



CIVL6101

Water and Wastewater Engineering

Session 2, Special circumstances 2021

School of Engineering

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Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

Visit the [MQ COVID-19 information page](#) for more detail.

General Information

Unit convenor and teaching staff

Rouzbeh Abbassi

rouzbeh.abbassi@mq.edu.au

Contact via Email

Room 107, 44 Waterloo Rd

Should be set via email

Credit points

10

Prerequisites

Admission to MEngEnvSafetyEng

Corequisites

Co-badged status

Unit description

The objective of this unit is to introduce students to principles and processes involved in contaminants removal from drinking water and wastewater. Theory and conceptual design of systems for treating drinking water and municipal wastewater are discussed. Specific topics in water engineering include introduction to water resources, pollution in different types of water bodies, different water treatment processes, design and implementation, and drinking water regulations. Specific topics in wastewater engineering include introduction to wastewater treatment and process analysis, wastewater characteristics, wastewater flowrates and constituent loadings, physical, chemical, biological unit processes, disinfection, and wastewater treatment process selection, design and implementation. As a part of this unit, students will complete various design tasks in team projects for developing engineering solutions in designing water and wastewater treatment facilities.

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: Use parameters to characterize the constituents of drinking water and municipal wastewater.

ULO2: Explain physical, chemical and biological unit operations in treatment processes.

ULO3: Select and apply appropriate options to design processes for treating drinking water and municipal wastewater based on engineering concepts.

ULO4: Communicate outcomes of analysing and designing different water and wastewater treatment processes in professionally varied ways.

ULO5: Integrate principles of sustainability into the design of water treatment systems (E, A);.

General Assessment Information

Grading and passing requirement for unit

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

Late submissions

For assignments handed in late, the following penalties apply 0-48hrs: -50%, >48hrs: -100%. Extenuating circumstances will be considered upon lodgement of a formal notice of disruption of studies.

Assessment Tasks

Name	Weighting	Hurdle	Due
Mid-session quiz	20%	No	Week 7
Project report	40%	No	Week 13
Final examination	40%	No	Exam Period

Mid-session quiz

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 15 hours

Due: **Week 7**

Weighting: **20%**

Mid-session quiz

On successful completion you will be able to:

- Use parameters to characterize the constituents of drinking water and municipal wastewater.
- Explain physical, chemical and biological unit operations in treatment processes.
- Select and apply appropriate options to design processes for treating drinking water and municipal wastewater based on engineering concepts.

Project report

Assessment Type ¹: Project

Indicative Time on Task ²: 35 hours

Due: **Week 13**

Weighting: **40%**

Water and wastewater projects

On successful completion you will be able to:

- Use parameters to characterize the constituents of drinking water and municipal wastewater.
- Explain physical, chemical and biological unit operations in treatment processes.
- Select and apply appropriate options to design processes for treating drinking water and municipal wastewater based on engineering concepts.
- Communicate outcomes of analysing and designing different water and wastewater treatment processes in professionally varied ways.
- Integrate principles of sustainability into the design of water treatment systems (E, A);.

Final examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 35 hours

Due: **Exam Period**

Weighting: **40%**

Final examination

On successful completion you will be able to:

- Use parameters to characterize the constituents of drinking water and municipal wastewater.
- Explain physical, chemical and biological unit operations in treatment processes.
- Select and apply appropriate options to design processes for treating drinking water and municipal wastewater based on engineering concepts.
- Integrate principles of sustainability into the design of water treatment systems (E, A);.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Wastewater Engineering: Treatment and Resources Recovery, by Metcalf & Eddy (Fifth Edition)

Lecture Slides

Unit Schedule

Lectures (Friday, 11 am- 1 pm)

Tutorials (Monday, 10 am- 12 pm)

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.s.mq.edu.au\)](https://policies.s.mq.edu.au). 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](#)

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

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/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

Not Applicable