1. General Course Information

1.1 Course Details

Course Code:	**FND002**
Course Name:	**Chemistry**
Trimester:	**Trimester 2, 2022**
Program:	**Foundation Program**
Credit Points:	**10**
Course Coordinator:	**Gretel Heber**
Document modified:	**27 May 2022**

Course Description

This course provides students with an introduction to the molecular basis and physical properties of materials, the reasons chemical reactions occur and quantitation of chemical changes.

Assumed Knowledge

There are no prerequisites for this course.

1.2 Teaching Team

Your teacher/s can be contacted via email as below:

You will also find their email in the Teacher's tile on your Course Site.

Name	Email
Gretel Heber	Gretel.heber@staff.griffithcollege.edu.au

1.3 Meet with your teacher

Your teacher is available each week to meet outside of normal class times. This is called consultation. Times that your teacher will be available for consultation will be found on the Teacher's tile on your Course Site.

1.4 Timetable

Your timetable is available on the Griffith College Digital Campus at My Apps, Timetable. This class is split into 2 x 2hour classes per week. You must attend both classes per week.

1.5 Technical Specifications

All students must have access to a computer or suitable mobile device such as desktop, laptop, or tablet. In addition, up-to-date bowser access, a reliable high-speed internet connection with enough upload and download capacity, a webcam and headset including microphone are needed.

2. Aims, Outcomes & Generic Skills

2.1 Course Aims

The aim of this course is to provide students with an understanding of the basic concepts and processes of chemistry. Students will develop analytical, problem solving, calculation and technical report writing skills. Students will also develop an appreciation of safe and effective manipulative skills in the laboratory environment.

2.2 Learning Outcomes

After successfully completing this course you should be able to:

1. Utilise the periodic table to produce correct chemical nomenclature, elucidate properties and trends for common substances;
2. Predict the atomic and molecular structures and properties of substances and extrapolate structure with macroscopic properties;
3. Develop qualitative and quantitative solutions to chemical problems in a range of contexts;
4. Demonstrate critical thinking to analyse chemical problems and utilise research literature appropriately to support ideas.

2.3 Generic Skills and Capabilities

For further details on the Generic Skills please refer to the Graduate Generic Skills and Capabilities policy.

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

Generic Skills and Capabilities		Taught	Practised	Assessed
Acquisition of discipline knowledge and skills with critical judgement		✓	✓	✓
Communication and collaboration			✓	
Self-directed and active learning		✓	✓	
Creative and future thinking		✓	✓	✓
Social responsibility and ethical awareness			✓	
Cultural competence and awareness in a culturally diverse environment				

3. Learning Resources

3.1 Required Learning Resources

Timberlake, K. C. (2018). *Basic Chemistry, Global Edition*. Your teacher will provide you with information on how to access the e-book and associated interactive activities

Non-programmable scientific calculator.

3.2 Recommended Learning Resources

n/a

3.3 College Support Services and Learning Resources

Griffith College provides many facilities and support services to assist students in their studies. Links to information about support resources that are available to students are included below for easy reference.

- Digital Library – Databases to which Griffith College students have access to through the Griffith Library Databases.
- Study Toolbox – there is a dedicated website for this course on the Griffith College Digital Campus.
- Academic Integrity - Griffith College is committed to ensuring academic integrity is understood and maintained by all staff and students. All students learn about academic integrity through engagement with Academic Integrity online modules within the Academic and Professional Studies course.
- Services and Support provides a range of services to support students throughout their studies including academic advice and assignment help from Student Learning Advisors, and personal and welfare support from Student Counsellors.
- Jobs and Employment in the Student Hub can assist students with career direction, resume and interview preparation, job search tips, and more.
- IT Support provides details of accessing support, information on s numbers and internet access and computer lab rules.

3.4 Other Information about your Learning

As you progress from the Foundation program to Diploma studies with Griffith College you will note some changes to the terminology used about your learning. This includes **Before Class** = Learning Content; **Classwork** = Learning Experiences; **Homework** = Leaning Activities and **Assessment** = Evidence of Learning. We have therefore included both in the below information.

Preparation and Participation in Learning

You need to prepare before attending your scheduled learning experience. Work through the **Before Class** (Learning Content) prepared by your teacher which is found on the course site. Make sure you complete the **Homework** (Learning Activities) set each week, they are designed to support your learning. Active participation in your learning will enhance your success. Ask questions when something is unclear or when you want to bring some issue to your teacher's attention; respond to questions to test your knowledge and engage in discussion to help yourself and others learn.

Attendance

You are expected to actively engage in all **Classwork** (Learning Experiences) which underpin the learnings in this course. You are expected to engage with the Before Class work and Homework outside of timetabled class times. This requires you to be an active agent of your learning. You are expected to bring all necessary learning resources to class such as the required textbook and /or Workbook. In addition, you are encouraged to BYOD (bring your own device) to class such as a laptop or tablet. This is not a requirement as computer lab facilities are available on campus, however, the use of such devices in the classroom is encouraged with appropriate and considerate use principles being a priority.

Consultation Sessions

Teachers offer extra time each week to assist students outside the classroom. This is known as 'consultation time.' You may seek assistance from your teacher on email or in person according to how the teacher has explained this to the class. Attendance during consultation time is optional but you are encouraged to use this extra help to improve your learning outcomes.

Course Learning Materials

Learning materials are made available to you in the course site. The learning materials are arranged in Modules. In each Module you will find **Before Class** (Learning Content), **Classwork** (Learning Experiences), **Homework** (Learning Activities) and **Assessment** (Evidence of Learning). **Before Class** work will be engaged with prior to the scheduled **Classwork** (your weekly class). This will ensure you are prepared for the scheduled class by being aware of the content to be covered and therefore will be able to actively participate in the session. **Homework** (Learning Activities**)** are accessed after the scheduled session for purposes of review, consolidation of learning, and preparation for **Assessment (**Evidence of Learning Tasks) in the course.

In addition, **Anytime Anywhere** learning material is provided in the course. This learning material provides support, interactive tools and directions for students who occasionally cannot attend the weekly scheduled class (either in person or on Zoom) perhaps due to illness or other commitments. The Anytime Anywhere learning material should also be used in conjunction with before class and homework resources.

Self-Directed Learning

You will be expected to learn independently. This means you must organise and engage with the course content even when you are not specifically asked to do so by your teacher. The weekly guide will be helpful to organise your learning. This involves revising the weekly course learning material and completing the homework activities. It also means you will need to find additional information to evidence your learning beyond that given to you, and to construct your own response to a question or topic. All of this requires careful planning of your time. Expect to spend, on average, at least 10 hours per week including class time for each of your courses.

Program Progression

You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, students are engaged in their learning and that GPA is maintained at equal to or greater than 3.5 [please see Griffith College Policy Library - Program Progression Policy - for more information].

Teacher and Course Evaluation

Your feedback is respected and valued by your teachers. You are encouraged to provide your thoughts on the course and teaching, both positive and critical, directly to your teacher or by completing course and teacher evaluations via Griffith College's evaluation tool whenever these are available.

4. Before Class (Learning Content), Classwork (Learning Experiences) and Homework (Learning Activities) and Assessment (Evidence of Learning)

4.1. Modules for Learning and Weekly Before Class, Classwork, Homework and Assessment

	Before Class (Learning Content)	Classwork (Learning Experiences)	Homework (Learning Activities)	Assessment (Evidence of Learning)	Learning Outcome
					
	Module 1 – Introduction to Chemistry, Measurements and Matter				
1	**Before Class** Online vocabulary activities **In Class topics** Introduction to Chemistry	Online Zoom Class • Introduction to Course • Discuss Course Outline • Introduction to Chemistry • Maths for Chemistry	Chapters 1 and 2 Associated eBook Activities - All		1,3
2	**Before Class** Online vocabulary activities **In Class topics** Matter	Online Zoom Class • Continue Maths and Measurements for Chemistry • Introduction to Solids, Liquids and Gases	Ch. 3 Associated eBook Activities Up to 3.3		1,3,4

	Module 2: *Atomic and molecular structure*				
3	**Before Class** Online vocabulary activities **In Class topics** Atoms and Elements	Online Zoom Class ● Module 1 Quiz ● Elements and Symbols ● The Periodic Table ● Atoms, Atomic Numbers, Mass Numbers • Isotopes	Ch. 4 Associated eBook Activities - All	**Module 1 Quiz - 10%**	1,2
4	**Before Class** Online vocabulary activities **In Class topics** Electronic Structure of Atoms and Periodic Trends	Online Zoom Class ● Atomic Spectra and Energy Levels ● Sub-levels and Orbitals ● Electron Configurations • Trends in Periodic Properties	Ch. 5.2 Onwards Associated eBook Activities - All		1,2
5	**Before Class** Online vocabulary activities **In Class topics** Ionic and Molecular Compounds	Online Zoom Class ● Ions and Ionic Compounds ● Polyatomic Ions Molecular Compounds	Ch. 6,10 Associated eBook Activities - All		1,2
6	**Before Class** Online vocabulary activities **In Class topics** Bonding and Properties of Solids and Liquids	Online Zoom Class ● Lewis Structures ● Electronegativity and Bond Polarity ● Intermolecular forces Changes of State	Ch. 10 Associated eBook Activities – All		1,2,4
	Module 3: *Chemical Quantities and Reactions*				
7	**Before Class** Online vocabulary activities **In Class topics** Chemical Quantities	Online Zoom Class Module 2 Quiz ● Introduction to the mole ● Molar Mass ● Mass Percent • Empirical and Molecular Formulas	Ch. 7 Associated eBook Activities - All	**Module 2 quiz – 20%**	1,2,3,4
8	**Before Class** Online vocabulary activities **In Class topics** Chemical Reactions	Online Zoom Class ● Chemical Reactions ● Balancing Chemical Equations ● Chemical Reaction Types 5. Oxidation-Reduction Reactions	Ch. 8 Associated eBook Activities - All	**Virtual lab 1 (10%)**	1,2,3,4

9	**Before Class** Online vocabulary activities **In Class topics** Chemical Quantities in Reactions	Online Zoom Class • Conservation Mass • Mole Calculations • Mass Calculations • Limiting Reactants • Percentage Yield • Energy in Chemical Reactions	Ch. 9 Associated eBook Activities - All		1,2,3,4
	Module 4: *Gases and Solutions*				
10	**Before Class** Online vocabulary activities **In Class topics** Gases	Online Zoom Class • Introduction to gases • Pressure, Volume and Temperatures • Gas Laws	Ch. 11 Associated eBook Activities – All	**Module 3 Quiz – 10%**	**1,2,3,4**
11	**Before Class** Online vocabulary activities **In Class topics** Solutions	Online Zoom Class • Types of solutions • Concentration • Calculations • Dilutions • In chemical reactions	Ch 12 Associated eBook Activities	**Research assignment (20%)**	**1,2,3,4**
12	**Before Class** Online vocabulary activities **In Class topics** Acids and Bases	Online Zoom Class • Acids and Bases • The pH scale • Acid-Base Reactions • Acid-Base Titrations	Ch. 14 Associated eBook Activities – All	**Module 4 Quiz – 20%** **Virtual lab 2, 10%**	1,2,3,4

5. Assessment (Evidence of Learning)

5.1 Assessment Summary (Evidence of Learning Summary)

	Assessment	Weighting	Learning outcome	Due Date
				
1	Module 1- Competency Quiz	10%	1-4	Week 3
2	Module 2 - Competency Quiz	20%	1-4	Week 7
3,4	Module 3 - Virtual lab (10%) - Competency quiz (10%)	20%	1-4	Week 8,10
5	Research Assignment	20%	1-4	Week 11
6,7	Module 4 - Virtual lab (10%) - Competency quiz (20%)	30%	1-4	Week 12, 13

5.2 Assessment Task Detail (Evidence of Learning)

1. **Assessment Task 1: Module 1 Competency Quiz (10%)**
   Task Type: Quiz
   Due Date: Week 3, date to be advised
   Weight: 10%, Marked out of: 15
   Length: 1 hour
   Task Description: Multiple choice and short answer calculation and naming questions
   Criteria and Marking: Correct response, automarked.
   Submission: online quiz/exam

2. **Assessment Task 2: Module 2 Competency Quiz**
   Task Type: Quiz
   Due Date: Week 7, date to be advised
   Weight: 20%, Marked out of: 30
   Length: 2 hours
   Task Description: Multiple choice and short answer calculation and naming questions
   Criteria and Marking: Correct response, auto marked.
   Submission: online quiz/exam

3. **Assessment Task 3: Virtual lab 1**
   Task Type: Lab (descriptive chemistry)
   Due Date: Week 8, date to be advised
   Weight: 10%, Marked out of: 10
   Length:
   Task Description: Undertake 5 droppers virtual lab activity and answer short answer questions and identify unknown
   Criteria and Marking: Correct response.
   Submission: online response.

4. **Assessment Task 4: Module 3 competency quiz**
   Task Type: Quiz
   Due Date: Week 10, date to be advised
   Weight: 10%, Marked out of: 15
   Length: 1 hour
   Task Description: Multiple choice and short answer calculation and naming questions
   Criteria and Marking: Correct response, auto marked.
   Submission: online quiz/exam

5. **Assessment Task 5: Research Assignment**
   Task Type: Assignment
   Due Date: Week 11, date to be advised
   Weight: 20%, Marked out of: 20
   Length:
   Task Description: Research and analyse the development and properties of a chemical substance that was an accidental discovery.
   Criteria and Marking: Rubric
   Submission: Turnitin (Padlet or Word)

6. **Assessment Task 6: Virtual lab 2**
   Task Type: Virtual lab (Acid-base titration)
   Due Date: Week 12, date to be advised
   Weight: 10%, Marked out of: 10
   Length:
   Task Description: Undertake RSC titration virtual lab activity, answer short answer questions and identify unknown concentration
   Submission: online lab book.

7. Assessment Task 7: Module 4 competency quiz
Task Type: Quiz
Due Date: Week 13, date to be advised
Weight: 20%, Marked out of: 30
Length: 2 hours
Task Description: Multiple choice and short answer calculation and naming questions
Criteria and Marking: Correct response, auto marked.
Submission: online quiz/exam

In order to pass this Course, students must:

A. Attempt all assessment items
B. Demonstrate assurance of learning of all learning outcomes through graded Assessment Tasks.

5.3 Late Submission

An Assessment Task submitted after the due date, without an approved extension from the teacher, will be penalised. The standard penalty is the reduction of the mark allocated to the Assessment Task by 5% of the maximum mark applicable for the Assessment Task, for each working day or part working day that the task is late. Assessment tasks submitted more than five working days after the due date are awarded zero marks.

Please refer to the Griffith College website - Policy Library > Assessment Policy for guidelines and penalties for late submission.

5.4 Other Information about Assessments (Evidence of Learning)

Retention of Originals

You must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the Course.

Requests for extension

To apply for an extension of time for an evidence of learning task, you must submit an Application for Extension of Assignment form to your teacher at least 24 hours before the date the assignment is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. Griffith College Student Medical Certificate]. Please refer to the Griffith College website – Policy Library for guidelines regarding extensions and deferred Evidence of Learning Tasks.

Return of Evidence of Learning Tasks

1. Marks awarded for in-trimester evidence of learning tasks, except those being moderated externally with Griffith University, will be available on the course site within fourteen [14] days of the due date. This does not apply to the final evidence of learning task in this course (marks for this task will be provided with the final course result).

2. Students will be advised of their final grade through the Digital Campus. Students can review their final exam papers after student grades have been published. Review of final exam papers will not be permitted after the final date to enrol.

3. Marks for **all** evidence of learning tasks including the final exam (if applicable) will be recorded in the Course Site and made available to students through the Course Site.

The sum of your marks of evidence of learning *tasks in this course does not necessarily imply your final grade for the course. Standard grade cut off scores can be varied for particular courses, so you need to wait for the official release of grades to be sure of your grade for this course.*

6. Policies & Guidelines

Griffith College Evidence of Learning Tasks-related policies can be found in the Griffith College Policy Library which include the following policies:

Assessment Policy, Special Consideration, Deferred Assessment, Alternate Exam Sittings, Medical Certificates, Academic Integrity, Finalisation of Results, Review of Marks, Moderation of Assessment, Turn-it-in Software Use. These policies can be accessed within the Policy Library

Academic Integrity Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre-meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your teachers and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

In the case of an allegation of a breach of academic integrity being made against a student he or she may request the guidance and support of a Griffith College Student Learning Advisor or Student Counsellor.

Please ensure that you are familiar with the Griffith College Academic Integrity Policy; this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Griffith College website - Policy Library > Academic Integrity Policy

Reasonable Adjustments for Evidence of Learning Tasks – The Disability Services policy

The Disability Services policy (accessed within the Policy Library) outlines the principles and processes that guide the College in making reasonable adjustments to Evidence of Learning Tasks for students with disabilities while maintaining academic robustness of its programs.

Risk Assessment Statement

There are no out of the ordinary risks associated with this course.

Note: Griffith College acknowledges content derived from Griffith University in Diploma level courses, as applicable.