



CIVL4201

Geotechnical and Transportation Project

Session 1, In person-scheduled-weekday, North Ryde 2025

School of Engineering

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General Information

Unit convenor and teaching staff

Unit convenor

Golnaz Alipour Esgandani

golnaz.alipour@mq.edu.au

Contact via Email

Room 241, 3 Management Drive, Macquarie University

By arrangement

Credit points

10

Prerequisites

CIVL2205 and CIVL3201

Corequisites

Co-badged status

Unit description

This unit provides a practical introduction to investigation and design techniques in geotechnical and transport engineering. The projects are defined in consultation with engineers from practice, and students are expected to carry out the project emulating equivalent industry project-based professional practice. During the project, students will engage in teamwork, and will be required to investigate several options in a multi-objective context. The project work will draw upon knowledge and skills primarily gained in CIVL2205 Geotechnical Engineering, and CIVL3201 Transport Engineering, as well as other foundational knowledge.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Industry, Innovation and Infrastructure; Sustainable Cities and Communities

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: Apply fundamental knowledge about geotechnical design and transport systems

to a specific project.

ULO2: Apply relevant Australian Standards procedures to a geotechnical or transportation engineering design project.

ULO3: Exhibit an in-depth understanding of how to analyse and design geotechnical structures and transport systems.

ULO4: Communicate project outcomes and associated solutions professionally, both orally and in writing.

ULO5: Employ strategies to collaborate effectively within a team.

General Assessment Information

Students require to submit a group report in week 7 about the work they have done halfway through the session. They then complete the report based on the received feedback and submit the final report in week 13. Rubrics for project presentation and technical report will be available to students through iLearn.

Grading and passing requirement for unit

There are periodic quizzes, technical reports and a project presentation that need to be completed for assessment. 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).

For further details about grading, please refer below in the policies and procedures section.

Late assessment submission

Late assessments are not accepted in this unit unless a [Special Consideration](#) has been submitted and approved.

Special Consideration

The [Special Consideration Policy](#) aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due
Periodic quizzes	40%	No	Week 6 and 11

Name	Weighting	Hurdle	Due
Project presentation	30%	No	Week 13
Technical report	30%	No	Week 7 and 13

Periodic quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 20 hours

Due: **Week 6 and 11**

Weighting: **40%**

Two quizzes will be held based on the topics covered in various weeks.

On successful completion you will be able to:

- Apply fundamental knowledge about geotechnical design and transport systems to a specific project.
- Exhibit an in-depth understanding of how to analyse and design geotechnical structures and transport systems.

Project presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 15 hours

Due: **Week 13**

Weighting: **30%**

Project presentation

On successful completion you will be able to:

- Exhibit an in-depth understanding of how to analyse and design geotechnical structures and transport systems.
- Communicate project outcomes and associated solutions professionally, both orally and in writing.
- Employ strategies to collaborate effectively within a team.

Technical report

Assessment Type ¹: Report

Indicative Time on Task ²: 24 hours

Due: **Week 7 and 13**

Weighting: **30%**

Technical report

On successful completion you will be able to:

- Apply relevant Australian Standards procedures to a geotechnical or transportation engineering design project.
- Communicate project outcomes and associated solutions professionally, both orally and in writing.
- Employ strategies to collaborate effectively within a team.

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

Workshops are face to face and start in Week 1.

Unit Schedule

Refer to iLearn for the unit schedule.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.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](#)
- [Assessment Procedure](#)
- [Complaints Resolution 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 connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)

- [Complete the 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

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

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.

Unit information based on version 2025.02 of the [Handbook](#)