



WFCH001

Chemistry

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Macquarie University International College

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Disclaimer

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General Information

Unit convenor and teaching staff

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Macquarie University International College

Contact Staff Member

Credit points

3

Prerequisites

Corequisites

Co-badged status

Unit description

This unit considers the physical and chemical properties of matter, how and why matters transform into different matters, and the change in energy. It attempts to provide chemical explanations and to predict events at both macroscopic and microscopic level. In this unit, students will explore the fundamental concepts that underpin some important chemical processes. Students will examine how chemical theories, models, and practices are developed and applied. Advancements in the field of chemistry will be discussed as will their impact on individuals and society. Students will practice planning, data analysis, critical thinking and reporting their findings in laboratory investigation.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

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

Discuss the applications and uses of Chemistry in society and the environment

Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.

Demonstrate understanding of the process of gathering, recording and analysing Chemical data

Use laboratories and scientific equipment to plan and conduct investigations in a safe manner

Apply scientific thinking and problem-solving techniques to practical problems.

General Assessment Information

Requirements to Pass

In order to pass this unit a student must obtain a mark of 50 or more for the unit (i.e. obtain a passing grade P/ CR/ D/ HD).

For further details about grading, please refer to [Schedule 1](#) of the [Assessment Policy](#).

Students must also pass any hurdle assessments as stipulated in the Assessment Section of this Unit Guide.

Grading

The College will award common result grades as specified in [Schedule 1](#) of the [Assessment Policy](#).

Students will receive criteria and standards for specific assessment tasks, which will be aligned with the grading descriptors given in [Schedule 1](#).

The attainment (or otherwise) of learning outcomes for a unit of study will be reported by grade and mark which will correspond to the Schedule 1 and be as outlined below.

Grade		Mark Range	Outcome	Description
HD	High Distinction	85-100	Pass	Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality, insight or creativity in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application as appropriate to the program.
D	Distinction	75-84	Pass	Provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality or creativity in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the program and the audience.
CR	Credit	65-74	Pass	Provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; convincing argumentation with appropriate coherent justification; communication of ideas fluently and clearly in terms of the conventions of the program.
P	Pass	50-64	Pass	Provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the program; routine argumentation with acceptable justification; communication of information and ideas adequately in terms of the conventions of the program. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.

F	Fail	0-49	Fail	Does not provide evidence of attainment of learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; missing, undeveloped, inappropriate or confusing argumentation; incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the program.
FA	Fail		Did Not Attend	Student has failed the compulsory attendance component of assessment
FH	Fail	49	Failed Hurdle	Student has obtained a raw mark over 50, yet failed all available attempts of at least one hurdle assessment (as described within Schedule 2 of the Assessment Policy).

Final Grades not receiving a mark because the student has withdrawn after the Census Date, not submitted or completed one or more components of the assessment, has been awarded a supplementary assessment or because of an unresolved matter such as allegations of academic misconduct are outlined in [Schedule 1](#).

Where to find information about assessment

General assessment information including the number and nature of assessments, due dates and weightings has been provided in this unit guide.

Specific assessment information including assignment instructions, questions, marking criteria and rubrics as well as examples of relevant and related assessment tasks and responses will be available in the Assessment section on iLearn. For units that have final examinations, students may access past final exam papers using [MultiSearch](#).

Student Responsibilities

As per the [Assessment Policy](#), students are responsible for their learning and are expected to:

- actively engage with assessment tasks, including carefully reading the guidance provided, understanding criteria, spending sufficient time on the task and submitting work on time;
- read, reflect and act on feedback provided;
- actively engage in activities designed to develop assessment literacy, including taking the initiative where appropriate (e.g. seeking clarification or advice, negotiating learning contracts, developing grading criteria and rubrics);
- provide constructive feedback on assessment processes and tasks through student feedback mechanisms (e.g. student surveys, suggestions for future offerings, student representation on committees);
- ensure that their work is their own; and
- be familiar with University policy and College procedures and act in accordance with

those policy and procedures.

Submission of Assessment Tasks

Assessments must be submitted in accordance with instructions provided in this unit guide. Assessment tasks which have not been submitted as required will not be marked; they will be considered a non-submission and zero marks will be awarded for the task.

Extensions & Late Submissions

Extensions will only be granted as a result of a successful application for Special Consideration. To apply for an extension of time for submission of an assessment item, students must submit their application for Special Consideration via ask.mq.edu.au.

Late submissions without an approved extension are possible but will be penalised at 20% per 24 hour period or thereof up to 4 days (weekend inclusive).

Example: An assignment is due at 5:00 pm on a Friday and is marked out of 100 marks.

- If a student submits at 5:02 pm on the Friday and no special consideration has been granted, a penalty of 20% of the total marks possible (20 marks) will be deducted from their result.
- If the student submits the assignment on Sunday and no special consideration has been granted, then a penalty of 40% (40 marks) will be deducted and so on.
- If a student submits an assessment task 5 or more days after the due date and no special consideration has been granted, a record of submission will be made and student will be provided with feedback, but they will receive zero marks for the assessment task as a full (100%) penalty will be applied.

Where a student has been granted an extension and submits late, late penalties will be applied following the due date.

Please see “In class assessment” section for further information on in class assessments.

Resubmissions after the Due Date / Time

Students may resubmit their work up to four days after the due date if for example, they have submitted the incorrect document, or forgotten to include information. These resubmissions will be treated as late submissions and will be penalised at 20% per 24 hour period or thereof up to 4 days (weekend inclusive). After the 5th day record of submission will be made and feedback provided on the new content submitted but the student will receive zero marks for the assessment task.

In order to resubmit your work you will need to contact your teacher, and ask them to delete your original submission so that you can upload a new one. Teaching staff contact details have been provided in this unit guide.

Retention of Originals

It is the responsibility of the student to retain a copy of any work submitted. Students must

produce these documents upon request. Copies should be retained until the end of the grade appeal period each term.

In the event that a student is asked to produce another copy of work submitted and is unable to do so, they may be awarded zero (0) for that particular assessment task.

Requests for original documentation will be sent to the applicant's student email address within six (6) months of notification by the student. Students must retain all original documentation for the duration of this six (6) month period and must supply original documents to the University within ten (10) working days of such a request being made.

In Class Assessment

Students must bring their Student ID Card to all assessment tasks, including in class assessments and produce this if requested. Students may be refused the opportunity to take an in class assessment task where unable to show their student ID card.

Where an assessment is to be held or submitted a scheduled lesson, students must be ready to submit, present or sit the assessment task at the start of the lesson, however not all assessments may commence at the beginning of the lesson. No additional time or adjustment will be made for late arriving students or students not ready to submit an assessment at the start of the lesson and late penalties may apply.

For example, if a one hour test or quiz is due to take place in a three hour lesson, the test or quiz may start at any time in the first two hours, so students must be ready to take the test at the beginning of the lesson. No additional time will be given to or adjustment made for students who arrive late. While they may still be permitted to take the test, depending on the task, the student will have only the remaining time to complete the task. Similarly, where an assessment task is due in a given lesson, late penalties may apply to a student who submits the task at the end of the lesson, depending on submission instructions for the task.

Final Examinations

The final examination period is from Thursday Week 6 until Monday of Week 7, including the weekend. This means that examinations and assessments may be held/due on the Saturday during the final examination period and students must be available to take exams and submit assessments on this day. For unit specific details please refer to the Assessment section of this unit guide.

The University will publish the [College Final Examination Timetable](#) at least 4 weeks before the commencement of the final examination period and students will be able to access their final examination schedule in Week 3 of the Term.

Final Examination Requirements

Schedule 4 of the Assessment Policy explains what students are responsible for:

- checking the final examination timetable
- knowing the examination location (including seat number allocation) and arriving at allocated examination venue on time.

- knowing the structure and format of the examination
- adhering to the final examination timetable
- ensuring they are available for the full duration of the final examination period and supplementary examination period.

Details of the structure and format of the final examination paper will be made available to students via iLearn prior to the start of the final examination period. This detail will include:

- a copy of the examination coversheet, giving the conditions under which the examination will be held
- information on the types of questions the examination will contain, and
- an indication of the unit content the paper may examine.

Students must follow directions given by the Final Examination Supervisor.

Students will be required to present their Macquarie University Campus Card as photographic proof of identity for the duration of the final examination and may be refused the opportunity to take a final examination where unable to show their student ID card.

Students are not permitted to:

- enter a final examination venue once one hour from the time of commencement (excluding any reading time) has elapsed
- leave a final examination venue before one hour from the time of commencement (excluding any reading time) has elapsed
- leave a final examination venue during the last 15 minutes of the examination
- be readmitted to a final examination venue unless they were under approved supervision during the full period of their absence
- obtain, or attempt to obtain, assistance in undertaking or completing the final examination script
- receive, or attempt to receive, assistance in undertaking or completing the final examination script (Unless an application for reasonable adjustment has been approved)
- communicate in any way with another student once they have entered the final examination venue

Missed assessments and examinations

The [Special Consideration Policy](#) establishes the principles that support students seeking to notify the University when they experience short-term, unexpected, serious and unavoidable circumstances, which affect their performance in assessment. This Policy applies only to short-term, serious and unavoidable circumstances that arise after a study period has commenced, and where specific assessment task/s have been affected. Students with a pre-existing disability/health condition or prolonged adverse circumstances are advised to seek support from Campus Wellbeing and should also refer to the Student Disability Support Policy.

In order to support students who have experienced serious and unavoidable circumstances, the University will attempt to provide affected students with one (1) additional opportunity to demonstrate that they have met the learning outcomes of a unit or units. An additional opportunity provided under such circumstances is referred to as Special Consideration, and may be granted after careful evaluation of the supporting evidence.

Students are expected to plan their work so that they can meet assessment deadlines at the same time as other obligations which they may have, both inside and outside the University. Special Consideration will not be granted when students are unable to complete an assessment task due to planned or foreseeable absence (e.g. holidays, recreational activities or normal work commitments or changes).

All applications for Special Consideration must be substantiated by original, independent documentary evidence in the format and by the deadline prescribed in the Procedure.

Please refer to the [Special Consideration Policy](#) section under Policies and Procedures below.

Supplementary Tests, Supplementary Examinations and Second Attempts at a Hurdle Assessments

Where a student has been granted a supplementary test or examination as a result of an application for special consideration, they will be advised of the time, date and location for the supplementary task.

Supplementary interim assessments (i.e. assessments held during the term) will be held throughout the term with sittings typically taking place on these days:

- Week 3: Wednesday AND/OR Friday
- Week 5: Wednesday AND/OR Friday
- Week 6: Thursday

The supplementary final examination period (i.e. for formal, end of term examinations) will span from Monday Week 7 until Friday Week 1 of the subsequent teaching term. Students who have lodged a special consideration application must be available to undertake examinations during the supplementary examination period.

Where a student is eligible for a **second attempt at a hurdle assessment**, this will typically be organised during the supplementary interim/final examination periods unless stipulated otherwise in the assessment section of the unit guide. Students awarded second attempts at hurdles will be notified via email so please ensure you are checking your student email regularly.

No more than one (1) alternate assessment will be offered to a student in each affected unit, so it is essential that the student makes themselves available for the alternative assessment activity. Please refer to the [Special Consideration Policy](#) for further details.

Results for supplementary final examinations may not be available for up to two weeks following the supplementary examination. Students in their final term of study who undertake supplementary final exams and students who apply for special consideration for a unit which is a prerequisite to another unit in their program should note that formal completion of their Program will not be possible until supplementary results are released and this may impact on their ability

to enrol in subsequent programs of study on time.

Accessing your Results

Students will be able to view their results for internal assessments via the Grades section in [iLearn](#).

Grades (e.g. HD, D, CR, P, F) for all assessment tasks will be released to students once marking has concluded. Marks for individual assessments may be released as well.

Final results for the unit will be released at 00:01 on Friday of Week 7. Students will be able to view their final result for the unit via [eStudent](#).

Calculating your GPA

A Grade Point Average (GPA) is a calculation that reflects the overall grades of a student in a coursework program. Please refer to the [GPA Calculator](#).

Obtaining Feedback

Teaching staff will provide students with feedback about their academic progress and performance in assessment tasks or a unit of study. Where relevant, other staff such as Senior Teachers, Program Managers and members of the Student Administration and Services Team will provide feedback and advice to students about their performance in a program of study. Feedback may be provided to individual students, a group of students or a whole class and it may be written or verbal in nature.

Some examples of feedback include:

- Teaching staff member reviewing a draft submission and giving a student advice on how to improve their work before making a final submission
- Teaching staff member telling a class that they need to improve their editing of grammar in their recently submitted assignment.
- Teaching staff member discussing progress of an individual student before census date to allow the student to decide whether they should remain enrolled in the unit.
- Online feedback via announcements or forums, an online marking rubric or various iLearn activities employed in a unit. Please note that feedback on written assessments is usually provided via Feedback Studio in iLearn.
- Written marks and comments on a marking sheet or essay.

Recorded voice comment provided in response to an essay submitted online.

- A student receiving advice that they should consider withdrawing from a unit because they have missed too many classes / too much work to be able to catch up or for other reasons.

It is a student's responsibility to:

- Attend sessions, be present and actively engaged during times when feedback is

provided in scheduled class times.

- If absent from an in-class feedback session due to unavoidable circumstances, organise an alternative time with the teacher so that they can receive their feedback
- Ensure that they have received sufficient feedback prior to their next assessment task and/or final assessment in the unit
- Act promptly on feedback provided (e.g. incorporate advice provided into their work and study habits).

If you are unsure how or when feedback has been or will be provided, or you feel that feedback provided is not sufficient, you must approach relevant teaching or administrative staff and request additional feedback in a timely manner during the term and prior to any subsequent assessment task or the final assessment task for the unit. Claims that not enough feedback has been provided are not grounds for a grade appeal, especially where a student has not made any effort to approach staff about obtaining additional feedback in a timely manner. Students may seek general feedback about performance in a unit up to 6 months following results release.

If you have any problems contacting your teacher you must seek help from administrative staff at the E3A Level 2 Reception.

Contacting Teaching Staff Obtaining Help

Students may contact teaching staff at any time during the term by using the contact details provided in this guide. Students should expect a response within 1-2 business days. Teaching staff are unable to accept assessment submissions via email, all assessments must be submitted as outlined in the unit guide.

For all university related correspondence, students must use their official Macquarie University student email account which may be accessed via the [Macquarie University Student Portal](#). Inquiries from personal email accounts will not be attended to.

Academic Honesty

Using the work or ideas of another person, whether intentionally or not, and presenting them as your own without clear acknowledgement of the source is called [Plagiarism](#).

Macquarie University promotes awareness of information ethics through its [Academic Honesty Policy](#). This means that:

- all academic work claimed as original must be the work of the person making the claim
- all academic collaborations of any kind must be acknowledged
- academic work must not be falsified in any way
- when the ideas of others are used, these ideas must be acknowledged appropriately.

All breaches of the [Academic Honesty Policy](#) are serious and penalties apply. Students should be aware that they may fail an assessment task, a unit or even be excluded from the University for breaching the Academic Honesty Policy.

Examples of Academic Dishonesty

Examples of some dishonest behaviours include deception, fabrication, obstruction, plagiarism and sabotage.

Deception includes:

- falsely claiming to have contributed to a group task or presenting collaborative work as one's own without acknowledging others' contributions
- falsely claiming to have submitted an assignment when this was not the case
- collusion (work together with someone else in a deceitful way to develop a submission for an assessment which has been restricted to individual effort)
- submission of a work previously submitted for another unit or another assessment, even if this is the student's own work
- creating a new article out of an existing article by rewriting/reusing it,
- cheating in an examination or asking someone else to complete an assessment or examination in one's place.

Plagiarism involves using the work or ideas of another person, whether intentionally or not, and presenting this as your own without clear acknowledgement of the source of the work or ideas.

This includes, any of the following:

- copying part(s) of any document or audio-visual material or computer code or website content without indicating their origins
- using or extracting another person's concepts, experimental results, or conclusions
- summarising or paraphrasing another person's work
- submitting substantially the same final version of any material as another student in an assignment where there was collaborative preparatory work
- use of others (paid or otherwise) to conceive, research or write material submitted for assessment (eg ghost writing)
- submitting the same or substantially the same piece of work for two different tasks or in different units (self-plagiarism).

Sabotage includes, but is not limited to, theft of work, destruction of library materials.

Fabrication involves creating false data, citation(s), or reports.

Obstruction involves intentionally impeding or interfering with another student's academic work

The University may commence applicable disciplinary procedures if a person who breaches the Academic Honesty Policy.

Turnitin

To uphold principles of Academic Honesty, Macquarie University employs online anti-plagiarism Software called [Turnitin](#). Turnitin compares electronically submitted papers to a database of academic publications, internet sources and other student papers that have been submitted to

the system to identify matching text. It then produces an Originality Report which identifies text taken from other sources, and generates a similarity percentage.

All text based assessments must be submitted through Turnitin as per instructions provided in the unit guide. It is the student's responsibility to ensure that work is submitted correctly prior to the due date. This includes verifying that correct files have been submitted as no special consideration will be given to students who have uploaded incorrect documents. No hard copies of assessments will be accepted and only Turnitin records will be taken as records of submission.

Multiple submissions may be possible via Turnitin prior to the final due date and time of an assessment task and originality reports may be made available to students to view and check their levels of similarity prior to making a final submission. Students are encouraged to use these reports to ensure that they do not breach they Academic Honesty Policy through high levels of similarity (plagiarism).

Students should note that the report on the initial submission will be immediate but on a second or subsequent submission it will take at least 24-36 hours for the similarity report to be generated. This may be after the due date so students should plan any resubmissions carefully. If you have not planned your submission time carefully and note high levels of similarity in your work after the due date, you can still resubmit your work, however a late penalty (20% per day) will apply. For instructions on how to resubmit your work please see "Resubmissions after the due date" section in this unit guide.

Teaching staff will use the report to judge whether plagiarism has occurred and whether penalties should apply for breaches of the Academic Honesty Policy. Any similar text identified by Turnitin will be considered carefully to see if it is indeed a breach of the Academic Honesty Policy.

There is no set percentage which indicates whether plagiarism has occurred; all identified matching text should be reconsidered carefully. If plagiarism has occurred or is suspected and resubmission is possible prior to the due date, students are advised to edit their work before making a final submission. Help may be sought from teaching staff. Students may also access [research resources](#) provided by the library or [Learning Skills](#).

Please refer to these instructions on [how to submit your assignment through Turnitin](#) and access similarity reports and feedback provided by teaching staff.

Should you have questions about Turnitin or experience issues submitting through the system, you must inform your teacher immediately. If the issue is technical in nature may also lodge a [On eHelp](#) Ticket, refer to the [IT help page](#).

Submission of Drafts through Turnitin.

In some instances students may be required to submit drafts of written work via Turnitin **prior to the due date of the assessment** task so that they can receive feedback prior to making a final submission. If the student does not make a final submission prior to the due date, their draft will be counted as the final submission or late penalties applied.

Extension Activities

Language and Literacy Extension Activity Modules

Why do I need to complete Extension Activities?

Extension Activity Modules are specifically designed to develop English language proficiency and academic skills required for undergraduate studies.

These modules are integrated within each unit and support consistent and simultaneous learning of subject-specific academic concepts and content, literacy and academic skills.

Extension Activities are designed to enable students to develop their academic, language and tertiary skills consistently throughout the duration of their Standard Foundation Program or Intensive Program and focus on:

- academic listening skills
- academic reading skills
- academic writing skills, including essay/report writing, paraphrasing, summarising
- academic writing conventions (including academic referencing skills)
- oral presentation skills
- discussion and engagement in group activities in a variety of formats

Extension Activities are an integral part of the program and in essence an assessment in the unit. Extension activities carry a weighting of 10% of the final mark allocated for the unit. Content from the extension activities is **examinable across different assessments**, and some activities will form part of preparation for other assessment tasks.

How do I access my Extension Activity Modules?

Extension Activities will be available to students via iLearn units for each of the subjects they enrol in. Access to iLearn units will generally be available within 24 hours of enrolling in a unit via eStudent. If you do not have access to units after 48 hours of enrolling in a unit you should contact the IT Help Desk, or call 9850 4367. You may also lodge a OneHelp ticket.

How and when do I complete Extension Activities?

Extension Activities will be completed outside of class time and will constitute 5 hours of self-study per enrolled unit per week. This means that for a student enrolled in one unit required to complete 30 hours of self-study per term and for a student enrolled in two units would complete 10 hours of extension activities per week or 60 hours per term.

Extension activities will be completed under guidance from the teaching staff which means that students will be directed to relevant extension activities for each day or week. However, it is the student's responsibility to ensure that they complete the activities as required and approach teaching staff in a timely manner in order to seek assistance where required.

What will I need to do?

The nature of tasks will vary within each week and between units. Tasks may include activities which require students to:

- Communicate information to others orally as well as in writing
- Demonstrate understanding of written and spoken texts in various formats including videos and audio recordings
- Use technology to conduct research or access materials in various formats
- Apply analytical, problem solving and critical thinking skills
- Undertake independent reading
- Collect and analyse information and represent this in various formats
- Manage study projects independently or in groups
- Collaborate with other students and university professionals

Tasks will contain different types of activities and may be presented in different formats including crosswords puzzles, gap-fill exercises, research tasks, vocabulary exercises, recorded audio and video presentations, discussion forums and Turnitin submissions.

The number of tasks may vary from week to week but they will constitute at least 5 hours of additional work outside of class time. For example, in one week students may need to undertake one multi staged activity which is of 5 hours duration, but in another week they may have to complete five shorter tasks.

How do I submit my Extension Activity work and when are they due?

Extension Activities will be completed on a weekly basis and each set extension activity will be due at the times stated in the assessment task section of the individual Unit Guides and in iLearn.

All extension activities will be submitted via iLearn and some activities will also be submitted through Turnitin in iLearn.

Instructions for each extension activity will be made available in iLearn and teachers will guide students to the tasks during the course of the teaching term.

How will my progress in Extension Activity Modules be monitored and what type of feedback will I receive?

Extension activities will be marked on a weekly basis. Marks will be recorded in iLearn and available for student view.

Depending on the nature of the task, feedback may be provided in various formats including but not limited to:

- Verbally in class
- Online via iLearn (e.g. within Turnitin, within online Assessment Submission links, in discussion forums or marking rubrics)
- As part of auto marked responses in online quizzes
- Email to individual students via their Macquarie University student email address.
- Via ask.mq.edu.au

It is the student's responsibility to approach teaching staff in a timely manner if they require additional feedback on their progress with extension activities.

Requirements for Satisfactory Completion

Detailed instructions and requirements for completion of each set extension activity will be provided in iLearn. The requirements to satisfactorily complete each activity will vary from task to task so students must read instructions carefully and are responsible for ensuring that they complete each activity as per the instructions provided. If you are uncertain about the expectations or do not understand the instructions, it is your responsibility to seek assistance from the teacher in a timely manner.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Class quizzes</u>	15%	No	Weeks 1 - 6
<u>Research Assignment</u>	15%	No	Week 3, Lesson 1
<u>Practical Test & Report</u>	20%	No	Week 3, Lesson 5
<u>Final examination</u>	40%	No	Week 6, Lesson 4
<u>Extension activities module</u>	10%	No	Week 1, 2, 3, 4, 5

Class quizzes

Due: **Weeks 1 - 6**

Weighting: **15%**

A short quiz will be held at the start of most classes. The aim of the quizzes will be to review work and concepts covered in the preceding lessons and provide formative feedback on progress throughout the course. The quizzes are to be answered individually. The best 15 quiz marks will be used to calculate the final mark for this assessment task. Feedback will be provided immediately following the quiz or in the next lesson depending on nature of the task.

On successful completion you will be able to:

- Discuss the applications and uses of Chemistry in society and the environment
- Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.

Research Assignment

Due: **Week 3, Lesson 1**

Weighting: **15%**

Students will be required to research a given sub-topic within the field of chemistry, and its

application and relevance to society and the environment. Students will present their findings verbally to the class using a short Powerpoint presentation. They will also be required to write their research up into a simple information report to be submitted with their Powerpoint slides via Turnitin in iLearn before the start of the class.

Missed Assessment: Please refer to the general assessment section below.

On successful completion you will be able to:

- Discuss the applications and uses of Chemistry in society and the environment
- Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner
- Apply scientific thinking and problem-solving techniques to practical problems.

Practical Test & Report

Due: **Week 3, Lesson 5**

Weighting: **20%**

Students will design and conduct a practical experiment individually under examination conditions in the laboratory in Week 3. In the experiment they will need to demonstrate safe laboratory practices and familiarity with laboratory equipment. Students will then in class under examination conditions use data obtained (or provided by the teacher) to write a report on the experiment in a science experiment report format. This assessment must be submitted before leaving the class.

Feedback will be provided by the teacher during class in Week 4.

Missed Assessment: Please refer to the general assessment section below.

On successful completion you will be able to:

- Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner
- Apply scientific thinking and problem-solving techniques to practical problems.

Final examination

Due: **Week 6, Lesson 4**

Weighting: **40%**

The final examination will cover all work in the course including theory questions about experiments conducted during the session. The questions will include short answer and long answer questions. A periodic table will be provided in the examination. The exam will be 2 hours long with an extra 10 minutes reading time, and will be held in Week 6, Lesson 4. Only Non-programmable calculators **without** text retrieval abilities, and calculators **without** “run”, “exe” or “calc” keys are permitted. Candidates must supply their own non-programmable calculators as these will not be supplied at the test venue. Materials permitted in the test may not be shared among students.

Missed Assessment: Please refer to the general assessment section below.

On successful completion you will be able to:

- Discuss the applications and uses of Chemistry in society and the environment
- Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner
- Apply scientific thinking and problem-solving techniques to practical problems.

Extension activities module

Due: **Week 1, 2, 3, 4, 5**

Weighting: **10%**

Extension Activities are designed to assist students to develop their academic language and tertiary skills throughout the term. They also reinforce subject specific content, language and skills which are examinable in assessment tasks. Extension Activities will be available to students on a weekly basis via iLearn and will constitute 5 hours of self-study per week. Students should complete all activities as these will assist them to prepare for their assessment tasks.

Each Set Extension activity is to be submitted by the following times in iLearn as indicated by the teacher. Students will receive their mark and feedback by 11.55 pm Thursday of the following week.

Week

Due

Feedback

1

Sunday 11.55 pm week 1

By Thursday 11.55 pm week 2

2

Sunday 11.55 pm week 2

By Thursday 11.55 pm week 3

3

Sunday 11.55 pm week 3

By Thursday 11.55 pm week 4

4

Sunday 11.55 pm week 4

By Thursday 11.55 pm week 5

5

Sunday 11.55 pm week 5

By Thursday 11.55 pm week 6

Missed Assessment: Please refer to the missed assessment section above.

Late Submissions: Please refer to the late submission section above.

For further information see section on Extension Activities below.

On successful completion you will be able to:

- Discuss the applications and uses of Chemistry in society and the environment
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Apply scientific thinking and problem-solving techniques to practical problems.

Delivery and Resources

Term Dates & College Calendar

Details of key dates during the term can be found on the [Important Dates](#) calendar.

Enrolment and Timetables

General timetable information is available via Macquarie University's [Timetable page](#).

Students will be able to enrol in units and register for classes via [eStudent](#) and also view their personal timetable. It is the student's responsibility to ensure that classes they have registered for do not clash.

Students are only permitted to attend classes in which they have registered via eStudent, unless they have written approval from the Students Services and Administration Manager. To seek approval, students must email muic@mq.edu.au or speak to a member of the Student Services and Administration Team at E3A Level 2 Reception. Approval will only be granted in exceptional circumstances.

The last day to enrol in units is Tuesday of Week 1. Swapping groups is not possible after the enrolment period has concluded. The last day to enrol and register into classes is Tuesday of Week 1 and this must be finalised by the student in [eStudent](#) by the end of the day.

Guest Lecturer Presentations and Workshops

One or two Guest Lecturer Presentations and/or workshops may be scheduled during the term. These sessions will take place outside of regular class time, usually in a lecture theatre on campus. In the session a speaker (usually an expert or well-known academic in the field) will give a presentation on a particular topic related to the unit or field.

While attendance at guest lectures is not compulsory, and content covered is not examinable unless covered in regular classes, students are strongly encouraged to attend these sessions as they will:

- help them to engage with and broaden their understanding of the discipline
- contextualise content covered in class by providing insights into recent research and workplace developments in the field
- provide opportunities for networking
- provide experience of what lectures are like

Specific details including time and venue for Guest Lecturer Presentations and workshops will be posted in iLearn announcements and provided in class.

Recordings of these sessions may also be made available to students via iLearn.

Attendance Requirements – All Students

All students are expected to attend 100% of scheduled class time.

Attendance will be monitored in each lesson & students will be able to see their current attendance percentage to date and potential attendance percentage for each unit they have enrolled in via [iLearn](#).

- **Current attendance Percentage** will reflect the percentage of classes a student has attended so far (based only on the lessons held to date).
- **Potential Attendance Percentage** will reflect the percentage of classes a student can potentially attend by the end of the term, taking into consideration lessons attended and assuming the student also attends all future lessons scheduled (based only on the total number of lessons in the Term).

Where a student is present for a part of a lesson (for example arrives late, leaves early, leaves

the class frequently, particularly for lengthy periods) the teacher reserves the right to mark a student absent for that part of the lesson.

In cases of unavoidable non-attendance due to illness or circumstances beyond their control, students should lodge an application for special consideration ask.mq.edu.au within 5 working days and supply relevant supporting documentation, even if they have not missed a formal assessment task. This will ensure that that appropriate records of unavoidable absences can be kept.

Attendance Requirements for International Standard Foundation Program and Intensive Program Students

International students in the Standard Foundation Program and the Intensive Program are required to maintain 80% attendance across all their enrolled units in a Term of study to satisfy the conditions of their visa. Students who do not meet this requirement may be reported to the Department of Immigration and Border Protection and excluded from the University.

Where a student is at risk of not meeting the 80% attendance requirement across their enrolled units in a Term, they will be counselled by the teaching and/or student services staff. Once an international student fails to meet the 80% attendance requirement, they may be reported to the Government for non-attendance and their visa may be cancelled.

Because of the intensive nature of this program, students should be aware that their attendance may fall quite quickly and should carefully monitor their attendance on a regular basis. They may do so by checking their attendance in [iLearn](#) and ensuring they attend at least 80% of classes in each of the units they are enrolled in. Students should refer to the Potential Attendance Percentage.

For further information on attendance, please refer to the [Attendance and Study Load Policy](#).

Public Holidays and Make-up Lessons

If any scheduled class falls on a public holiday a make-up lesson may be scheduled on an alternate day, usually on a Saturday or a weekday at a time when students do not have other classes scheduled.

In Term January there will be two public holidays for which make-up lessons will be scheduled.

New Year's Day (01/01/2018): Make up lessons will be scheduled on Wednesday 3rd January.

Australia Day (26/01/2018): Make up lessons will be scheduled on Wednesday 31st January.

Technology Used and Required

- Access to internet (Available on Campus using Macquarie [OneNet](#) and in designated E3A Self-Access Computer Laboratories)
- [iLab](#) - iLab is Macquarie University's personal computer laboratory on the Internet, enabling students to use the Microsoft Windows applications they require to do their

university work from anywhere, anytime, on anything.

- Access to [iLearn](#) Access to Macquarie University [Library catalogue](#) ([MultiSearch](#))
- Access to Microsoft Office Suite (available in E3A Self-Access Computer Laboratories and via [iLab](#)) software downloads page for full instructions.

Bringing your own Device (BYOD)

Macquarie University is BYOD (Bring Your Own Device) friendly and it encourages students to bring their Windows or Mac devices to use on campus and during classes.

In some classes in this unit, you will need to have access to a mobile device, Office applications (Word, Excel and PowerPoint) and an Internet Browser of your choice. If you do not have your own device and computer access is required in a particular lesson, you may be able to borrow a laptop to use for the duration of the lesson.

As a Macquarie University student, you are entitled to free access to Microsoft Office Suite, which you can download for use on your device. Please visit the University's [software downloads page](#) for full instructions.

If you do bring your own device, you will need to ensure that it is sufficiently charged as access to power points will not be available in the classrooms.

iLearn

[iLearn](#) is Macquarie's online learning management system and a principal teaching and learning resource which will be used throughout the term. Students must access iLearn at least 3 times per week to access important information including:

- Announcements and News Forums - Teaching staff will communicate to the class using iLearn announcements. Announcements may also be emailed to students' Macquarie University email address but students should check the News Forum regularly.
- Attendance – current and potential attendance percentage for the Term.
- Unit Guide and staff contact details
- Set unit readings available through [MultiSearch](#) (library).
- Lesson materials and recordings where available
- Learning and teaching activities and resources, questions and solutions
- Assessment instructions, questions, marking criteria and sample tasks
- Assessment submission links such as Turnitin
- Links to support materials and services available at the University
- Evaluation Surveys for the unit

For any resource related iLearn questions contact your teacher. For any technical or support issues using iLearn, please contact the IT helpdesk (Ph. 02 9850 4357) or lodge a ticket using [OneHelp](#).

Useful Study Resources

[StudyWise](#) is an iLearn resource created by Learning Skills, which is specifically designed to help you to manage your studies, strengthen your study techniques, write effective assignments and improve your English language proficiency. Once you enrol in StudyWISE, you can access it from your iLearn course list under the category "Student Support".

[InfoWise](#) will help you improve your research skills by teaching you how to use MultiSearch, decode citations, identifying key search terms and use advanced search techniques.

[Lib Guides](#) provide students with links to electronic sources and websites that are good starting points for research in different fields or disciplines.

[MultiSearch](#) will connect you to Macquarie University Library and allow you to search library resources, databases, unit readings and past exam papers

[Academic Language and Learning Workshops](#) are designed to help you with Study Skills, Assignment Writing, Referencing and Academic Language.

[Research resources](#) provide information about:

- [Researching for your assignments](#)
- How to [manage your references](#)
- [Referencing style guides](#)
- [Subject and research guides](#)

[Numeracy Support](#) is provided by the [Numeracy Centre](#). Students who can attend these support classes on a drop in basis as required.

Learning and Teaching Activities

Lessons

Lessons will include a mixture of learning and teaching activities. New content and topics will be presented in lessons, and students will be given problems, practice questions and other interactive activities to apply the knowledge and the skills gained in the lesson.

Students will be required to take notes, complete set class tasks and engage in discussion and individual and group activities.

In class, specific time may be dedicated to work on assessment tasks and students will be given guidance and feedback to complete these. Certain lessons may be dedicated to independent research and reading related to the unit whether in the classroom or a computer lab.

Active Participation

Students will be required to not only attend but also actively participate in lessons.

Active participation entails:

- active engagement in class activities
- contribution to class discussions by asking and answering questions
- coming to class prepared and having completed required pre-readings and activities

- completion of set class and homework activities
- collaboration with other students
- adhering to Macquarie University Student Codes of Conduct

Unit Schedule

Week	Lesson	Topic / Content Covered	Required reading (should not be more than 12 pages) per week – provide citation	Associated tasks	Assessment Task (if applicable)
1	Lesson 1	Introduction to Chemistry Pure substances and mixtures New Year's Day (01/01/2018): Make up lessons will be scheduled on Wednesday 3rd January.	Smith: 5,6,8 Gallagher: 9,14,15	Demonstration: filtration	Introductory Quiz
	Lesson 2	Particle theory; Symbols and formulae. Periodic table as a list of elements. Elements and compounds.	Smith: 28-30, 33,34,37 Gallagher:10-13, 26, 27	Use of periodic table	Quiz
	Lesson 3	Elements and compounds extension Pre Laboratory session for Lessons 4 & 5	Smith: 28-30, 33,34,37 Gallagher:10-13, 26, 27 Smith: 12-14 Gallagher:20-23, 54	Use of periodic table (cont'd) Prelab: filtering. Decanting water from a mixture of a solid and water. Evaporation in evaporation basin. Evaporation over hot water bath	Quiz
	Lesson 4	Naming and use of basic lab equipment. Weighing. Separation of mixtures.	Smith: 12-14 Gallagher:20-23, 54	Experiments: filtering CuSO ₄ (aq) and CuCO ₃ (suspension). Decanting water from a mixture of a solid and water. Write a guided report on filtering. Reading activity: separation Weigh: multiple examples of "identical" glassware	Quiz

	Lesson 5	Separation continued.		Experiments: Evaporation of NaCl(aq) in evaporating basin Evaporation of CuSO ₄ (aq) over hot water bath Writing a report on one of these	Quiz Set Extension Activity due on Sunday 11.55 pm
2	Lesson 1	Properties of substances. Pre-Census Feedback	Smith: 20, 21	Model building	Quiz
	Lesson 2	Dissolving to make solutions Valency Formulae of common compounds.	Gallagher:16,17,38	Model Building Valency Tables	Quiz
	Lesson 3	Valency Formulae of common compounds.(cont'd) Pre Laboratory session for Lessons 4 & 5	Gallagher:16,17,38	Pre lab: Gravimetric analysis of a mixture ; physical changes ; chemical changes.	Quiz
	Lesson 4	Gravimetric analysis		Experiments Gravimetric analysis of a mixture of NaCl(s) + CaCO ₃ (s)	Quiz
	Lesson 5	Physical and chemical changes		Experiments Heating CuCO ₃ (s) (+ test for CO ₂) Melting ice CaCO ₃ + H ⁺ Heating NH ₄ Cl(s) Burning gas and test for combustion products	Quiz Set Extension Activity due on Sunday 11.55 pm
3	Lesson 1	Student presentations. Synthesis reactions and word equations. Ions and ionisation. Solutions, solubility,	Smith: 74, 78, 81 Gallagher: 18	Solubility tables	Quiz Research assignment due Student presentations.

	Lesson 2	Work to be completed on the following topics: Solutions, solubility, Synthesis reactions, simple chemical equations.		Questions S 207 Solubility tables	Quiz
	Lesson 3	Synthesis reactions, simple chemical equations.(cont'd) Pre Laboratory session for Lessons 4 & 5		Chemical equations (cont'd) Pre lab: Solutions, concentrations, mass and volume relationships	Quiz
	Lesson 4	Making solutions		Experiments: Make a solution with an accurate concentration Measure the concentration of a solution by evaporation Calculate the masses needed to make solutions of a specified concentration.	Quiz
	Lesson 5	Practical test			Practical test Set Extension Activity due on Sunday 11.55 pm
4	Lesson 1	Simple chemical equations. Solution and precipitation equations	Smith: 202-205, 207 Gallagher: 62,63		Quiz
	Lesson 2	Simple ionic reactions and equations	Smith: 115-118		Quiz
	Lesson 3	Simple ionic reactions and equations. Solution and precipitation equations. (cont'd) Pre lab: precipitation reactions; reactions of metals.	Smith: 115-118 Gallagher: 62,63	Pre lab: precipitation reactions; reactions of metals.	Quiz
	Lesson 4	Precipitation reactions		Experiment: Carry out precipitation reactions to test predicted solubility	Quiz

	Lesson 5	Precipitation reactions Reactions of metals Australia Day (26/01/2018): Make up lessons will be scheduled on Wednesday 31st January.		Demonstration: burning Mg. Experiment: carry out reactions of :- Metals and water Metals and acids Test for hydrogen gas	Quiz Set Extension Activity due on Sunday 11.55 pm
5	Lesson 1	Empirical formula	Gallagher:68-71		Quiz
	Lesson 2	Mole concept	Gallagher:64, 65	Questions S 220	Quiz
	Lesson 3	Mole concept (cont'd) Pre Lab: % composition; moles ;molarity	Gallagher:64, 65		Quiz
	Lesson 4	Empirical formula of MgO	Gallagher:66, 67	Experiment: % composition of MgO	Quiz
	Lesson 5	Measuring moles		Experiment: measure one mole of some substances Prepare a solution of known molarity.	Quiz Set Extension Activity due on Sunday 11.55 pm
6	Lesson 1	LEU surveys due this week Concentration of solutions, molarity, solution calculations		SS 220 questions	Quiz
	Lesson 2	Concentration of solutions, molarity, solution calculations - continued		Calculate masses required to make solutions. Complete simple problems on molarity,volume and concentration of solutions,	Quiz
	Lesson 3	Concentration of solutions, molarity, solution calculations - continued Revision		Problems on molarity, volume and concentration of solutions, Revision	Quiz
	Lesson 4, 5	Final Examination			Final Examination

Learning and Teaching Activities

Lessons

Lessons will include a mixture of learning and teaching activities. New content and topics will be presented in lessons, and students will be given problems, practice questions and other interactive activities to apply the knowledge and the skills gained in the lesson. Students will be required to take notes, complete set class tasks and engage in discussion and individual and group activities. In class, specific time may be dedicated to work on assessment tasks and students will be given guidance and feedback to complete these. Certain lessons may be dedicated to independent research and reading related to the unit whether in the classroom or a computer lab.

Active participation

Students will be required to not only attend but also actively participate in lessons. Active participation entails: - active engagement in class activities - contribution to class discussions by asking and answering questions - coming to class prepared and having completed required pre-readings and activities - completion of set class and homework activities - collaboration with other students - adhering to Macquarie University Student Codes of Conduct

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway \(https://students.mq.edu.au/support/study/student-policy-gateway\)](https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](#).

Academic Honesty

Using the work or ideas of another person, whether intentionally or not, and presenting them as your own without clear acknowledgement of the source is called [Plagiarism](#).

Macquarie University promotes awareness of information ethics through its [Academic Honesty Policy](#). This means that:

- all academic work claimed as original must be the work of the person making the claim
- all academic collaborations of any kind must be acknowledged
- academic work must not be falsified in any way
- when the ideas of others are used, these ideas must be acknowledged appropriately.

All breaches of the [Academic Honesty Policy](#) are serious and penalties apply. Students should be aware that they may fail an assessment task, a unit or even be excluded from the University for breaching the Academic Honesty Policy.

Assessment Policy

Students should familiarise themselves with their responsibilities under the [Assessment Policy](#), and notably [Schedule 4](#) (Final Examination Requirements).

Final Examination Script Viewings

A student may request to view their final examination script once results have been released but scripts remain the property of Macquarie University.

Students should view their final examination paper prior to submitting a grade appeal, if this is relevant to their case. The viewing will be conducted in a secure location under supervision.

To request a final examination script viewing, please email: muic@mq.edu.au and write 'script viewing' in the subject heading.

Scripts may be reviewed for up to 6 months following the results release date for the relevant Term.

Grade Appeals

A student who has been awarded a final grade for a unit has the right to appeal that grade as outlined in the [Grade Appeal Policy](#). Grade appeals apply to the final mark and grade a student

receives for a unit of study. They do not apply to results received for individual assessment tasks.

Grade appeals must be submitted via ask.mq.edu.au within 20 working days from the published result date for the relevant unit. Before submitting a Grade Appeal, please ensure that you read the [Grade Appeal Policy](#) and note valid grounds for appeals.

Students are expected to seek feedback on individual assessment tasks prior to the award of a final grade. Students also have the right to request generic feedback from the teaching staff on their overall performance in the unit, including in a final examination. This can be done at any time in the six month period starting from the day on which the final grade of the relevant unit is published.

Course Progression

The College closely monitors students' academic progress as per the [Progression Policy](#) for Programs delivered by Macquarie University International College.

To maintain Satisfactory Academic Progress, a student must successfully complete (pass) 50% or more of their enrolled units in a Term of study. To successfully complete a unit, students must obtain a passing grade and meet any other requirements to pass listed in the unit guide.

Students who fail to make Satisfactory Academic Progress will be classified as "at risk" and will be notified in writing. At-risk students may be required to undergo academic counselling, undertake certain initiatives or have conditions placed upon their enrolment to help them make satisfactory progress.

Students must also pass 50% or more of the units in 2 or more terms in order to meet Minimum Rate of Progress (MRP) requirements. A student is deemed not to be making Minimum Rate of Progress if they fail more than 50% of their enrolled units in two consecutive Terms of study, or if they have failed more than 50% of their units after studying two or more terms.

Any domestic student who has been identified as not meeting Minimum Rate of Progress requirements will be issued with an Intention to Exclude letter and may subsequently be excluded from the program.

Any international student who has been identified as not meeting MRP will be subject to exclusion from the program and be issued with an Intention to Report letter and may subsequently be reported to the Department of Immigration and Border Protection (DIBP) for not meeting visa requirements. International students must comply with the [Progression Policy](#) of the College in order to meet the conditions of their visa.

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Assessment task

- Extension activities module

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Discuss the applications and uses of Chemistry in society and the environment
- Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner
- Apply scientific thinking and problem-solving techniques to practical problems.

Assessment tasks

- Class quizzes
- Research Assignment
- Practical Test & Report
- Final examination

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner
- Apply scientific thinking and problem-solving techniques to practical problems.

Assessment tasks

- Class quizzes
- Research Assignment
- Practical Test & Report
- Final examination
- Extension activities module

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Discuss the applications and uses of Chemistry in society and the environment
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner
- Apply scientific thinking and problem-solving techniques to practical problems.

Assessment tasks

- Class quizzes
- Research Assignment
- Practical Test & Report
- Final examination
- Extension activities module

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Use fundamental discipline specific terminology to express concepts and ideas related to Chemistry.
- Demonstrate understanding of the process of gathering, recording and analysing Chemical data
- Use laboratories and scientific equipment to plan and conduct investigations in a safe manner

Assessment tasks

- Class quizzes
- Research Assignment
- Practical Test & Report
- Final examination
- Extension activities module

Changes from Previous Offering

As of Term 7 2017 Extension Activities form as part of the unit assessment items and carry a weighting of 10% of the final mark allocated for the unit.

Course Contact Hours

Weekly face to face contact for this unit will be 10 hours (60 hours per term). There will be five 2-hour lessons per week, from Monday to Friday.

In addition, students in both the Standard Foundation Program and the Intensive Program are required to complete 5 hours of prescribed Extension activities each week outside of class time which will be made available via iLearn.

Unit Specific Texts and Materials

Students will be given a unit reader which will contain articles and activities to be completed in class, and to supplement their class work.

The following readings have been prescribed for this unit.

Gallagher, RM & Ingram, P, (2014), Complete chemistry for Cambridge IGCSE: for the updated syllabus (3rd Edition), Oxford, Oxford University Press.

Smith, R, (2010), Conquering chemistry preliminary course (4th Edn), South Melbourne, Cengage Learning Australia.

These readings will be available to students via [MultiSearch](#) and can be accessed via the “Unit Readings” block in iLearn.

Any additional reading material will be provided to students in class.