MOLS1910

Advanced Chemistry and Biomolecular Sciences I

Full year 1, Weekday attendance, North Ryde 2020

Department of Molecular Sciences

Contents

General Information

Unit convenor and teaching staff
Unit Convenor/Lecturer
Fei Liu
fei.liu@mq.edu.au
Contact via 8312
4WW 330
make an appointment

Lecturer
Peter Karuso
peter.karuso@mq.edu.au
Contact via 8290
4WW 232
make an appointment via e-mail

Lecturer
Joanne Jamie
joanne.jamie@mq.edu.au
Contact via 8283
4WW 231
anytime

Lecturer
Morten Andersen
morten.andersen@mq.edu.au
Contact via 7487
4WW 306
anytime

Lecturer
Sophie Goodchild
Sophie.Goodchild@mq.edu.au
Contact via 8235
4WW 338
anytime

Lecturer
Ian Jamie
ian.jamie@mq.edu.au
Contact via 8293
4WW 236
anytime

Credit points 10
Prerequisites
Corequisites (CBMS107 or CHEM1001) or (CBMS108 or CHEM1002)
Co-badged status
Unit description This is a full-year unit based on contemporary topics in chemistry and biomolecular sciences. It has weekly research-focussed seminars and discussions. This unit caters for advanced students who are strong in chemistry and/or molecular sciences and who are interested in pursuing a scientific career. It will encourage and challenge well-qualified students to reach their full potential. This unit is an extension of CHEM1001 and CHEM1002 treating some topics in more depth and introduce others that are not covered in these units. It will also address recent advances in the molecular sciences. It includes weekly one-hour discussion sessions in S1 and weekly two-hour discussion sessions in S2. Each student is mentored by a third year advanced chemistry or biomolecular sciences student. In addition, all students are encouraged to participate in the research activities of the department over the summer recess through vacation scholarships.

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:

ULO1: Identify and describe all forms of chirality in organic, inorganic and biological molecules with recognition of additional fundamental chemical functionalities in more complex structures.

ULO2: Demonstrate the ability to use chemical and biomolecular information databases to retrieve information.

ULO3: Describe theoretical models of bonding and how these control chemical structure and reactivity in order to create new matter either in diversity-oriented synthesis or target-oriented synthesis.

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target-oriented synthesis

ULO5: Explain the physical and chemical basis to spectroscopic techniques involved in the structural characterisation of large and small molecules in chemical and biological systems.

ULO6: Explain the physical basis to important chemical processes such as precipitation, diffusion and osmosis.

Assessment Tasks

Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult iLearn for revised unit information.

Find out more about the Coronavirus (COVID-19) and potential impacts on staff and students

General Assessment Information

Assessment is based on assignments/workshops (total of 6 major topics). These assessment tasks are provided so that you will have the opportunity to use the information gained in the discussion session to test your degree of understanding of those topics and to gain discipline specific knowledge and skills as well as develop your graduate capabilities attributes. **There is no final exam for this unit**.

A satisfactory/unsatisfactory grade is obtained overall. **You must perform satisfactorily in all parts of the assessment to achieve an overall satisfactory mark**. A high standard of performance is expected and higher marks will allow entry into summer vacation scholarships. An unsatisfactory grade will result from a student not submitting all assignment tasks or showing a partial, superficial or faulty understanding of the topics.

Please note that CHEM1001 and CHEM1002 are co-requisites for this unit (unless you have done CBMS107/8 or the equivalent previously).

Delivery and Resources

Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

No required text.

Please refer to the university's timetable for the time and location of this unit in S1.

The final time and location of this unit in S2 will be on iLearn during S1.

The class will meet once per week for one hour in S1 and once per week for two hours in S2.

Learning and teaching activities include lectures, workshops, presentations, assignments/ discussions, and web tool applications.

Unit Schedule

Coronavirus (COVID-19) Update

The unit schedule/topics and any references to on-campus delivery below may no longer be relevant due to COVID-19. Please consult iLearn for latest details, and check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

Please see the unit's iLearn website for details.

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.)*

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 published on platform other than eStudent, (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@mq.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 help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

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

If you are a Global MBA student contact globalmba.support@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.

Changes from Previous Offering

Students are advised to do a maximum of 3 other subjects in S2 (and 4 other subjects in S1).

The content/format in this year's offering is similar to that of last year.

Changes since First Published

Date	Description
23/02/2020	The mapping between UOLs and assessment tasks is now added from CMS