

CIVL6460A: MPE Thesis A

Callaghan

Semester 1 - 2024



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

OVERVIEW

Course Description	This course is Part A of a multi-term sequence. Over two 10 units courses, students will 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 progress report.
Academic Progress Requirements	Nil
Contact Hours	Callaghan Individual Supervision Face to Face On Campus 1 hour(s) per week(s) for 13 week(s) starting Week 1
Unit Weighting Workload	10 Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.
Multi-Term Sequence Advice	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

CONTACTS

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

SYLLABUS

Course Content	This course is a self-directed project with a member of academic staff as supervisor.
Course Learning Outcomes	On successful completion of this course, students will be able to: <ol style="list-style-type: none">1. Use their initiative in an area of self-selected engineering interest2. Demonstrate initiative through the work performed3. Critically analyse the work performed previously by others4. Critically assess the achievements, limitations and further requirements of their own work5. Demonstrate an appreciation of the state-of-the-art in the selected area6. Demonstrate an advanced ability to communicate the objectives and outcomes of the work
Course Materials	

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	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
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

Assessment Type	Presentation
Description	Students should report on the progress of their research with a summary of results and preliminary conclusions related to the previously stated project objectives.
Weighting	10%
Length	15 minutes (10 min presentation and 5 minutes Q&A)
Due Date	Week 11, details TBA on Canvas.
Submission Method	You are required to attend all seminars within your presentation stream. 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.
Assessment Criteria	Average of three marks: content, method of presentation, the student's response to questions.
Return Method	Not Returned
Feedback Provided	In Person -. Feedback is provided by individual Academic Supervisor.

Assessment 2 - Part A - Progress Report

Assessment Type	Written Assignment
Purpose	Students should demonstrate their capacity to write a research report.
Description	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.
Weighting	40%
Length	As defined by the individual Academic Supervisor.
Due Date	Week 15, details TBA on Canvas.
Submission Method	Online Submissions as electronic copy to Canvas/Turnitin.
Assessment Criteria	Report Presentation, the amount of work undertaken by the student, intellectual contribution.
Return Method	Not Returned
Feedback Provided	In Person -. Feedback is provided by individual Academic Supervisor.

Assessment 3 - Part B - Seminar

Assessment Type	Presentation
Purpose	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.
Description	
Weighting	10%
Length	15 minutes (10 min presentation and 5 minutes Q&A)
Due Date	Week 11, details TBA on Canvas. You are required to attend all seminars within your presentation stream.
Submission Method	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.
Assessment Criteria	Average of three marks: content, method of presentation, the student's response to questions.
Return Method	Not Returned
Feedback Provided	In Person -. Feedback is provided by individual Academic Supervisor.

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

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

ADDITIONAL INFORMATION

Grading Scheme	This course is Part A of a multi-term sequence. A grade will be awarded at the completion of Part B.
Attendance	Attendance/participation will be recorded in the following components: <ul style="list-style-type: none">- Individual Supervision (Method of recording: The class roll will be marked at the seminar session)
WH&S Requirements	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.
Communication Methods	Communication methods used in this course include: <ul style="list-style-type: none">- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.- Email: Students will receive communications via their student email account.- Face to Face: Communication will be provided via face to face meetings or supervision. There is an orientation lecture in Week 1 to discuss how the course will run.

Course Evaluation	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.
Oral Interviews (Vivas)	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 Oral Examination (viva) Procedure . 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 Student Conduct Rule .
Academic Misconduct	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 of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35 .
Adverse Circumstances	<p>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:</p> <ol style="list-style-type: none">1. the assessment item is a major assessment item; or2. 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;3. you are requesting a change of placement; or4. the course has a compulsory attendance requirement. <p>Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at: https://policies.newcastle.edu.au/document/view-current.php?id=236</p>
Important Policy Information	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 https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures 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)
	Professional Attributes	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
	Engineering Ability	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
	Knowledge Base	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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