



# ENGG4104

## Engineering Contracts and Procurement

Session 1, Special circumstances 2021

*School of Engineering*

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#### **Disclaimer**

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#### **Notice**

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Admission to MEngMgt or ((ENGG3000 or ENGG300) and ENGG3050)

Corequisites

Co-badged status

Unit description

This unit will provide students with learning modules about structuring and commissioning engineering contracts to deliver and procure engineering outcomes. Students will develop a working knowledge of contract administration and build a fundamental understanding of commercial engineering contracts and procurement. The unit is designed to cover all engineering disciplines across different stages of the career.

## 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:** Evaluate the commercial viability of engineering projects and decide an appropriate procurement strategy for a particular project.

**ULO2:** Interpret the scope and meaning of contract documents for the delivery of engineering projects.

**ULO3:** Analyse and assess tenders, articulate fundamental knowledge of contract law, identify potential risks associated with the engineering projects.

**ULO4:** Conduct cost estimation and tendering processes from a Contractors perspective.

## 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). For further details about grading, please refer below in the policies and procedures section. Late submissions and Resubmissions For assignments handed in late, the following penalties apply 0-48hrs: -50%, >48hrs: -100%. Extenuating circumstances will be considered upon lodgment of a formal notice of disruption of studies. Resubmissions of work are generally allowed unless stated prior or otherwise.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#"><u>Final Project</u></a>	40%	No	Week 13
<a href="#"><u>Case study</u></a>	20%	No	Weeks 1, 2, 6, 7, & 10
<a href="#"><u>Midterm group project</u></a>	30%	No	Week 6
<a href="#"><u>Active Engagement</u></a>	10%	No	All weeks

### Final Project

Assessment Type <sup>1</sup>: Project

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **Week 13**

Weighting: **40%**

Final project report based on Engineering procurement principles

On successful completion you will be able to:

- Evaluate the commercial viability of engineering projects and decide an appropriate procurement strategy for a particular project.
- Interpret the scope and meaning of contract documents for the delivery of engineering projects.
- Analyse and assess tenders, articulate fundamental knowledge of contract law, identify potential risks associated with the engineering projects.
- Conduct cost estimation and tendering processes from a Contractors perspective.

## Case study

Assessment Type <sup>1</sup>: Case study/analysis

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Weeks 1, 2, 6, 7, & 10**

Weighting: **20%**

Case study on engineering procurement

On successful completion you will be able to:

- Evaluate the commercial viability of engineering projects and decide an appropriate procurement strategy for a particular project.
- Interpret the scope and meaning of contract documents for the delivery of engineering projects.
- Analyse and assess tenders, articulate fundamental knowledge of contract law, identify potential risks associated with the engineering projects.

## Midterm group project

Assessment Type <sup>1</sup>: Project

Indicative Time on Task <sup>2</sup>: 14 hours

Due: **Week 6**

Weighting: **30%**

Group project based on procurement case scenario

On successful completion you will be able to:

- Evaluate the commercial viability of engineering projects and decide an appropriate procurement strategy for a particular project.
- Interpret the scope and meaning of contract documents for the delivery of engineering projects.
- Analyse and assess tenders, articulate fundamental knowledge of contract law, identify potential risks associated with the engineering projects.
- Conduct cost estimation and tendering processes from a Contractors perspective.

## Active Engagement

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 6 hours

Due: **All weeks**

Weighting: **10%**

Participation marks for attending and contributing in tutorials

On successful completion you will be able to:

- Evaluate the commercial viability of engineering projects and decide an appropriate procurement strategy for a particular project.
- Interpret the scope and meaning of contract documents for the delivery of engineering projects.
- Analyse and assess tenders, articulate fundamental knowledge of contract law, identify potential risks associated with the engineering projects.
- Conduct cost estimation and tendering processes from a Contractors perspective.

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<sup>1</sup> 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.

<sup>2</sup> 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

Text: Procurement Principles and Management: Baily, Farmer, Crocker, Jessop, Jones

Engineers Procurement Manual for Major Plant Equipment: Robert Leeser

## Unit Schedule

Week	Lecture /Content / Topic	Chapter Ref	HBR Case Study
1	The Procurement function and its role in a business. Measurement of Procurement Success, KPI's	Chapter 1 Bailey et al	Boeing Australia Assessing the merits of implementing an eProcurement System
2	Strategic Procurement and Supply Chain Management.	Chapter 2 Bailey et al	Meisterclean – Turning Supply chain into competitive advantage (Lecture 3)
3	Price and total cost of ownership (TCO)	Chapter 9 Bailey et al	Within Slides – Hewlett Packard Case Study
4	Preparation of procurement requirements. Compiling the contract conditions, developing commercial terms. Preparing technical specifications	Ch 3, 5, 6, 7, 8, & 9 Leeser	Strategic sourcing at Whirlpool China: Finding the ideal supplier
5	Selection of suppliers. Bidding process.	Ch 10, 11, & 12 Leeser	Contract selection in component procurement
6	Sourcing Strategies and Relationships  <b>Assignment 1 due</b>	Chapter 8 Bailey et al	Building Deep Supplier Relationships (Lecture 5)
7	Project Procurement and Risk	Chapter 11 Bailey et al	Boeing Strategic Initiative RM Supply Chain Risk
8	Contract Management	Chapter 19 Bailey et al	Within Slides
9	Government Projects – <u>Guest Lecturer</u> <u>Dermot Thompson &amp; Kylie Dixon</u>		

10	Quality Management	Chapter 5 Bailey et al	Quality Management in the oil industry: How BP greases its machinery for frictionless sourcing.
11	Inventory Management	Chapter 6 Bailey et al	Raymond: Design of warehouse operations
12	Capital Procurement	Chapter 14 Bailey et al	Hu-Friedy: Evaluating Transport Alternatives
13	Review  Assignment 2 due		

## 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](#)
- [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](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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](http://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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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.