

## In Progress

Please note that this Unit Profile is still in progress. The content below is subject to change.



# CHEM11044 Chemical Reactions

## Term 2 - 2024

Profile information current as at 14/05/2024 08:09 am

All details in this unit profile for CHEM11044 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

This unit will provide you with an understanding of the fundamental principles of chemical kinetics, thermodynamics, redox chemistry, equilibrium, pH, basic spectroscopy and organic reactions and mechanisms. You will learn about reactions and how they can be manipulated. You will be introduced to a range of chemical calculations involving rates, cell potentials, equilibrium constants, and pH, as well as techniques for analysing spectral data for chemical structure determination. This unit will provide a strong foundation for further studies in analytical and materials sciences, physical and organic chemistry. This unit has a compulsory residential school. These laboratory sessions will emphasise laboratory safety and compliance, and introduce you to skills relating to sample preparation, data collection, synthesis, spectroscopic analyses and report writing.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Prerequisite: CHEM11043 Atoms, Molecules and Matter

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 2 - 2024

- Mixed Mode

### 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).

### Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are:

Click here to see your [Residential School Timetable](#).

### 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 Undergraduate 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. **Written Assessment**

Weighting: 20%

#### 2. **Practical Assessment**

Weighting: 30%

#### 3. **Take Home Exam**

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
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and 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 SUTE

##### **Feedback**

A student commented that this unit is great at delivering content in a way that is better understood than the textbooks themselves and is well supported with an online study mode. The student stated they would recommend this unit to anyone who wants to further their understanding of chemical reactions.

##### **Recommendation**

I recommend that the teaching team continues with its good efforts in learning, teaching, assessment to maintain positive feedback from our students.

#### Feedback from SUTE

##### **Feedback**

Students commented that the staff were very patient, friendly, encouraging and showed great enthusiasm for the content during the residential school. The coordinator and lab techs were complimented on their skill, knowledgeable and assistance with both coursework and residential school tasks.

##### **Recommendation**

I recommend that the residential school staff and teaching team continues with their great support for our students during the residential school.

#### Feedback from SUTE

##### **Feedback**

Students commented that the unit helped them to improve their understanding of chemistry accurately.

##### **Recommendation**

I recommend that the teaching team continue their teaching efforts and implement any further improvements in learning, teaching, assessment wherever possible.

#### Feedback from SUTE

##### **Feedback**

Students suggested updating the laboratory manual for clearer instructions and calculations.

##### **Recommendation**

I recommend that the teaching team update the laboratory manual, incorporating simple language and providing clear requirements for calculations.

## Unit Learning Outcomes

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

1. Apply concepts of kinetics, thermodynamics and redox chemistry
2. Use critical reasoning to apply chemical theories to reactions
3. Demonstrate an understanding of equilibrium and acid / base chemistry
4. Synthesise organic compounds and examine these for purity
5. Interpret a range of spectra and use these to identify compounds
6. Demonstrate competency in experimental techniques and lab safety, data generation, analysis and report writing.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
1 - Written Assessment - 20%	•	•				
2 - Practical Assessment - 30%				•	•	•
3 - Take Home Exam - 50%	•	•	•		•	

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
1 - Communication				•	•	•
2 - Problem Solving		•	•	•		
3 - Critical Thinking		•	•		•	
4 - Information Literacy						•
5 - Team Work				•		•
6 - Information Technology Competence						•
7 - Cross Cultural Competence						
8 - Ethical practice				•		•
9 - Social Innovation						
10 - Aboriginal and Torres Strait Islander Cultures						

## Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 17 June 2024

## Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.