CBMS107

Foundations of Chemical and Biomolecular Sciences 1

S2 External 2018

Dept of Chemistry & Biomolecular Sciences

Contents

General Information

Unit convenor and teaching staff
Unit Convenor
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Lecturer
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Credit points
3

Prerequisites

Corequisites

Co-badged status

Unit description
Foundations of Chemical and Biomolecular Sciences 1 introduces students to the principles and practical aspects of the molecular sciences, from the smallest of chemical substances through to the molecules of life – the biomolecules. This unit does not assume prior knowledge of chemistry or biology and is ideal for any student that wants to understand the atomic and molecular world within and around them. It will commence with the language of chemistry by introducing atoms and molecules and elements and compounds and using representative inorganic and organic compounds, including biomolecules, to show how their structures, functions and reactions are described. It will build on this language to allow prediction of the reactivity, behaviour and function of different classes of compounds, with a focus on acids and bases and organic compounds including biomolecules. Contemporary applications will be highlighted to show the role of chemical and biomolecular sciences in our lives, now and in the future, including in helping to achieve a sustainable environment, understanding health and disease, and advancing new molecular technologies. Practical sessions and tutorials will reinforce learning throughout this unit.

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:

Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.
Apply knowledge of chemistry concepts to describe the structure and properties of inorganic and organic compounds to predict their reactivity, behaviour and function.
Use the principles of chemical and biomolecular sciences to solve problems, process and interpret data, and have an understanding of where to apply these principles.
Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.
Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.
Discuss the central role and impact of the chemical and biomolecular sciences in our lives and its modern applications.

General Assessment Information

Your marks will be displayed at iLearn, including your practical class and tutorial class

attendance records. We recommend that you periodically verify that the marks and attendance records shown at iLearn (Tools -> Grades) are correct.

If you are new to Macquarie, more information on the University assessment policy is available at https://students.mq.edu.au/study/exams-and-results/assessments.

If you haven't made a special consideration request before, the procedure is outlined at https://students.mq.edu.au/study/my-study-program/special-consideration. Note that the University requires that special consideration requests be submitted no later than five (5) working days after an assessment task date or due date. So if you miss a practical class, tutorial class, or the final exam, remember to apply for special consideration on time.

Attendance at practical classes:

- The practical classes are a participation hurdle.
- If you are unable to attend a practical class, please apply for special consideration and justify your absence.
- Note that if you miss your practical class, we are not required to offer you a catch up class.

Attendance at the final exam:

- The final exam is an hurdle assessment.
- In the event that you make a serious first attempt at the final exam, you will be provided with an opportunity to sit a new final exam. The faculty defines a serious attempt as a mark of 10% below the hurdle, which in this instance is a mark between 30-40%.
- If you are/were unable to attend the final exam, you should immediately apply for special consideration.

Attendance at tutorial classes:

- The tutorial classes are a participation hurdle.
- If you are unable to attend a practical class, please apply for special consideration and justify your absence.

Final grade:

- Your final grade will be based on the mark from the aggregation of your individual assessments (practicals, quizzes, mid-session test, final exam), noting that you must satisfy all hurdles (practical classes, tutorial classes & final exam) to pass CBMS107 overall.

*** Information on Supplementary Exams:** If you receive special consideration for the final exam, a supplementary exam will be scheduled in the interval between the regular exam period

and the start of the next session. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. You can check the supplementary exam information page on FSE101 in iLearn (bit.ly/FSESupp) for dates, and approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination.

The final CBMS107 examination is a hurdle. If you are given a second opportunity to sit the final examination, you will be offered that chance during the supplementary examination period and will be notified of the exact day and time after the publication of final results for the unit.

Assessment Tasks

Name	Weighting	Hurdle	Due
Practical Classes	20%	Yes	Every practical
Quizzes	15%	No	3 Sept, 24 Sept & 29 Oct
Mid-Session Test	15%	No	Second on-campus session
Final Examination	50%	Yes	University examination period
Tutorial Classes	0%	Yes	Every tutorial class

Practical Classes

Due: **Every practical**
Weighting: **20%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

There are four practical classes (5% each) which will be completed during the on-campus sessions. Practical class times will be listed at iLearn.

The pre-practical exercises, performance in the practical, the practical report, and the post-practical exercises will be used to calculate the final practical mark. The assessment tasks progressively build on skills and knowledge developed throughout the unit.

Practical classes are a hurdle assessment and you are expected to complete all four practicals. In the event of illness or misadventure, you can justify your absence from a practical class by submitting a special consideration request at ask.mq.edu.au. If your special consideration is approved, we will make arrangements for a supplementary activity.

Repeat students may request an exemption from the practical classes, but it is at the discretion of the unit coordinator as to whether an exemption is granted.

On successful completion you will be able to:

- Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.
- Apply knowledge of chemistry concepts to describe the structure and properties of inorganic and organic compounds to predict their reactivity, behaviour and function.
- Use the principles of chemical and biomolecular sciences to solve problems, process and interpret data, and have an understanding of where to apply these principles.
- Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.
- Discuss the central role and impact of the chemical and biomolecular sciences in our lives and its modern applications.

Quizzes

Due: **3 Sept, 24 Sept & 29 Oct**
Weighting: **15%**

There will be three on-line quizzes which you will find assist you in revising the course material as the course progresses.

Due dates: Quiz 1 (9 am Monday 3 September); Quiz 2 (9 am Monday 24 September); Quiz 3 (9 am Monday 29 October).

On successful completion you will be able to:

- Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.

Mid-Session Test

Due: **Second on-campus session**
Weighting: **15%**

There will be a mid-session test during the second on-campus session that will give you specific feedback on your understanding of the topics up to this stage of the unit.

On successful completion you will be able to:

- Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and

reactions for representative inorganic and organic compounds including biomolecules.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.

Final Examination

Due: **University examination period**
Weighting: **50%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

The final exam (50%) will be 3 hours in length with 10 minutes reading time. It is designed to address specific understanding of all topics presented within the course and to show that the knowledge obtained can be applied to new problems.

The final exam is a hurdle assessment and you will need to get >= 40% in the final exam to meet the hurdle. In the event that you make **a serious first attempt at the final exam**, you will be provided with an opportunity to sit a new final exam. The faculty define a serious attempt as a mark of 10% below the hurdle, which in this instance is a mark between 30-40%.

On successful completion you will be able to:

- Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.
- Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.

Tutorial Classes

Due: **Every tutorial class**
Weighting: **0%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Tutorial class times will be listed at iLearn. Participation in tutorials is a hurdle and you are expected to attend all classes. In the event of illness or misadventure, you can justify your absence from a tutorial class by submitting a special consideration request.

On successful completion you will be able to:

- Apply knowledge of chemistry concepts to describe the structure and properties of inorganic and organic compounds to predict their reactivity, behaviour and function.
- Use the principles of chemical and biomolecular sciences to solve problems, process

and interpret data, and have an understanding of where to apply these principles.

Delivery and Resources

Communication

- Information will also be sent by email to your student email account on a frequent basis.
- In addition to email communication, the CBMS107 iLearn site will be used to communicate important information to you.
- We cannot overstate the importance of checking your email and the CBMS107 iLearn site regularly.

Classes

Classes will take place during the on-campus sessions and will consist of lectures, tutorials and practical classes. Scheduled on-campus (OC) sessions: first on-campus session (**25-26 August 2018**); second on-campus session (**18-20 September 2018**); third on-campus session (**20-21 October 2018**).

Please arrive each day at 8.50 am for commencement at 9 am. The on-campus sessions are long and tiring; we recommend bringing something to eat and drink during the day, to help you maintain focus.

- **Lectures:**

Lecture slides and recordings (under Echo360 Active Learning Platform) from the internal first semester unit are available at the CBMS107 iLearn site. A list of topics will be provided before each on-campus sessions, which we advise that you study in advance of classes.

- **Tutorials:**

It is important to prepare thoroughly and in advance for the on-campus sessions. Complete the set tutorial questions in advance of each on-campus session, as you will only benefit fully from the tutorials if you have prepared in advance. The tutorial problems closely resemble the types of problems in exams and are designed to help you gauge your command of the materials covered.

- **Practicals**:

Practical class details are available at the CBMS107 iLearn space. For safety reasons you will not be permitted to participate in laboratory sessions unless you are wearing a lab coat and sturdy shoes which cover your feet (enclose your toes). Please read the practical class (PC) before you attend the laboratory session and complete the pre-laboratory tasks as required.

Learning Materials

- **Textbooks and reading**

A list of textbooks and recommended readings are available at the CBMS107 iLearn space.

- **Unit iLearn space (web site)**

If you have any problems with iLearn, log a ticket at onehelp.mq.edu.au.

You are expected to access the unit web site frequently, as it contains important information including notes on ALL the topics to be covered; What You Need to Know Sheets; your marks for practicals, quizzes and the mid-session exam. Additionally, the web site will also be used to post important messages.

- **Online Web Learning (OWL)**

You will be required to use the OWL system for assessment tasks and practice problems. Further details regarding OWL are provided at the CBMS107 iLearn site.

Teaching and Learning Strategy

CBMS107 is a 3 credit point half year unit and will require an average of 10 hours of work per week (contact hours plus self study time). Thus, in order to successfully complete this unit, students will need to work hard, consistently and continuously throughout the semester. For students with weak chemistry backgrounds, more than 10 hours per week may be necessary to perform satisfactorily in this unit.

CBMS107 is designed to introduce you to the principles of the molecular sciences, as well as developing an understanding of the practical skills required to undertake simple chemistry experiments in an efficient and safe manner. The lecture material, tutorials and laboratories complement each other, and along with quizzes (in lectures, on-line and in practical classes), have been developed to increase your understanding of the topics so you can achieve the learning outcomes.

Learning and Teaching Activities

Lectures

Lectures will be presented formally, although quizzes and general questions may be asked in class, demonstrations provided, and examples of problems worked through, to strengthen and increase understanding of the concepts. We encourage you to download the lecture material available at the unit iLearn site and bring it into lectures, so you can spend most of the time listening to the lecturer rather than transcribing. Please do not assume that the lecture notes or recordings are a suitable substitute for attending the lectures. Historically, students that do not attend the lecture classes, fall behind and perform poorly. Learning is an active process, and as such, you must engage with the material. For example, downloading and reading the lecture notes and relevant sections of the textbook (and beyond) before and after lectures is strongly recommended.

Tutorials

Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and

participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.

Practical classes

Practical classes are designed to develop basic laboratory skills, general safety practices and critical and analytical thought. Pre-practical questions are designed to make sure you are ready for the practical work and that you have grasped the relevant theory and necessary safety practices. In-lab work is designed to teach you to appropriately record your experimental observations and to present your calculations in a detailed manner. Post-lab exercises are designed to assess your understanding of the theory behind the experiments conducted.

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). 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). 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).

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.m

q.edu.au.

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

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Assessment tasks

- Practical Classes
- Final Examination

Learning and teaching activities

- Tutorials will be run to assist your understanding of the course material. Attempting the

questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- Use the principles of chemical and biomolecular sciences to solve problems, process and interpret data, and have an understanding of where to apply these principles.
- Discuss the central role and impact of the chemical and biomolecular sciences in our lives and its modern applications.

Assessment task

- Practical Classes

Learning and teaching activity

- Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.
- Practical classes are designed to develop basic laboratory skills, general safety practices and critical and analytical thought. Pre-practical questions are designed to make sure you are ready for the practical work and that you have grasped the relevant theory and necessary safety practices. In-lab work is designed to teach you to appropriately record your experimental observations and to present your calculations in a detailed manner. Post-lab exercises are designed to assess your understanding of the theory behind the

experiments conducted.

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:

Learning outcome

- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.

Assessment tasks

- Practical Classes
- Quizzes
- Mid-Session Test
- Final Examination

Learning and teaching activities

- Lectures will be presented formally, although quizzes and general questions may be asked in class, demonstrations provided, and examples of problems worked through, to strengthen and increase understanding of the concepts. We encourage you to download the lecture material available at the unit iLearn site and bring it into lectures, so you can spend most of the time listening to the lecturer rather than transcribing. Please do not assume that the lecture notes or recordings are a suitable substitute for attending the lectures. Historically, students that do not attend the lecture classes, fall behind and perform poorly. Learning is an active process, and as such, you must engage with the material. For example, downloading and reading the lecture notes and relevant sections of the textbook (and beyond) before and after lectures is strongly recommended.
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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

- Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.
- Apply knowledge of chemistry concepts to describe the structure and properties of inorganic and organic compounds to predict their reactivity, behaviour and function.
- Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.

Assessment tasks

- Practical Classes
- Quizzes
- Mid-Session Test
- Final Examination
- Tutorial Classes

Learning and teaching activities

- Lectures will be presented formally, although quizzes and general questions may be asked in class, demonstrations provided, and examples of problems worked through, to strengthen and increase understanding of the concepts. We encourage you to download the lecture material available at the unit iLearn site and bring it into lectures, so you can spend most of the time listening to the lecturer rather than transcribing. Please do not assume that the lecture notes or recordings are a suitable substitute for attending the lectures. Historically, students that do not attend the lecture classes, fall behind and perform poorly. Learning is an active process, and as such, you must engage with the

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- Practical classes are designed to develop basic laboratory skills, general safety practices and critical and analytical thought. Pre-practical questions are designed to make sure you are ready for the practical work and that you have grasped the relevant theory and necessary safety practices. In-lab work is designed to teach you to appropriately record your experimental observations and to present your calculations in a detailed manner. Post-lab exercises are designed to assess your understanding of the theory behind the experiments conducted.

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 outcome

- Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.

Assessment tasks

- Practical Classes
- Quizzes
- Mid-Session Test
- Final Examination
- Tutorial Classes

Learning and teaching activities

- Lectures will be presented formally, although quizzes and general questions may be

asked in class, demonstrations provided, and examples of problems worked through, to strengthen and increase understanding of the concepts. We encourage you to download the lecture material available at the unit iLearn site and bring it into lectures, so you can spend most of the time listening to the lecturer rather than transcribing. Please do not assume that the lecture notes or recordings are a suitable substitute for attending the lectures. Historically, students that do not attend the lecture classes, fall behind and perform poorly. Learning is an active process, and as such, you must engage with the material. For example, downloading and reading the lecture notes and relevant sections of the textbook (and beyond) before and after lectures is strongly recommended.

- Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.
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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

- Use the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.
- Apply knowledge of chemistry concepts to describe the structure and properties of

inorganic and organic compounds to predict their reactivity, behaviour and function.
- Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.

Assessment tasks

- Practical Classes
- Quizzes
- Mid-Session Test
- Final Examination
- Tutorial Classes

Learning and teaching activities

- Lectures will be presented formally, although quizzes and general questions may be asked in class, demonstrations provided, and examples of problems worked through, to strengthen and increase understanding of the concepts. We encourage you to download the lecture material available at the unit iLearn site and bring it into lectures, so you can spend most of the time listening to the lecturer rather than transcribing. Please do not assume that the lecture notes or recordings are a suitable substitute for attending the lectures. Historically, students that do not attend the lecture classes, fall behind and perform poorly. Learning is an active process, and as such, you must engage with the material. For example, downloading and reading the lecture notes and relevant sections of the textbook (and beyond) before and after lectures is strongly recommended.
- Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.
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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 the language and principles of chemical science to be able to explain the composition and properties of matter and name and write (or describe) structures and reactions for representative inorganic and organic compounds including biomolecules.
- Use the principles of chemical and biomolecular sciences to solve problems, process and interpret data, and have an understanding of where to apply these principles.
- Acquire basic laboratory skills in the chemical and biomolecular sciences, including an understanding of general laboratory safety procedures.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.

Assessment tasks

- Practical Classes
- Mid-Session Test
- Final Examination
- Tutorial Classes

Learning and teaching activities

- Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.
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your experimental observations and to present your calculations in a detailed manner. Post-lab exercises are designed to assess your understanding of the theory behind the experiments conducted.

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcomes

- Apply knowledge of chemistry concepts to describe the structure and properties of inorganic and organic compounds to predict their reactivity, behaviour and function.
- Use the principles of chemical and biomolecular sciences to solve problems, process and interpret data, and have an understanding of where to apply these principles.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.
- Discuss the central role and impact of the chemical and biomolecular sciences in our lives and its modern applications.

Assessment task

- Practical Classes

Learning and teaching activity

- Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.
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your experimental observations and to present your calculations in a detailed manner. Post-lab exercises are designed to assess your understanding of the theory behind the experiments conducted.

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcomes

- Use the principles of chemical and biomolecular sciences to solve problems, process and interpret data, and have an understanding of where to apply these principles.
- Record and analyse scientific data, as well as communicate conclusions using the basic elements of scientific report preparation.
- Discuss the central role and impact of the chemical and biomolecular sciences in our lives and its modern applications.

Assessment task

- Practical Classes

Learning and teaching activity

- Tutorials will be run to assist your understanding of the course material. Attempting the questions before the tutorial class to identify what assistance you need is highly recommended. Past experience has demonstrated that there is a strong correlation between success in the unit and participation in all activities, including the tutorial classes. While tutorials do not contribute to your mark, anonymous teaching evaluations from past students have identified tutorials as a valuable learning tool. Attendance records will be kept.
- Practical classes are designed to develop basic laboratory skills, general safety practices and critical and analytical thought. Pre-practical questions are designed to make sure you are ready for the practical work and that you have grasped the relevant theory and necessary safety practices. In-lab work is designed to teach you to appropriately record your experimental observations and to present your calculations in a detailed manner. Post-lab exercises are designed to assess your understanding of the theory behind the experiments conducted.

Changes from Previous Offering

- The final examination hurdle has been amended: *The final exam is a hurdle assessment and you will need to get >= 40% in the final exam to meet the hurdle. In the event that you make a serious first attempt at the final exam, you will be provided with an opportunity to sit a new final exam. The faculty define a serious attempt as a mark of 10% below the hurdle, which in this instance is a mark between 30-40%.*
- A hurdle requirement has been introduced for tutorial class participation: *If you are unable to attend a tutorial class, please submit a special consideration request and justify your absence.*

Non-attendance of assessment

Non-Attendance of Participation Hurdles: If you are unable to attend a practical class or tutorial class due to short-term, serious and unavoidable circumstances, submit apply for special consideration no later than five (5) working days after the date of the class and justify your absence.

Information on Supplementary Exams: If you receive special consideration for the final exam, a supplementary exam will be scheduled in the interval between the regular exam period and the start of the next session. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. You can check the supplementary exam information page on FSE101 in iLearn (bit.ly/FSESupp) for dates, and approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination.

Teaching staff

- **Dr Damian Moran**, Unit Convenor, F7B 329, ph 9850 8299, email damian.moran@mq.edu.au
- **A/Prof Joanne Jamie**, Lecturer, F7B 231, ph 9850 8283, email joanne.jamie@mq.edu.au

Dr Damian Moran is the coordinator of this unit and should be consulted if you have administrative or organisational problems.

Dr Damian Moran and A/Prof Jamie will be presenting the lectures.

The staff have an open door policy for any questions best dealt in person on their topics. However, **you are strongly advised to organise an appointment first by emailing beforehand (put CBMS107 in the header of the email message)**.