7, 8, 9, 10 and 11, in addition to fundamental concepts covered in earlier modules. The assessment comprises various question types that require handwritten responses. Depending on the question, you may be required to do one or more of the following:
- choose the correct response from multiple-choice questions and give a brief explanation
- perform simple or multi-step calculations, providing and using appropriate formulas, symbols and units where relevant
- provide short or extended answer responses using examples and diagrams to support your answer
- present information in the correct chemical format (i.e. use correct symbols, subscripts, superscripts and units).

Please note the following requirements and advice:
- This is an individual assessment designed for you to demonstrate your knowledge and understanding of the unit content.
- The CHEM40079 Textbook and resources on the unit Moodle site contain all the relevant material (content, examples and practice quizzes) required to complete this assessment.
- Use of Artificial Intelligence (AI):
  Level 1. No AI - You must not use AI at any point during the assessment. You must demonstrate your core skills and knowledge.
  (Source: Perkins, M., Roe, J. and Furze, L. 2024, “The AI Assessment Scale Revisited: A framework for educational assessment”)
  Not only could external sources be unreliable or not in the format required for this assessment, detected breaches could result in a loss of marks or a fail grade for the assessment or unit. Further information about this requirement will be provided by the teaching staff in the unit.
- Use formulas and display your answers with the same symbols and in the same format as they are shown in the CHEM40079 Textbook and resources on the unit Moodle site.
- Show all working and give logical explanations to demonstrate the development of your answers.
- Paraphrase (use your own words to express) the information found in the CHEM40079 Textbook and the resources on the unit Moodle site rather than copying it word for word. Conveying the information in your own words will demonstrate your understanding of topics.

Assessment Due Date
Week 12 Friday (5 June 2026) 11:59 pm AEST
Download and print the document, address the questions, scan the pages and upload as one document.

Return Date to Students
This assessment will be returned within two weeks of the assessment due date or received date, whichever is later.

Weighting
50%

Minimum mark or grade
To pass this unit, you must obtain at least 50% of the marks available for this assessment.

Assessment Criteria
Marks are allocated for the following:

- succinct responses that clearly answer the question and demonstrate understanding of the concepts involved
- appropriate setting out of the solution showing correct notation conventions
- presentation of a logical sequence of steps
- appropriate use of formulas with correct symbols and units.

The number of marks allocated to each question is detailed in the assessment task on Moodle. Answers to all questions must be handwritten on the assessment task sheets, using additional paper if extra space is required, and clearly presented with full working including correct symbols and logical explanations in order to obtain the maximum allocation of marks.

Referencing Style
Harvard (author-date)

Submission
Online

Submission Instructions
Assessment 3 is to be uploaded as a single pdf document through the CHEM40079 Moodle site.

Learning Outcomes Assessed

- Explain fundamental chemical concepts including matter, atomic structure, molecules, bonding, physical and chemical properties, stoichiometry, acids and bases, chemical reactions and organic compounds
- Apply chemical concepts and calculations of quantities to solve chemistry problems.

Graduate Attributes

- Self Management
- Communication
- Information Literacy
- Problem Solving

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the Student Academic Integrity Policy and Procedure. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?

For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem