



CBMS389

Advanced Chemistry III

FY1 Day 2014

Chemistry and Biomolecular Sciences

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General Information

Unit convenor and teaching staff

Unit Convenor

Peter Karuso

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Contact via peter.karuso@mq.edu.au

F7B232

any time ... for you guys

Credit points

3

Prerequisites

39cp including CBMS188

Corequisites

Co-badged status

Unit description

In this full-year unit students undertake a research project, involving weekly research focused seminars and discussions, and mentor first year advanced chemistry students. This unit caters for students who are strong in chemistry and/or science and who are interested in pursuing a scientific career. It aims to encourage well qualified students to reach their full potential among their peers. In addition, students review the scaffolding of the degree, including: integrating major unit material; reflecting on the development of the graduate capabilities and how these have been achieved within the degree; and preparing a portfolio of achievements and future goals. This gives students an opportunity to synthesise their understanding of chemistry through the knowledge they have gained throughout their degree, reflect on the graduate capabilities they have acquired and consider their integration into the workforce. The weekly one hour discussion group/tutorials is based around recent advances in the molecular sciences. Student discussions are led by research scientists of the Department of Chemistry and Biomolecular Sciences. In addition, students are required to participate in the activities of at least one research group within the department over the long vacation. Students write up their results in the form of a report.

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:

attend and review CBMS188 lectures

mentor CBMS188 students in analytical laboratory and in making two video presentation

conduct a 4 week full-time research project under the guidance of a senior member of the academic staff

write a paper in the style of a journal article (Aust. J. Chem.) on the results of the research project.

Assessment Tasks

Name	Weighting	Due
<u>participation</u>	10%	week 29
<u>mentor</u>	10%	week 29
<u>research report</u>	80%	summer vacation

participation

Due: **week 29**

Weighting: **10%**

On successful completion you will be able to:

- attend and review CBMS188 lectures

mentor

Due: **week 29**

Weighting: **10%**

mentor a group of CBMS188 students to complete the tasks in module 1, 2, 3 and 6

On successful completion you will be able to:

- attend and review CBMS188 lectures
- mentor CBMS188 students in analytical laboratory and in making two video presentation

research report

Due: **summer vacation**

Weighting: **80%**

write a journal article (style) report on the original research conducted

On successful completion you will be able to:

- conduct a 4 week full-time research project under the guidance of a senior member of the academic staff
- write a paper in the style of a journal article (Aust. J. Chem.) on the results of the research project.

Delivery and Resources

attend 24 lectures, run one workshop and complete 4 weeks full-time research with a written report

iLearn web site

the order of modules in S1 has been changed

Unit Schedule

as per CBMS188 plus outside mentoring of CBMS188 students plus 4 weeks full-time research in the final year of study (either summer vacation or mid-year break)

Learning and Teaching Activities

attend lectures

attend 25 lecture/tutorials

mentor

mentor a group of 1st year students

research

participate in the research of the department

report

write a report in journal style based on your original research

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/student_conduct/

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://informatics.mq.edu.au/help/>.

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

Graduate Capabilities

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

- mentor CBMS188 students in analytical laboratory and in making two video presentation
- conduct a 4 week full-time research project under the guidance of a senior member of the academic staff

Assessment tasks

- mentor
- research report

Learning and teaching activities

- participate in the research of the department

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 outcomes

- attend and review CBMS188 lectures
- mentor CBMS188 students in analytical laboratory and in making two video presentation
- conduct a 4 week full-time research project under the guidance of a senior member of the academic staff

Assessment tasks

- mentor
- research report

Learning and teaching activities

- attend 25 lecture/tutorials
- mentor a group of 1st year students
- participate in the research of the department

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

- attend and review CBMS188 lectures
- write a paper in the style of a journal article (Aust. J. Chem.) on the results of the research project.

Assessment tasks

- participation
- mentor

Learning and teaching activities

- attend 25 lecture/tutorials
- write a report in journal style based on your original research

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

- conduct a 4 week full-time research project under the guidance of a senior member of the academic staff

Assessment task

- research report

Learning and teaching activity

- participate in the research of the department

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 outcome

- conduct a 4 week full-time research project under the guidance of a senior member of the academic staff

Assessment task

- research report

Learning and teaching activity

- participate in the research of the department

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:

Learning outcome

- conduct a 4 week full-time research project under the guidance of a senior member of the academic staff

Assessment task

- research report

Learning and teaching activity

- participate in the research of the department

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

- mentor CBMS188 students in analytical laboratory and in making two video presentation
- write a paper in the style of a journal article (Aust. J. Chem.) on the results of the research project.

Assessment task

- mentor

Learning and teaching activity

- mentor a group of 1st year students
- write a report in journal style based on your original research

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 outcome

- mentor CBMS188 students in analytical laboratory and in making two video presentation

Assessment task

- mentor

Learning and teaching activity

- mentor a group of 1st year students
- write a report in journal style based on your original research

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:

Assessment task

- mentor