UNSW Course Outline

CHEM1031 Higher Chemistry 1A: Atoms, Molecules and Energy - 2024

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General Course Information

Course Code : CHEM1031
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Chemistry
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course builds on an elementary knowledge of chemistry (equivalent to two years of high

school chemistry, such as Year 12 chemistry, or CHEM1001 at UNSW) to explore the quantum mechanical structure of atoms leading to an understanding of the periodic trends in the properties of the elements. This knowledge is applied to understanding chemical bonding and intermolecular forces which together are responsible for determining the properties of materials. General principles of chemical equilibrium are developed and applied to chemical reactions involving acids and bases. The applications of the laws of Thermodynamics to chemical processes are described and ultimately linked to chemical equilibrium. The course involves an overview of chemical reactions involving electron transfer, including their applications in biology, corrosion and energy storage for portable electronic devices.

The theoretical content of the course is delivered through a combination of online lessons, workshops and lectures with problem solving skills developed in weekly group-based tutorial classes. Theory is combined with the practical aspects of chemistry in weekly laboratory classes.

This course covers the same material as CHEM1011, but has additional professional skills workshops that illuminate the role of chemistry in broader society, as well as the attributes of a professional chemistry researcher.

Note:

1. Assumed knowledge equivalent to year 12 chemistry or CHEM1001.
2. Students cannot subsequently enrol in CHEM1001 after completing CHEM1031. However, students may complete CHEM1001 followed by CHEM1031.

Course Aims

CHEM1031 aims to provide students with a solid foundation of the physical principles underlying modern chemistry while developing students' problem solving and practical laboratory skills.

The course aims to prepare student for further studies in chemistry and related disciplines while challenging students' perceptions of the role and mechanisms of chemistry in the wider global context.

Relationship to Other Courses

Students have a choice of two courses that satisfy the first half of level one chemistry : CHEM1011 (Chemistry 1A) this course is available in T1, T2 and T3 or CHEM1031 (Higher

Chemistry 1A) this course is available in T1 only.

In term 1, CHEM1011/1031/1051 are co-taught for lectures.

What are the diferences between the two courses?

- Chemistry 1A assumes year 11 NSW HSC (or equivalent) syllabus knowledge while Higher Chemistry 1A (available in Term 1 only) assumes year 12 NSW HSC (or equivalent) syllabus knowledge.
- Both courses have have the same core assessment tasks (tests, labs and exam) and overlap with year 11 NSW HSC chemistry however more time is taken in CHEM1011 on the fundamental principles and in CHEM1031 more time is spent on more complex content.
- CHEM1031 students are invited to particpate in a series of extention workshops with assignments that are available for extra credit in the course.

Assumed knowledge

If you do not meet this assumed knowledge requirement, the School of Chemistry strongly recommends that consider enrolling in CHEM1001 – Introductory Chemistry, before entering CHEM1011.

As a minimum we have designed the course assuming you are confident with the following:

- Use the periodic table to identify an element's symbol, atomic number, and relative atomic mass. Describe important features of the periodic table and their significances (arrangement into groups and periods, important subsets of elements such as the noble gases, halides, transition metals, lanthanides…).
- Name the constituent parts of an atom, together with their relative masses and charges and locations within the atom [according to the Bohr model].
- Calculate numbers of protons, neutrons, electrons in atoms of a specified isotope of any element and interpret [isotope/nuclear/AZE] notation
- Name common inorganic and organic compounds and write the formula for simple compounds from their name, including common polyatomic ions (e.g. NH4+, MnO4–, SO42–, HSO4–, OH–…)
- Write and balance simple chemical equations.
- Calculate molecular weight from chemical formula and perform mole calculations from mass.
- Calculate % by mass of each element in a compound and determine empirical formula and molecular formulae from % by mass.
- Calculate concentration of solutions in various units and perform dilution calculations.
- Perform calculations involving density (D=m/V) and recall the density of water is 1 g/mL.
- Perform calculations involving the quantity of an element/compound within a mixture: percentage compositions by mass (%w/w), %w/v, %v/v, mole fraction
- Relate the concept of a mole to number of particles using Avagadro's constant. Use the mole

ratio of a chemical equation to perform stoichiometric calculations involving quantities of solids, solutions and gases (n, m, C, V, T, P, number of particles).
- Identify the limiting reagent in a chemical reaction and perform stoichiometric calculations restricted by this limitation.
- Calculate expected and percentage yield for a chemical reaction.
- Describe the properties which distinguish gases from other states of matter and define Charles' Law, Boyle's Law, Gay-Lussac's Law and Avogadro's Law and use them to calculate quantities of gases.
- Identify acids and bases using the Arrhenius definition.
- Know the names and formulae of common acids and bases (from the list provided).
- Predict the products of reactions of acids and bases with acids and bases. (neutralisation), metals, and carbonates.
- Describe in simple terms the concept of atoms forming bonds to become molecules (covalent bonding). Recognise that diagrams displaying element symbols connected by straight lines (e.g. O=C=O) are approximate representations of the bonding within molecules.
- Recognise key organic functional groups: alkanes, alkenes, alkynes, alcohols, carboxylic acids, esters, ketones, aldehydes, ethers, amines and amides
- Conversions between common scientific units e.g. °C to K, atm to Pa to Torr, kJ to J, mL to L
- Fundamental knowledge of mathematical principles including:
  - Common numerical abbreviations (eg. nano, milli etc)
  - Rearranging simple algebraic formulae including manipulations of exponents and logarithms (including log10 rules)
  - Numerical rounding and use of significant figures
  - Use and manipulation of scientific notation
  - Calculation and manipulation of percentages

Diagnostic Test

A diagnostic test is available to help you judge which Chemistry course is best for you to enrol in. You can access the following diagnostic test and resources via Moodle, our online learning platform:

1. Click on the link to navigate to the course: https://moodle.telt.unsw.edu.au/enrol/index.php?id=73166
   - If you are not logged onto Moodle, you will need to enter your zID and Zpass.
2. To access the course, you will need to self-enrol. Use the Student Key: *Science1stYearDiagnostics*

It is your best interest to attempt the diagnostic test and to do as well as you can so that you can make a realistic decision about which first year chemistry course suits your background.

If you are studying CHEM1011 in Term 1, and you score a poor mark or a very good mark in the diagnostic test, you could consider changing to a less demanding course (CHEM1001), or the higher level course (CHEM1031). In Term 2 or Term 3, when CHEM1031 and CHEM1001 are not offered, if you score a poor mark in the diagnostic test, you could consider deferring first year chemistry and taking a chemistry bridging course over summer and taking Chem 1A next year. If you are considering changing CHEM courses, you should obtain advice from the First Year Director before changing your enrolment.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Evaluate the structures of chemical substances in terms of atomic structure, bonding, and intermolecular forces, and relate these to the physicochemical properties of substances and mixtures in real and ideal contexts.
CLO2 : Evaluate chemical reactions and processes through qualitative and quantitative application of chemical equilibria (particularly in the contexts of acids/bases and buffers) and thermodynamics (including the concepts of entropy, enthalpy and Gibbs energy)
CLO3 : Apply the concepts of oxidation and reduction, chemical equilibria and thermodynamics in the contexts of corrosion, electrochemical cells and relate this to current advances in battery technology.
CLO4 : Work safely in a laboratory to manipulate apparatus, perform quantitative and qualitative chemical analysis, evaluate the accuracy and precision of measurements, and to interpret results and observations.
CLO5 : Interpret information and numerical data to explain and/or rationalize real word phenomena by integrating multiple chemical principles.

Course Learning Outcomes	Assessment Item
CLO1 : Evaluate the structures of chemical substances in terms of atomic structure, bonding, and intermolecular forces, and relate these to the physicochemical properties of substances and mixtures in real and ideal contexts.	• In-term tests for threshold content • Weekly Threshold Quizzes • Final exam • Laboratory work
CLO2 : Evaluate chemical reactions and processes through qualitative and quantitative application of chemical equilibria (particularly in the contexts of acids/bases and buffers) and thermodynamics (including the concepts of entropy, enthalpy and Gibbs energy)	• In-term tests for threshold content • Weekly Threshold Quizzes • Final exam • Laboratory work
CLO3 : Apply the concepts of oxidation and reduction, chemical equilibria and thermodynamics in the contexts of corrosion, electrochemical cells and relate this to current advances in battery technology.	• In-term tests for threshold content • Weekly Threshold Quizzes • Final exam • Laboratory work
CLO4 : Work safely in a laboratory to manipulate apparatus, perform quantitative and qualitative chemical analysis, evaluate the accuracy and precision of measurements, and to interpret results and observations.	• Laboratory work
CLO5 : Interpret information and numerical data to explain and/or rationalize real word phenomena by integrating multiple chemical principles.	• Final exam

Learning and Teaching Technologies

Moodle - Learning Management System | Echo 360

Learning and Teaching in this course

The learning and teaching activities in this course consist of multiple teaching methods and modes of instruction which are delivered through a blended approach including Lectures, Tutorials, and Laboratories. In addition to online learning activities and private study, weekly small group consultations are available to provide further support. This course has been designed to engage you in learning by contextualising the material to students' prior experiences and knowledge. In addition, course content will be supplemented with interesting examples from research and industry. The laboratory component of this course will enable you to develop a proficiency in core chemistry laboratory skills while engaging in challenging and interesting laboratory practicals. In addition, this component of the course will contribute to the development of higher-order analytical skills, while providing opportunity for cooperative learning with your peers.

How this course works

We know that chemistry can be a conceptually challenging topic to study and that students in CHEM1011 have mixed chemistry backgrounds. We want every one of our students to succeed and to gain valuable skills and knowledge. For these reasons, we have developed a flexible course structure which is dedicated to helping you gain the skills needed to succeed not only in this course but in the rest of your degree.

Please note: The flexibility of the course design is designed with you in mind but has its limitations, inherent to a 9-week teaching period. Though you have multiple opportunities to attempt and pass the core assessments in this course it does not mean that you can put off the course work until last minute. You should always be aiming to sit the first assessment opportunity offered – this will afford you the maximum opportunity to pass.

The format and learning activities are different to many other courses and so we recommend you read all the following information carefully.

Threshold Knowledge and Core Skills

These are the fundamental skills you need to know and do to pass this course. They provide you

with the minimum acceptable foundation to continue in your studies. Achieving these skills sets you up to engage with the rest of the course. For this reason, we require you to complete assessment tasks throughout the term which demonstrate to us that you have obtained these skills in order to achieve the pass level marks for the course. We have built the course to give you MULTIPLE opportunities to achieve these tasks. **Once you have demonstrated that you have all these skills you will be awarded up to 50% of the course mark.**

Mastery Knowledge and Non-Core Skills

These are the important skills you need to complete the rest of the course. These concepts explore the applications and value of chemistry in our world and piece together the threshold knowledge to give meaning and context to your studies. Demonstrating your 'mastery' of this knowledge in your final exam and lab non-core skills quizzes will allow you to earn a merit grade (CR, DN, HD) in this course.

Threshold knowledge is taught primarily via weekly topic lessons (online)

A topics lesson (available on Moodle) will teach you the "threshold" concepts for the week. You should complete this lesson and attempt the associated topic quiz (see section 4 for more information about quizzes), BEFORE the first lecture of the week (which will be called the threshold workshop).

Threshold knowledge is supported by a threshold workshop (in person/livestream)

The first lecture of each week is a workshop-style session in which the "threshold" concepts are reinforced. This session assumes you have completed the topics lesson and have made an attempt at the topics quiz. The lecturer will work through problems and talk over areas of threshold content that students need assistance with. These classes are designed to help you understand the concepts required to pass the quizzes and bridge the threshold content with the mastery content for the week.

Mastery lectures (lectures in timetable)

Two of your timetabled lectures each week will extend the threshold knowledge from the topics lessons and assume that you have competed the lesson for that week. You may enrol in either the online stream or in person attendance. We recommend attending in person.

The lecturer will work with you to combine threshold concepts and introduce extended concepts

to that week's topic. In the live session the lecturer will work through exam style questions and provide you with opportunities to check your understanding of these concepts throughout the class. Lecture recordings will made available on Moodle for later revision.

Mastery Tutorials (face to face only)

Each week you'll join a small-group tutorial in which you will delve more deeply into certain "mastery" topics. These tutorials have been designed to build upon the mastery lectures for that topic. Your tutor will work with you to develop your ability to interpret data, communicate chemistry concepts and apply chemistry to real world problems. The types of problems in your tutorials are very similar to the problems that will be in your final exam.

Laboratory Classes (face to face only)

The laboratory classes provide an opportunity to learn the concepts and practice the calculations presented in lectures. Laboratory classes are also the place to learn practical skills and they are also the place where those skills are assessed.

You must **READ THE INTRODUCTION IN THE LABORATORY MANUAL** to be aware of all the requirements for passing the laboratory component of this course. Here are some of the main points regarding laboratory classes:

- **The following items of personal protective equipment (PPE) must be worn at all times in the laboratory:**
  - safety eyewear
  - a laboratory coat
  - fully enclosed footwear

You will not be permitted to work in thongs or open-top shoes or sandals or without a laboratory coat, facemask or safety eyewear.

- The schedule of experiments can be found on page 4 of the lab manual.
- All experiments require pre-lab work to be completed before your lab class.
- You must attend the laboratory class shown on your official timetable.
- You must arrive at the laboratory on time or you will be excluded from the class.
- Repeat students must apply to the First Year Laboratory Coordinator before the end of week 2 if they want exemption from laboratory classes. Exemption is not automatic and is decided on a case-by-case basis.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
In-term tests for threshold content Assessment Format: Individual	32%	Due Date: Week 5 and Week 9 during the EXAM timeslot
Weekly Threshold Quizzes Assessment Format: Individual	8%	Due Date: Every Monday at 9:00 AM (Wk3-5,7-10)
Final exam Assessment Format: Individual	40%	Due Date: See Exam Schedule closer to Exam Period
Laboratory work Assessment Format: Individual	20%	Due Date: Weekly in lab class

Assessment Details

In-term tests for threshold content

Assessment Overview

There are two in-term tests each worth up to 16% of the course marks. In-term test 1 is in week 5 and assesses threshold topics 1-4. In-term test 2 is in week 9 and assesses threshold topics 1-8 (up to and including the final topic, electrochemistry).

The in-term tests are designed as a summative validation of your learning of the threshold concepts covered in each of the online lessons. Each test is typically 20 multiple choice questions, and these are drawn from the same question bank as the weekly threshold quizzes.

The threshold mark for each in-session test is 15/20. You must achieve the threshold mark or higher to be awarded course marks for this assessment. You will receive feedback within a few days of the test, and this will outline the questions answered incorrectly and link these to the threshold learning outcome they were assessing.

There will be multiple opportunities to re-sit the test in subsequent weeks if you do not achieve the threshold mark in earlier sittings. The deadline for achieving the threshold mark for test one is the end of week 7 and for test two it is the end of week 10.

Course Learning Outcomes

- CLO1 : Evaluate the structures of chemical substances in terms of atomic structure, bonding, and intermolecular forces, and relate these to the physicochemical properties of substances and mixtures in real and ideal contexts.
- CLO2 : Evaluate chemical reactions and processes through qualitative and quantitative application of chemical equilibria (particularly in the contexts of acids/bases and buffers)

and thermodynamics (including the concepts of entropy, enthalpy and Gibbs energy)
- CLO3 : Apply the concepts of oxidation and reduction, chemical equilibria and thermodynamics in the contexts of corrosion, electrochemical cells and relate this to current advances in battery technology.

Detailed Assessment Description

Note: In term test 2 covers topics 5-7 inclusive - it does not inlcude topic 8 electrochemistry (this topic will be assessed in the final exam only)

Weekly Threshold Quizzes

Assessment Overview

Each of the 8 topics covered in the course are assessed with a threshold (pass level) quiz that typically consists of 10 multiple choice questions – each question corresponds to a threshold learning outcome covered in the online lesson.

These quizzes are designed as study aids for you to keep up with the course work each week and to give feedback that will help you to develop the threshold learning outcomes for that topic.

You will have 2 weeks and unlimited attempts to achieve at least one attempt with a 10/10 outcome. Once this outcome is recorded you will be awarded a 1% course mark for that quiz. This totals 8% course marks across the term for all threshold quizzes

You will receive feedback immediately after each quiz attempt that allows you to review the questions answered incorrectly and explains why your chosen answer was incorrect.

Course Learning Outcomes

- CLO1 : Evaluate the structures of chemical substances in terms of atomic structure, bonding, and intermolecular forces, and relate these to the physicochemical properties of substances and mixtures in real and ideal contexts.
- CLO2 : Evaluate chemical reactions and processes through qualitative and quantitative application of chemical equilibria (particularly in the contexts of acids/bases and buffers) and thermodynamics (including the concepts of entropy, enthalpy and Gibbs energy)
- CLO3 : Apply the concepts of oxidation and reduction, chemical equilibria and thermodynamics in the contexts of corrosion, electrochemical cells and relate this to current advances in battery technology.

Final exam

Assessment Overview

The final exam is designed to summarise your learning and problem-solving skills on all Mastery topics covered in the course, including material from lectures, tutorials and labs. The exam is

typically 2hrs 10 minutes and consists of MCQ, short numerical and short answer responses - details will be confirmed during the course. The examination will occur during the official university examination period. Feedback is available through inquiry with the course convenor.

If you have participated in the optional professional workshop sessions (PWS) across the term, there is the option to replace the marks for your lowest scoring exam questions with the mark you achieved in the PSW assessments tasks - up to the value of 8% course marks. This is typically equivalent to 15 exam marks. For example, if your lowest question mark was 7/15 and your PSW mark was 90% then the 7/15 exam mark would be bumped up to 13.5/15.

Course Learning Outcomes

- CLO1 : Evaluate the structures of chemical substances in terms of atomic structure, bonding, and intermolecular forces, and relate these to the physicochemical properties of substances and mixtures in real and ideal contexts.
- CLO2 : Evaluate chemical reactions and processes through qualitative and quantitative application of chemical equilibria (particularly in the contexts of acids/bases and buffers) and thermodynamics (including the concepts of entropy, enthalpy and Gibbs energy)
- CLO3 : Apply the concepts of oxidation and reduction, chemical equilibria and thermodynamics in the contexts of corrosion, electrochemical cells and relate this to current advances in battery technology.
- CLO5 : Interpret information and numerical data to explain and/or rationalize real word phenomena by integrating multiple chemical principles.

Laboratory work

Assessment Overview

The laboratory classes are designed to provide you with practical experience in the lab as well as developing your observational and data analysis skills. You will be provided with feedback on your progress from your demonstrator during lab classes as well as through a personalized feedback web page that allows you to track and visualize your skill development.

You are required to attend a minimum of 6/8 laboratory classes to meet the hurdle pass requirement for this course.

Laboratory work is assessed in two parts:

Core skills: You are required to achieve all core skills as a hurdle requirement to pass this course. You will be given multiple opportunities across several lab classes to demonstrate each core skill. Your demonstrator will communicate with you when you have been marked as competent for a given skill. Once you have achieved all the core skills required in the lab you will be awarded

10% course marks.

Non-core skills : Each of the 8 laboratory exercises will require you to complete questions in your lab book relating to the non-core skills listed for that lab. You will submit at the end of the lab class for marking by your demonstrator. The grades for these are tracked on your personalized feedback page and will total 10% course marks across the 8 laboratory classes.

Course Learning Outcomes

- CLO1 : Evaluate the structures of chemical substances in terms of atomic structure, bonding, and intermolecular forces, and relate these to the physicochemical properties of substances and mixtures in real and ideal contexts.
- CLO2 : Evaluate chemical reactions and processes through qualitative and quantitative application of chemical equilibria (particularly in the contexts of acids/bases and buffers) and thermodynamics (including the concepts of entropy, enthalpy and Gibbs energy)
- CLO3 : Apply the concepts of oxidation and reduction, chemical equilibria and thermodynamics in the contexts of corrosion, electrochemical cells and relate this to current advances in battery technology.
- CLO4 : Work safely in a laboratory to manipulate apparatus, perform quantitative and qualitative chemical analysis, evaluate the accuracy and precision of measurements, and to interpret results and observations.

Detailed Assessment Description

Full details of the assesments related to teh laboratory classes are available in the Lab Manual document

Hurdle rules

- You must attend at least 6 laboratory classes
- You must be awarded all core laboratory skills

General Assessment Information

Grading Basis

Standard

Requirements to pass course

- You must attend a minimum of 6 laboratory classes
- You must be awarded all core laboratory skills (see laboratory manual for more details).
- You must achieve a course mark of at least 50

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Quantisation of Energy and Hydrogen Atoms
	Tutorial	Introduction to problem solving
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Quantisation of Energy topic quiz - due 9am Monday week3
Week 2 : 19 February - 25 February	Lecture	Atomic structure and periodic trends
	Tutorial	Quantisation of Energy
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Atomic Structure topic quiz. Due 9am Monday week 3
Week 3 : 26 February - 3 March	Lecture	Bonding
	Tutorial	Periodic trends
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Bonding topic quiz. Due 9am Monday week 4
Week 4 : 4 March - 10 March	Lecture	Intermolecular forces and states of matter
	Tutorial	Bonding
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	IMF and States of Matter topic quiz. Due 9am Monday week 5
Week 5 : 11 March - 17 March	Lecture	Chemical Equilibrium
	Tutorial	Intermolecular forces and states of matter
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Chemical Equilibrium topic quiz. Due 9am Monday week 7
	Assessment	In-term Test 1 - Online
Week 6 : 18 March - 24 March	Other	Flexibility Week - No classes.
	Laboratory	Make-up labs (if required).
	Assessment	Additional In-term Test sittings (if required).
Week 7 : 25 March - 31 March	Lecture	Acids and Bases
	Tutorial	Chemical Equilibrium
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Acids and Bases topic quiz. Due 9am Monday week 8
Week 8 : 1 April - 7 April	Lecture	Thermochemistry
	Tutorial	Acids and Bases
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Thermochemistry topic quiz. Due 9am Monday week 9
Week 9 : 8 April - 14 April	Lecture	Electrochemistry
	Tutorial	Thermochemistry
	Laboratory	Laboratory classes (3 hr) run most weeks during Term. See Lab Manual.
	Assessment	Electrochemistry topic quiz. Due 9am Monday week 10
	Assessment	In-term Test 2 - Online
Week 10 : 15 April - 21 April	Lecture	Exam revision (TBC).
	Tutorial	Electrochemistry
	Laboratory	Make-up labs (if required).
	Assessment	Additional In-term Test sittings (if required).

Attendance Requirements

Laboratory class attendance is compulsory.

General Schedule Information

- **Threshold Workshops** are held during the Tuesday Lectures.
- **Mastery Lectures** are held during the Friday Lectures.
- The times and locations of classes can be found on myUNSW.
- You MUST attend the tutorial and laboratory times shown on your official timetable.

Course Resources

Prescribed Resources

Laboratory Manual and Tutorial Notes

- A printed course pack is available to purchase in book shop, or digital files can be downloaded from Moodle
- Note you must bring a blank printed copy of the relevant lab report to your weekly lab classes.

Recommended Resources

Blackman, Bottle, Schmid, Mocerino and Wille, "Chemistry," 5th Ed., Wiley.

- This is the recommended text for CHEM1A and CHEM1B
- This book is available in print through the UNSW Bookshop: https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9780730396673 or in print or as a digital copy from Wiley Direct Online: https://www.wileydirect.com.au/buy/chemistry

Aylward and Findlay, "SI Chemical Data," 6th Ed. or later

- Not essential to purchase, though recommended for chemistry majors. Available from the UNSW Bookshop: https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9780730302469

Both books can be purchased in a pack: https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9780730371526

Additional Costs

The following PPE must be supplied by students:

- Cotton button up lab coat
- Safety glasses

These can be purchased in the bookshop or grad store on campus or at outside retailers (e.g. hardware stores)

Course Evaluation and Development

Feedback: Students have told us that they have found there was not enough time to engage with the electrochemistry topic (topic 8) before it was formally assessed in in term test 2.

Action: We have removed topic 8 from the second in term test. This threshold content will be assessed in the final exam instead.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Shannan Maisey (1st Yr Director)		Please email firstyearchem@unsw.edu.au unless inquiry is highly personal.		Mon - Fri (business hours)	Yes	Yes
Administrator	First Year Support			9385-4651	Mon - Fri (business hours)	No	No
Lab director	Ron Haines				Mon - Fri (business hours)	No	No
Lecturer	Tim Schmidt		Lecturer (Week 1-4)			No	No
	Junming Ho		Lecturer (week 5-10)			No	No

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the UNSW Student Code of Conduct Website.

Academic Honesty and Plagarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.
Further information about referencing styles can be located at https://student.unsw.edu.au/referencing

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.
Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The Current Students site,
- The ELISE training site, and
- The Use of AI for assessments site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: https://student.unsw.edu.au/conduct

Submission of Assessment Tasks

Penalty for Late Submissions
UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: https://student.unsw.edu.au/special-consideration

Important note: UNSW has a "fit to sit/submit" rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- The Current Students Gateway
- Student Support
- Academic Skills and Support
- Student Wellbeing, Health and Safety
- Equitable Learning Services
- UNSW IT Service Centre
- Science EDI Student Initiatives, Offerings and Guidelines

School Contact Information

Level 1, Dalton Building (F12)

W: www.chemistry.unsw.edu.au

Also see: ***Contacts and Support*** section of the course Moodle page (where applicable)