



# CHEM11042 *Fundamentals of Chemistry*

## Term 1 - 2019

Profile information current as at 30/04/2024 07:08 am

All details in this unit profile for CHEM11042 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 the fundamental principles of chemistry that underpin the medical sciences and provide a strong foundation on which you can develop an understanding of biochemistry and molecular science. You will gain an appreciation of the nature of matter, classic atomic structure and how energy is involved in bond formation. These concepts will be developed to explain the forces between molecules that govern chemical interaction. You will be introduced to the chemistry of electrolytes, acids, bases and buffers. This study will be supported by simple calculations to assist you in relating to the pH scale. The study of organic chemistry and molecules central to the life sciences will enable you to develop an understanding of the biochemistry and molecular biology relevant to your specific discipline. The naming and classifying of chemical compounds will enable you to be conversant with accepted scientific terms. Tutorials and on-line activities will complement the theoretical knowledge gained in lectures and provide you with the basic mathematical and analytical tools required in the application of chemistry to your specific discipline.

### 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

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 - 2019

- Online
- Rockhampton

### 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 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. **Online Quiz(zes)**

Weighting: 30%

#### 2. **Written Assessment**

Weighting: 20%

#### 3. **Examination**

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 Have your say survey, Moodle forums and student- staff discussions

##### **Feedback**

Some students were displeased with the quality of the lecture videos, a number highlighting echo 360 in particular as an issue (sound issues). This unfortunately appears to be a common complaint across a number of units.

##### **Recommendation**

Measures were taken by academic staff to improve video quality with reasonable success (personal purchase of microphone). Issues with echo 360 however, are beyond the academic staff's control. It should be noted that the University has moved to an updated Echo 360 platform for term 2 2018 so hopefully this will combat a lot of the issues highlighted.

#### Feedback from Have your say survey, Moodle forums and student- staff discussions

##### **Feedback**

Students highlighted the occurrence of a sesskey error in Moodle which made navigation of the Moodle site difficult and time consuming.

##### **Recommendation**

Academic staff were in contact with ITD to remedy the issue - this is an ongoing issue that ITD are aware of and are working to resolve. Again, this unfortunately is somewhat beyond the control of academic staff.

#### Feedback from Have your say survey, Moodle forums and student- staff discussions

##### **Feedback**

A number of students expressed their concern at the amount of content covered in this unit. With some querying the relevance of the content for their discipline and future study. Some felt that their understanding would benefit if the unit was divided into more units - either via the addition of a bridging unit prior to CHEM11042 to cover the unit load or by the delivery of the content over two separate units.

##### **Recommendation**

CHEM11042 is a pre-requisite to a number of units and in order to prepare the students for these units it is necessary to cover a lot of chemistry fundamentals. Staff can sympathise that students (particularly those studying chemistry for the first time) may feel overwhelmed and struggle with the unit content. Consequently, a large amount of resources were made available to students and students were made aware of the support facilities available to them such as the ALC and so forth.

#### Feedback from Have your say survey, Moodle forums and student- staff discussions

##### **Feedback**

The majority of students indicated that overall they enjoyed the course, the following aspects were highlighted 1. Delivery of content 2. Approachability of staff and their consistent reliable response to queries 3. Quality of face to face interaction with staff 4. Use of online assessment pieces

##### **Recommendation**

Continue best practice.

## Unit Learning Outcomes

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

1. Apply concepts of atomic structure to explain molecular bonding and nuclear reactivity.
2. Apply chemical concepts to healthcare situations.
3. Identify categories of organic compounds and their potential chemical interactions.
4. Perform basic chemical calculations.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Online Quiz(zes) - 30%	•		•	•
2 - Written Assessment - 20%		•		
3 - Examination - 50%	•		•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes			
	1	2	3	4
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				

### Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Online Quiz(zes) - 30%		•	•	•		•				
2 - Written Assessment - 20%	•	•	•	•		•				

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
<b>3 - Examination - 50%</b>	•	•	•	•						

## Textbooks and Resources

### Textbooks

CHEM11042

#### Prescribed

##### General, Organic, & Biological Chemistry

Edition: 4th edn (2019)

Authors: Janice Gorzynski Smith

McGraw Hill Education

New York , New York , USA

ISBN: 9781260085181

Binding: Paperback

CHEM11042

#### Prescribed

##### Periodic Table of the Elements

Edition: 2018 (2018)

Authors: CQUniversity Bookshop

CQUniversity

Rockhampton , QLD , Australia

Binding: Other

#### Additional Textbook Information

This is a new edition for 2019. Both items are available to purchase at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

### 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: [Vancouver](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Shaneel Chandra** Unit Coordinator

[s.chandra@cqu.edu.au](mailto:s.chandra@cqu.edu.au)

## Schedule

### Week 1 - 11 Mar 2019

Module/Topic

Chapter

Events and Submissions/Topic

Introduction to Chemistry, Matter, Atoms and Bonding	<b>Lecture 1: Matter</b>	
	<b>Chapter 1</b>	<b>Matter and Measurement</b>
		<b>Section Heading</b>
	1.1	Chemistry: The Science of Everyday Experience
	1.2	States of Matter
	1.3	Classification of Matter
	<b>Lecture 2: Atomic Structure, Isotopes and the Periodic Table</b>	
	<b>Chapter 2</b>	<b>Atoms and the Periodic Table</b>
		<b>Section Heading</b>
	2.1	Elements
	2.2	Structure of the Atom
	2.3	Isotopes
	2.4	The Periodic Table
	2.5	Electronic Structure
	2.8	Periodic Trends
<b>Lecture 3: Valence Electrons, Ion Formation and Bonding Types</b>		
<b>Chapter 2</b>	<b>Atoms and the Periodic Table</b>	
	<b>Section Heading</b>	
2.7	Valence Electrons	
<b>Chapter 3</b>	<b>Ionic compounds</b>	
	<b>Section heading</b>	
3.1	Introduction to Bonding	
3.2	Ions	
3.3	Ionic Compounds	
<b>Chapter 4</b>	<b>Covalent compounds</b>	
	<b>Section heading</b>	
4.7	Electronegativity and Bond Polarity	

## Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Molecules, Moles and Lewis Dot Diagrams	<b>Lecture 1: Molecules, Molecular Formula, Molar Mass and the Mole</b>	
	<b>Chapter 5</b>	<b>Chemical reactions</b>
		<b>Section Heading</b>
	5.5	The Mole and Avogadro's number
	5.6A	Molar Mass
	<b>Lecture 2: Mass-Mole Conversions (Review: Significant Figures and Scientific Notation)</b>	
	<b>Chapter 5</b>	<b>Chemical reactions</b>
		<b>Section Heading</b>
	5.6	Mass to Mole Conversions
	<b>Chapter 1</b>	<b>Matter and Measurement</b>
		<b>Section Heading</b>
	1.4	Measurement
	1.5	Significant Figures
	1.6	Scientific Notation
	<b>Lecture 3: Lewis Dot Structures and Polarity of Molecules</b>	
	<b>Chapter 4</b>	<b>Covalent compounds</b>
		<b>Section Heading</b>
	4.1	Introduction to Covalent Bonding
4.2	Lewis Structures	
4.4	Resonance	
4.6	Molecular Shape	
4.8	Polarity of Molecules	
FYI 4.9	FOCUS ON HEALTH AND MEDICINE Covalent Drugs and Medical Products	

## Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Solutions, Dilutions and Intermolecular Forces	<b>Lecture 1: Chemical Solutions - Terms and Concentration</b>	
	8.1	Mixtures
	8.3	Solubility - General Features
	8.4	Solubility - Effects of Temperature and Pressure
	8.5	Concentration Units - Percent Concentration
	8.6	Concentration Units - Molarity
	<b>Lecture 2: Preparing Solutions and Dilutions, Unit conversions</b>	
	<b>Chapter 8</b>	<b>Solutions</b>
		<b>Section Heading</b>
	8.5	Concentration Units - Percent Concentration
	8.6	Concentration Units - Molarity
	8.7	Dilution
	<b>Lecture 3: Intermolecular Forces and Colligative Properties</b>	
	<b>Chapter 7</b>	<b>Gases liquids and Solids</b>
		<b>Section Heading</b>
	7.7	Intermolecular Forces, Boiling Point and Melting Point
	<b>Chapter 8</b>	<b>Solutions</b>
		<b>Section Heading</b>
8.8	Colligative Properties	

Assessment Item 1 - Online Quiz 1  
Quiz close 11:55 pm (AEST) Sunday  
31 March 2019

## Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Chemical Equations 1	<b>Lecture 1: Chemical Equations</b>		
	Chapter 5	<b>Chemical Reactions</b>	
		<b>Section Heading</b>	
	5.1	Introduction to Chemical Reactions	
	5.2	Balancing Chemical Equations	
	<b>Lecture 2: Energy in Reactions, Catalysts and Enzymes</b>		
	Chapter 6	<b>Energy changes, Reaction Rates and Equilibrium</b>	
		<b>Section Heading</b>	
	6.1	Energy	
	6.2	Energy Changes in Reactions	
6.3	Energy Diagrams		
6.4	Reaction Rates		
<b>Lecture 3: Chemical Reactions and Stoichiometry</b>			
Chapter 5	<b>Chemical reactions</b>		
	<b>Section Heading</b>		
5.7	Mole Calculations in Chemical Equations		
5.8	Mass Calculations in Chemical equations		

## Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic	
Chemical Equations 2	<b>Lecture 1: Yield Calculations, Limiting and Excess Reagents</b>		
	Chapter 5	<b>Chemical Reactions</b>	
		<b>Section Heading</b>	
	5.9	Percent yield	
	5.10	Limiting Reactants	
	<b>Lecture 2: Chemical Equilibrium and Equilibrium Constants</b>		
	Chapter 6	<b>Energy changes, Reaction Rates and Equilibrium</b>	Assessment Item 2 - Written Assessment
		<b>Section Heading</b>	Due 11:55 pm (AEST) Sunday 14 April 2019
	6.5	Equilibrium	
	<b>Lecture 3: Le Châtelier's Principle</b>		
Chapter 6	<b>Energy Changes, Reaction Rates and Equilibrium</b>		
	<b>Section Heading</b>		
6.6	Le Châtelier's Principle		
6.7	FOCUS ON THE HUMAN BODY: Body Temperature		

## Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
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## Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic	
Introduction to Acids and Bases	<b>Lecture 1: Introduction to Acids and Bases</b>		
	Chapter 9	<b>Acids and Bases</b>	
		<b>Section Heading</b>	
	9.1	Introduction to Acids and Bases	
	9.2	The Reaction of a Brønsted-Lowry Acid with a Brønsted-Lowry Base	
	9.3	Acid and Base Strength	
	9.4	Equilibrium and Acid Dissociation Constants	
	9.5	The Dissociation of Water	
	<b>Lecture 2: The pH Scale and pH Calculations for Strong Acids and Bases</b>		
	Chapter 6	<b>Acids and Bases</b>	Assessment Item 1 - Online Quiz 2
	<b>Section Heading</b>	Quiz close 11:55 pm (AEST) Sunday 28 April 2019	
9.6	The pH Scale		
9.7	Common Acid-Base Reactions		
9.8	The Acidity and Basicity of Salt Solutions		
<b>Lecture 3: The pH of weak acids and bases</b>			
No readings from text			

## Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic	
Acids, Bases, Buffers and Gases	<b>Lecture 1: Common Acid Base Reactions and Buffer Theory</b>		
	Chapter 9	<b>Acids and Bases</b>	
		<b>Section Heading</b>	
	9.7	Common Acid-Base Reactions	
	9.8	The Acidity and Basicity of Salt Solutions	
	9.10	Buffers	
	9.10A	General Characteristics of a Buffer	
	FYI 9.11	FOCUS ON THE HUMAN BODY: Buffers in the Blood	
	<b>Lecture 2: Calculating the pH of a Buffer</b>		
	Chapter 9	<b>Acids and Bases</b>	
	<b>Section heading</b>		
9.10B	Calculating the pH of a Buffer		
<b>Lecture 3: Gas Laws</b>			
Chapter 7	<b>Gases, Liquids and Solids</b>		
	<b>Section Heading</b>		
7.2	Gases and Pressure		
7.3	Gas Laws that Relate Pressure, Volume and Temperature		
7.4	Avogadro's Law - How Volume and Moles are Related		
7.5	The Ideal Gas Law		
7.6	Dalton's Law and Partial Pressure		

## Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic	
Introduction to Organic Chemistry – Carbon, Functional Groups and Alkanes	<b>Lecture 1: Introduction to Organic Chemistry – Carbon and Functional Groups</b>		
	<b>Chapter 11</b>	<b>Introduction to Organic Molecules and Functional Groups</b>	
		<b>Section Heading</b>	
	11.1	Introduction to Organic Chemistry	
	11.2	Characteristic Features of Organic Compounds	
	11.3	Shapes of Organic Molecules	
	11.4	Drawing Organic Molecules	
	11.5	Functional Groups	
	11.6	Properties of Organic Compounds	
	FY1 11.7	FOCUS ON HEALTH & MEDICINE: Vitamins	
	<b>Lecture 2: Alkanes, IUPAC Nomenclature and Classification of Carbon Atoms</b>		
	<b>Chapter 12</b>	<b>Atoms and the Periodic Table</b>	
		<b>Section Heading</b>	
	12.1	Introduction	
	12.2C	Classifying Carbon Atoms	
	12.3	An introduction to Nomenclature	
	12.4	Alkane Nomenclature	
	<b>Lecture 3: Cycloalkanes, Isomers, Chiral Compounds and Properties of Alkanes</b>		
	<b>Chapter 12</b>	<b>Alkanes</b>	
		<b>Section Heading</b>	
	12.2	Simple Alkanes	
12.5	Cycloalkanes		
12.7	Physical properties		
12.8	Combustion		
FY1 12.6	FOCUS ON THE ENVIRONMENT: Combustion		
<b>Chapter 15</b>	<b>The Three-Dimensional Shape of Molecules</b>		
	<b>Section Heading</b>		
15.1	Isomers – A Review		
15.2	Looking Glass Chemistry – Molecules and Their Mirror Images		
15.3	Chiral Centres		
FY1 15.5	FOCUS ON HEALTH & MEDICINE: Chiral Drugs		

## Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic	
Unsaturated Hydrocarbons and Aromatics	<b>Lecture 1: Alkenes and Alkynes</b>		
	<b>Chapter 13</b>	<b>Unsaturated Hydrocarbons</b>	
		<b>Section Heading</b>	
	13.1	Alkenes and Alkynes	
	13.2	Nomenclature of Alkenes and Alkynes	
	13.6	Reactions of Alkenes	
	FY1 13.4	Interesting Alkenes in Food and Medicine	
	FY1 13.5	FOCUS ON HEALTH & MEDICINE: Oral Contraceptives	
	FY1 13.7	Margarine or Butter	
	<b>Lecture 2: cis - trans isomerism</b>		
	<b>Chapter 13</b>	<b>Unsaturated Hydrocarbons</b>	
		<b>Section Heading</b>	
	13.3	Cis - Trans Isomers	
	<b>Lecture 3: Aromatic Compounds</b>		
	<b>Chapter 13</b>	<b>Unsaturated Hydrocarbons</b>	
		<b>Section Heading</b>	
	13.9	Aromatic Compounds	
13.10	Nomenclature of Benzene derivatives		
FY1 13.11	FOCUS ON HEALTH & MEDICINE: Aromatic Drugs, Sunscreens, and Carcinogens		
FY1 13.12	FOCUS ON HEALTH & MEDICINE: Phenols as Antioxidants		

Assessment Item 1 - Online Quiz 3  
Quiz close 11:55 pm (AEST) Sunday  
19 May 2019

## Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic	
Alcohols, Thiols and Amines	<b>Lecture 1: Alcohols</b>		
	<b>Chapter 14</b>	<b>Organic Compounds that Contain Oxygen, Halogen or Sulfur</b>	
	14.1	<b>Section heading</b> Introduction	
	14.2	Structure and properties of alcohols	
	14.3	Nomenclature of Alcohols	
	14.5	Reactions of Alcohols	
	FY1 14.4	Interesting Alcohols	
	FY1 14.6	FOCUS ON HEALTH & MEDICINE: Ethanol, the Most Widely Abused Drug	
	<b>Lecture 2: Ethers, Alkyl Halides and Thiols</b>		
	<b>Chapter 14</b>	<b>Organic Compounds that Contain Oxygen, Halogen or Sulfur</b>	
		<b>Section Heading</b>	
	14.7	Structure and Properties of Ethers	
	14.9	Alkyl Halides	
	14.10	Organic Compounds that Contain Sulfur	
	FY1 14.8	FOCUS ON HEALTH & MEDICINE: Ethers as Anesthetics	
	<b>Lecture 3: Amines</b>		
	<b>Chapter 18</b>	<b>Amines and Neurotransmitters</b>	
		<b>Section Heading</b>	
	18.1	Structure and Bonding	
	18.2	Nomenclature	
18.3	Physical Properties		
FY1 18.4	FOCUS ON HEALTH & MEDICINE: Caffeine and Nicotine		



## Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
	<b>Lecture 1: Aldehydes and Ketones</b>	
	<b>Chapter 16</b>	<b>Aldehydes and Ketones</b>
		<b>Section Heading</b>
	16.1	Structure and Bonding
	16.2	Nomenclature
	16.3	Physical Properties
	FYI 16.4	FOCUS ON HEALTH & MEDICINE: Interesting Aldehydes and Ketones
	<b>Lecture 2: Carboxylic Acids, Esters and Amides</b>	
	<b>Chapter 17</b>	<b>Carboxylic Acids, Esters, and Amides</b>
		<b>Section Heading</b>
	17.1	Structure and Bonding
	17.2	Nomenclature
	17.3	Physical Properties
	17.4	Interesting Carboxylic Acids in Consumer Products and Medicines
	17.5	Interesting Esters and Amides
	FYI 17.7	FOCUS ON HEALTH & MEDICINE: Aspirin
	<b>Lecture 3: Nuclear Decay and Radiation Safety</b>	
	<b>Chapter 10</b>	<b>Nuclear Chemistry</b>
		<b>Section Heading</b>
	10.1	Introduction
	10.2	Nuclear Reactions
	10.3	Half-life
	10.4 B	FOCUS ON HEALTH & MEDICINE: The Effects of Radioactivity
	10.5	FOCUS ON HEALTH & MEDICINE: Medical Uses of Radioisotopes

## Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
		Assessment Item 1 - Online Quiz 4 Quiz close 11:55 pm (AEST) Sunday 9 June 2019

## Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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## Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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## Assessment Tasks

### 1 Online Quizzes

#### Assessment Type

Online Quiz(zes)

#### Task Description

This assessment is comprised of 4 online quizzes which will assess your understanding of the topics presented in this unit. Completing these quizzes will give you an indication of your understanding of the concepts presented each week and encourage you to stay on track with your study. This assessment requires you to apply the concepts to answer a series of multiple choice questions. All questions in each quiz are of equal value.

- Quiz 1 will contribute 6 %,
- Quiz 2 will contribute 6 %,
- Quiz 3 will contribute 6 %, and
- Quiz 4 will contribute 12%,

The 4 online quizzes will contribute a total of 30% of the assessment for this unit.

The quizzes are not timed and you are allowed three attempts; the highest score of the three attempts will be recorded. Note that questions are generated randomly and you will receive different questions on subsequent attempts.

#### Number of Quizzes

4

#### Frequency of Quizzes

Other

#### Assessment Due Date

The quizzes will be due at 11:55 pm (AEST) on the Sunday at the end of Weeks 3, 6, 9 and 12.

### **Return Date to Students**

Quiz results will be released after the completion of each attempt. Answers to the quiz questions will be released after the quiz has closed.

### **Weighting**

30%

### **Assessment Criteria**

All questions are of equal weighting. One mark will be awarded for each correct response. Incorrect responses will not incur a penalty.

### **Referencing Style**

- [Vancouver](#)

### **Submission**

Online

### **Submission Instructions**

Complete each quiz by following the link on the Moodle site.

### **Learning Outcomes Assessed**

- Apply concepts of atomic structure to explain molecular bonding and nuclear reactivity.
- Identify categories of organic compounds and their potential chemical interactions.
- Perform basic chemical calculations.

### **Graduate Attributes**

- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

## **2 Written Assessment**

### **Assessment Type**

Written Assessment

### **Task Description**

This assessment is designed to assess your comprehension of the concepts presented in the unit through their application to a answer a series of questions. Marks will be awarded for each question as indicated in the assessment item (please see the Moodle site for further details). Explanations for each answer must be provided and if calculations are required all workings must be provided.

### **Assessment Due Date**

Due Sunday 14th April at 11:55 pm (AEST)

### **Return Date to Students**

Week 8 Friday (10 May 2019)

Results will be released via Moodle

### **Weighting**

20%

### **Assessment Criteria**

Marks will be awarded for each question as indicated in the assessment item (please see the Moodle site for further details). Marks will be awarded for each correct response. Incorrect responses will not incur a penalty.

### **Referencing Style**

- [Vancouver](#)

### **Submission**

No submission method provided.

### **Learning Outcomes Assessed**

- Apply chemical concepts to healthcare situations.

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

**Examination****Outline**

Complete an invigilated examination.

**Date**

During the examination period at a CQUniversity examination centre.

**Weighting**

50%

**Length**

120 minutes

**Minimum mark or grade**

40

**Exam Conditions**

Closed Book.

**Materials**

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).  
Calculator - all non-communicable calculators, including scientific, programmable and graphics calculators are authorised

## 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