

**CIVL6460B: MPE Thesis B**

Callaghan

Semester 1 - 2024



THE UNIVERSITY OF  
**NEWCASTLE**  
AUSTRALIA

## OVERVIEW

<b>Course Description</b>	This course is Part B of a multi-term sequence. Students conduct an independent research study in the form of a literature review, an experimental or theoretical investigation, an engineering design problem etc. Results are communicated in the form of a seminar, and final report (conference paper).
<b>Academic Progress Requirements</b>	Nil
<b>Contact Hours</b>	<b>Callaghan</b> <b>Individual Supervision</b> Face to Face On Campus 1 hour(s) per week(s) for 13 week(s) starting Week 1
<b>Unit Weighting Workload</b>	10 Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.
<b>Multi-Term Sequence Advice</b>	This course is part of a multi-term sequence. Both Part A and Part B must be completed to meet the requirements of the sequence. Part A and Part B must be completed in consecutive terms. Students must complete Part A before completing Part B. Students must complete the sequence within a twelve-month period. If students complete Part A but are unable to complete Part B within the timeframe, they must re-enrol in Part A. Part A cannot be completed as a standalone course, it will only count towards your program once you have successfully completed Part B.

# COURSE OUTLINE

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# CONTACTS

<b>Course Coordinator</b>	<b>Callaghan</b> Prof Anna Giacomini Anna.Giacomini@newcastle.edu.au (02) 4921 6254 Consultation: Via email
<b>Teaching Staff</b>	You will be allocated an individual Academic Supervisor for this course. Details of current allocations are posted on Canvas.
<b>School Office</b>	<b>School of Engineering</b> EAG02 EA Building Callaghan Seng-admin@newcastle.edu.au 9.00am-1.00pm and 2.00pm-5.00pm (Monday to Friday)

# SYLLABUS

<b>Course Content</b>	This course is a self-directed project with a member of academic staff as supervisor.
<b>Course Learning Outcomes</b>	<b>On successful completion of this course, students will be able to:</b> <ol style="list-style-type: none"><li>1. Use their initiative in an area of self-selected engineering interest</li><li>2. Demonstrate initiative through the work performed</li><li>3. Critically analyse the work performed previously by others</li><li>4. Critically assess the achievements, limitations and further requirements of their own work</li><li>5. Demonstrate an appreciation of the state-of-the-art in the selected area</li><li>6. Demonstrate an advanced ability to communicate the objectives and outcomes of the work</li></ol>
<b>Course Materials</b>	

# ASSESSMENTS

This course has 4 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Part A - Preliminary Seminar		Individual	10%	1, 2, 3, 4, 5, 6
2	Part A - Progress Report	Week 15, details TBA on Canvas.	Individual	40%	1, 2, 3, 4, 5, 6
3	Part B - Seminar	Week 11, details TBA on Canvas. You are required to attend all seminars within your presentation stream.	Individual	10%	1, 2, 3, 4, 5, 6
4	Part B - Final Report (Conference Paper)	Week 15, details TBA on Canvas.	Individual	40%	1, 2, 3, 4, 5, 6

## Late Submissions

The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

## Assessment 1 - Part A - Preliminary Seminar

<b>Assessment Type</b>	Presentation
<b>Description</b>	
<b>Weighting</b>	10%
<b>Due Date</b>	
<b>Submission Method</b>	
<b>Assessment Criteria</b>	
<b>Return Method</b>	
<b>Feedback Provided</b>	

## Assessment 2 - Part A - Progress Report

<b>Assessment Type</b>	Written Assignment
<b>Purpose</b>	Students should demonstrate their capacity to write a research report.
<b>Description</b>	A formal report describing the scope and direction of the project, relevant background material pertinent to the project, literature review, methodology, work completed to date and detailed plan of work to follow. This report is seen as the foundation of your final report/conference paper of CIVL6460B. It is noted that the main focus in the assessment will be given to the literature review and the development of the methodology.
<b>Weighting</b>	40%
<b>Length</b>	As defined by the individual Academic Supervisor.
<b>Due Date</b>	Week 15, details TBA on Canvas.
<b>Submission Method</b>	Online Submissions as electronic copy to Canvas/Turnitin.
<b>Assessment Criteria</b>	Report Presentation, the amount of work undertaken by the student, intellectual contribution.
<b>Return Method</b>	Not Returned
<b>Feedback Provided</b>	In Person -. Feedback is provided by individual Academic Supervisor.

## Assessment 3 - Part B - Seminar

<b>Assessment Type</b>	Presentation
<b>Purpose</b>	The intent for the seminar is that students have the opportunity to give an oral presentation on their (nearly) completed project. Students should report on the progress of their research with a summary of results and preliminary conclusions related to the previously stated project objectives.
<b>Description</b>	
<b>Weighting</b>	10%
<b>Length</b>	15 minutes (10 min presentation and 5 minutes Q&A)

<b>Due Date</b>	Week 11, details TBA on Canvas. You are required to attend all seminars within your presentation stream.
<b>Submission Method</b>	In Class Two submissions are required: (1) electronic copy to Canvas/Turnitin, (2) presentation at the seminar room TBA on Canvas. You are to present your PowerPoint presentation using the UON provided IT equipment.
<b>Assessment Criteria</b>	Average of three marks: content, method of presentation, the student's response to questions.
<b>Return Method</b>	Not Returned
<b>Feedback Provided</b>	In Person -. Feedback is provided by individual Academic Supervisor.

## Assessment 4 - Part B - Final Report (Conference Paper)

<b>Assessment Type</b>	Written Assignment
<b>Purpose</b>	A 10-page conference paper as the final report will assess students' capacity to describe their work and research findings in a concise manner.
<b>Description</b>	Based on the work of each student, a conference paper will be completed to include the title, abstract, introduction, methodology, results, discussions and conclusions, and references.
<b>Weighting</b>	40%
<b>Length</b>	10 pages based on template provided
<b>Due Date</b>	Week 15, details TBA on Canvas.
<b>Submission Method</b>	Online Submissions as electronic copy to Canvas/Turnitin.
<b>Assessment Criteria</b>	Report presentation, the amount of work undertaken by the student, intellectual contribution.
<b>Return Method</b>	Not Returned
<b>Feedback Provided</b>	In Person -. Feedback is provided by individual Academic Supervisor.

## ADDITIONAL INFORMATION

### Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

\*Skills are those identified for the purposes of assessment task(s).

### Attendance

Attendance/participation will be recorded in the following components:

- Individual Supervision (Method of recording: The class roll will be marked at the seminar session)

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<b>WH&amp;S Requirements</b>	Students are to discuss any and all WHS matters with their Academic Supervisor. That said, please do not hesitate to contact the Course Coordinator if you ever have a WHS matter that remains unresolved.
<b>Communication Methods</b>	Communication methods used in this course include: <ul style="list-style-type: none"><li>- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.</li><li>- Email: Students will receive communications via their student email account.</li><li>- Face to Face: Communication will be provided via face to face meetings or supervision.</li></ul>
<b>Course Evaluation</b>	Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.
<b>Oral Interviews (Vivas)</b>	As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the <a href="#">Oral Examination (viva) Procedure</a> . In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the <a href="#">Student Conduct Rule</a> .
<b>Academic Misconduct</b>	All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students at the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to <a href="https://policies.newcastle.edu.au/document/view-current.php?id=35">https://policies.newcastle.edu.au/document/view-current.php?id=35</a> .
<b>Adverse Circumstances</b>	The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: <ol style="list-style-type: none"><li>1. the assessment item is a major assessment item; or</li><li>2. the assessment item is a minor assessment item, and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;</li><li>3. you are requesting a change of placement; or</li><li>4. the course has a compulsory attendance requirement.</li></ol> Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at: <a href="https://policies.newcastle.edu.au/document/view-current.php?id=236">https://policies.newcastle.edu.au/document/view-current.php?id=236</a>
<b>Important Policy Information</b>	The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at <a href="https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures">https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures</a> that support a safe and respectful environment at the University.

## Graduate Profile Statements

This course builds students' capacity in the following University of Newcastle Bachelor of Engineering Graduate Profile Statements (based on 2011 Engineers Australia revised Stage 1 Competency Standards for Professional Engineers):

UON Att.	University of Newcastle Bachelor of Engineering Graduate Profile Statements/ Engineers Australia Stage 1 competency statements	Taught	Practised	Assessed	Skill Level (1-4)
	<b>Professional Attributes</b>	x	x	x	4
11	3.1. Ethical conduct and professional accountability	x	x	x	4
12	3.2. Effective oral and written communication in professional and lay domains.	x	x	x	4
13	3.3. Creative, innovative and pro-active demeanour.	x	x	x	4
14	3.4. Professional use and management of information.	x	x	x	4
15	3.5. Orderly management of self, and professional conduct.	x	x	x	4
16	3.6. Effective team membership and team leadership.	x	x	x	4
	<b>Engineering Ability</b>	x	x	x	4
7	2.1. Application of established engineering methods to complex engineering problem solving.	x	x	x	4
8	2.2. Fluent application of engineering techniques, tools and resources.	x	x	x	4
9	2.3. Application of systematic engineering synthesis and design processes.	x	x	x	4
10	2.4. Application of systematic approaches to the conduct and management of engineering projects.	x	x	x	4
	<b>Knowledge Base</b>	x	x	x	4
1	1.1. Comprehensive, theory-based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline.	x	x	x	4
2	1.2. Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline.	x	x	x	4
3	1.3. In-depth understanding of specialist bodies of knowledge within the engineering discipline.	x	x	x	4
4	1.4. Discernment of knowledge development and research directions within the engineering discipline.	x	x	x	4
5	1.5. Knowledge of contextual factors impacting the engineering discipline.	x	x	x	4
6	1.6. Understanding of the scope, principles, norms, accountabilities and bounds of contemporary engineering practice in the specific discipline.	x	x	x	4

*This course outline was approved by the Head of School on the 30/01/2024. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.*

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