

# GSOE9820

Engineering Project Management

Term 1, 2022



## Course Overview

### Staff Contact Details

#### Convenors

Name	Email	Availability	Location	Phone
Edward Obbard	<a href="mailto:e.obbard@unsw.edu.au">e.obbard@unsw.edu.au</a>	Mondays 13:00 -15:00. Please schedule an appointment at least 24 hrs in advance.	Ainsworth Bld. J17	
Shiva Abdoli	<a href="mailto:s.abdoli@unsw.edu.au">s.abdoli@unsw.edu.au</a>	Tuesdays 13:00 -15:00. Please schedule an appointment at least 24 hrs in advance.	Ainsworth Bld. J17	

#### Lecturers

Name	Email	Availability	Location	Phone
Imrana Kabir	<a href="mailto:i.kabir@unsw.edu.au">i.kabir@unsw.edu.au</a>		Ainsworth Bld. J17	

### School Contact Information

#### Location

UNSW Mechanical and Manufacturing Engineering

Ainsworth building J17, Level 1

Above Coffee on Campus

#### Hours

9:00–5:00pm, Monday–Friday\*

\*Closed on public holidays, School scheduled events and University Shutdown

#### Web

[School of Mechanical and Manufacturing Engineering](#)

[Engineering Student Support Services](#)

[Engineering Industrial Training](#)

[UNSW Study Abroad and Exchange](#) (for inbound students)

[UNSW Future Students](#)

## Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

(+61 2) 9385 4097 – School Office\*\*

\*\*Please note that the School Office will not know when/if your course convenor is on campus or available

## Email

[Engineering Student Support Services](#) – current student enquiries

- e.g. enrolment, progression, clash requests, course issues or program-related queries

[Engineering Industrial Training](#) – Industrial training questions

[UNSW Study Abroad](#) – study abroad student enquiries (for inbound students)

[UNSW Exchange](#) – student exchange enquiries (for inbound students)

[UNSW Future Students](#) – potential student enquiries

- e.g. admissions, fees, programs, credit transfer

[School Office](#) – School general office administration enquiries

- NB: the relevant teams listed above must be contacted for all student enquiries. The School will only be able to refer students on to the relevant team if contacted

## Important Links

- [Student Wellbeing](#)
- [Urgent Mental Health & Support](#)
- [Equitable Learning Services](#)
- [Faculty Transitional Arrangements for COVID-19](#)
- [Moodle](#)
- [Lab Access](#)
- [Computing Facilities](#)
- [Student Resources](#)

- [Course Outlines](#)
- [Makerspace](#)
- [UNSW Timetable](#)
- [UNSW Handbook](#)

## Course Details

### Units of Credit 6

### Summary of the Course

This course will introduce to you the fundamental principles of project management in an engineering context, enabling you to become a successful project manager.

### Course Aims

This course takes an integrated approach to managing projects, exploring both technical and managerial challenges. The course will provide you with tools to improve your ability to plan, implement and manage activities to accomplish specific organisational objectives in often complex and challenging work environments. The Project Management Standards (e.g. PMBOK) are included in the course to comprehensively identify the critical knowledge areas that project managers should understand.

### Course Learning Outcomes

After successfully completing this course, you should be able to:

Learning Outcome	EA Stage 1 Competencies
1. Translate from organisational strategy into project deliverables	PE1.5, PE2.4
2. Formulate project scope	PE1.5, PE2.4
3. Select and apply project management methods	PE1.3, PE2.1, PE2.2
4. Integrate and justify project plans	PE3.6, PE2.3
5. Evaluate progress and interpret success in projects	PE3.4, PE3.2

### Teaching Strategies

The online lectures are designed to give students maximum flexibility. The course will cover the terminology and core concepts and theories in Project Management to help you develop a range of skills, such as managing project teams, project schedules, budgets as well as being aware of strategic topics, different environments, cultures and ethics of projects and community issues. The lectures and assessment tasks are developed to build on the lecture topics using examples taken from industry to show how the theory is applied in practice. Group work is extensive, and a course demonstrator is allocated to each student group to mentor the team throughout the term. Participation in group meetings has been found to be a major indicator of overall student success.

### Additional Course Information

The course, and the Course Learning Outcomes (CLO) listed above, are structured according to [Bloom's Taxonomy of Educational Objectives](#), from the most basic to instill Knowledge, moving on to Understanding it, then Applying it and Analysing results, and finally the most challenging which are to Synthesise new knowledge and learn to Evaluate information for ourselves. Thus CLO 1-3 are more basic, while CLO 4 and 5 are the most challenging.

The course aims to always provide students with Knowledge and Understanding, before asking students to carry out something more complex like Analysis or Evaluation. Different assignments deal with different kinds of Educational Objectives, such that for example individual quizzes are used to assess Knowledge, while a team assignment assess the integration of a project plan (which is a kind of Synthesis).

To achieve high marks in the course students must succeed at all the different kinds of these educational objectives, from the basic ones to the most challenging.

The course is a possible pathway for Project Management Institute (PMI) certification since the contents of the course, terminologies used and exposure to several real-world cases will support your preparations. It also provides an opportunity to be considered as a future course demonstrator, who are selected from students in the cohort who achieve a high level of all-round success.

## Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Project Management Plan	50%	Week 3 and Week 7	1, 2, 3, 4
2. Team Based Learning Activities	10%	In-class activities	1, 2, 3, 4
3. Individual Knowledge Quiz	20%	Scheduled in exam time	1, 2, 3, 4
4. Interview	20%	Weeks 9-10, outside class time	4, 5

### Assessment 1: Project Management Plan

**Assessment length:** Approx. 20 pages

**Submission notes:** via Moodle

**Due date:** Week 3 and Week 7

**Marks returned:** 1 week after submission

In the project assignment student teams work together to complete an Engineering Project Management Plan (EPMP). Feedback is given in stages to help teams check and adjust their work.

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

#### Assessment criteria

Assessment is by a grading rubric which reflects the course learning outcomes.

#### Additional details

Part 1 of the PMP (week 3) is an individual assignment. Part 2 (week 7) is a group assignment. Grades in the group assignment part are individually scaled based on contribution to the team, as verified by the team demonstrator. Students work in groups of 4-6.

### Assessment 2: Team Based Learning Activities

**Assessment length:** n/a

**Submission notes:** Submitted by Moodle quiz, or other in-class activity

**Due date:** In-class activities

**Marks returned:** Immediately

Team Based Learning (TBL) activities are graded, timed group assessments that take place during scheduled class or team meeting time. The most significant TBL activities are in weeks 8 and 10.

This is not a Turnitin assignment

#### Assessment criteria

Marks are awarded for correct answers. All team members must be present online at the scheduled time and participate in the activities to be awarded marks, unless absence is agreed in advance with the team members and the team's demonstrator.

### **Assessment 3: Individual Knowledge Quiz**

**Start date:** Scheduled in exam time

**Submission notes:** Moodle quiz

**Due date:** Scheduled in exam time

The Knowledge Quiz is scheduled during exam time. 50 multiple choice questions must be completed in 60 minutes. The quiz is similar in structure and timing to the well-known Project Management Professional (PMP) exam. The quiz is assessed by right/wrong answers and late completion is not possible. Feedback on the quiz is not returned.

This is not a Turnitin assignment

#### **Assessment criteria**

Correct answers

### **Assessment 4: Interview**

**Start date:** Weeks 9-10, outside class time

**Submission notes:** Online interview

**Due date:** Weeks 9-10, outside class time

Each student will be interviewed by an academic staff member or demonstrator and asked to discuss their group assignment in terms of achieving integration in their project planning and the definition of project success.

This is not a Turnitin assignment

#### **Assessment criteria**

Grading is by a rubric that reflects the learning outcomes.

#### **Additional details**

Rescheduling the interview time after its initial selection is not possible except in exceptional circumstances and by approval of the course convener. No-shows in the interview will receive zero marks for the interview.



## Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Team Based Learning (TBL) activities are graded group activities that take place during scheduled class time and in some meetings with demonstrators. Students who do not appear (or do not take part at all) will not receive marks for the TBL activities, unless their absence has been agreed in advance with their group and their demonstrator.

## Course Schedule

[View class timetable](#)

### Timetable

Date	Type	Content
Week 1: 14 February - 18 February	Topic	Introduction to Projects
	Topic	The Course and its Assessments
	Topic	Project Scope
Week 2: 21 February - 25 February	Topic	Design Thinking
	Topic	Scope and Design Thinking Case Study (TBL)
Week 3: 28 February - 4 March	Workshop	Agile and High Performing Teams
	Assessment	Hand in Project WBS
Week 4: 7 March - 11 March	Topic	Projects in Organisations
	Topic	Case Study 2
	Topic	The Project Charter
Week 5: 14 March - 18 March	Topic	Estimating
	Topic	Scheduling
	Topic	Risk Management
	Group Activity	Revision Quiz (TBL)
Week 6: 21 March - 25 March	Workshop	PMP Integration
	Group Activity	Assignment Check-in and Presentation (TBL)
Week 7: 28 March - 1 April	Topic	Project Controls
	Topic	Case Study 3
	Assessment	Hand in PMP Assignment

Week 8: 4 April - 8 April	Group Activity	Project Controls Application Exercise (TBL)
Week 9: 11 April - 15 April	Topic	Industry Panel Discussion
	Topic	Interview Preparation
	Assessment	Interviews
	Assessment	Hand in PMP changes
Week 10: 18 April - 22 April	Group Activity	Practice Quiz and Team Quiz (TBL)
	Assessment	Interviews

## Resources

### Prescribed Resources

#### Textbook

Project Management Institute, issuing body. A Guide to the Project Management Body of Knowledge (PMBOK Guide) : and, Agile Practice Guide. Sixth edition. Newtown Square, Pennsylvania: Project Management Institute, 2017.

### Recommended Resources

#### Additional instructional videos

Linked-in Learning accessed through

UNSW: <https://www.myit.unsw.edu.au/services/staff/educational-technology/linkedin-learning>

### Course Evaluation and Development

Feedback on the course is gathered periodically using various means, including the UNSW myExperience process, feedback surveys used through the course, and the School's Student/Staff meetings. Your feedback is taken seriously, and continual improvements are made to the course taking into account such feedback.

Changes made this term to improve online education and assessments

- Improved grading rubrics
- Simpler PMP assignment (3 reduced to 2 steps)
- More controlled grading and questions for interview
- Improved project descriptions according to transparent assessment design.

Successful aspects of the course that have been kept:

- Practical assignment planning a realistic project
- TBL workshop
- Large demonstrator team and many opportunities for personalized support
- Excellence in guest lecturers and panelists

# Submission of Assessment Tasks

## Assessment submission and marking criteria

Should the course have any non-electronic assessment submission, these should have a standard School cover sheet.

All submissions are expected to be neat and clearly set out. Your results are the pinnacle of all your hard work and should be treated with due respect. Presenting results clearly gives the marker the best chance of understanding your method; even if the numerical results are incorrect.

Marking guidelines for assignment submissions will be provided at the same time as assignment details to assist with meeting assessable requirements. Submissions will be marked according to the marking guidelines provided.

## Late policy

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of 20 percent (20%) of the maximum mark possible for that assessment item, per calendar day, for a minimum of zero marks.

The late penalty is applied per calendar day (or part thereof), including weekends and public holidays, that the assessment is overdue.

Work submitted after the 'deadline for absolute fail' is not accepted and a mark of zero will be awarded for that assessment item. For example:

- Your course has an assessment task worth a total of **30 marks (Max Possible Mark)**
- You submit the assessment **2 days after the due date**
- The assessment is marked as usual and achieves a score of **20 marks (Awarded Mark)**
- The late policy is applied using **Late Mark = Awarded Mark - (Days\*Penalty per Day)\*Max Possible Mark**. Your adjusted final score is **8 marks** ( $20 - ((2*0.2)*30)$ ).

For some assessment items, a late penalty may not be appropriate. These are clearly indicated in the course outline, and such assessments receive a mark of zero if not completed by the specified date. Examples include:

1. Weekly online tests or laboratory work worth a small proportion of the subject mark, or
2. Online quizzes where answers are released to students on completion, or
3. Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date, or
4. Pass/Fail assessment tasks.

## Examinations

You must be available for all quizzes, tests and examinations. For courses that have final examinations, these are held during the University examination periods: February for Summer Term, May for T1, August for T2, and November/December for T3.

Please visit myUNSW for Provisional Examination timetable publish dates. For further information on

exams, please see the [Exams](#) webpage.

## Special Consideration

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to submitting an assessment or sitting an exam.

UNSW now has a [Fit to Sit / Submit rule](#), which means that if you attempt an exam or submit a piece of assessment, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's [Special Consideration page](#).

**Please note** that students will **not** be required to provide **any** documentary evidence to support absences from any classes missed **because of COVID-19 public health measures such as isolation**. UNSW will **not** be insisting on medical certificates from anyone deemed to be a positive case, or when they have recovered. Such certificates are difficult to obtain and put an unnecessary strain on students and medical staff.

Applications for special consideration **will** be required for assessment and participation absences – but no documentary evidence **for COVID-19 illness or isolation** will be required.

## Special Consideration Outcomes

Assessments have default Special Consideration outcomes. The default outcome for the assessment will be advised when you apply for Special Consideration. Below is the list of possible outcomes:

<b>Outcome</b>	<b>Explanation</b>	<b>Example</b>
Time extension	Student provided more time to submit the assessment	e.g. 1 more week of time granted to submit a report
Supplementary assessment	Student provided an alternate assessment at a later date/time	e.g. a supplementary exam is scheduled during the supplementary exam period of the term
Substitute item	The mark for the missed assessment is substituted with the mark of another assessment	e.g. mark for Quiz 1 applied also applied as mark for Quiz 2, meaning if a student achieved a mark of 20/30 for Quiz 1 and was granted Special Consideration for Quiz 2, a mark of 20/30 would be applied for Quiz 2, etc
Exemption	All course marks are recalculated excluding this assessment and its weighting	e.g. The course has an assessment structure of: <ul style="list-style-type: none"> <li>- Assignments 30%,</li> <li>- Lab report 30%,</li> <li>- Final Exam 40%.</li> </ul> If the Lab report is missed and student is granted Special Consideration, then the assessment structure may be reweighted as follows: <ul style="list-style-type: none"> <li>- Assignments 50%</li> <li>- Final Exam 50%</li> </ul> as though the Lab report did not exist
Non-standard	Course Coordinator is contacted for the outcome when special consideration is granted as the outcome differs on a case-by-case basis	e.g. typical for group assessments where time extension supplementary assessment could be granted to the group member, time extension could be granted to the whole group, etc. Clarify with your Course Convenor for

## Academic Honesty and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: [student.unsw.edu.au/plagiarism](http://student.unsw.edu.au/plagiarism). The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However more serious instances in first year, such as stealing another student's work or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis) even suspension from the university. The Student Misconduct Procedures are available here:

[www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf](http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf)

## Academic Information

### Credit points

Course credit is calculated in Units-Of-Credit (UOC). The normal workload expectation for one UOC is approximately 25 hours per term. This includes class contact hours, private study, other learning activities, preparation and time spent on all assessable work.

Most coursework courses at UNSW are 6 UOC and involve an estimated 150 hours to complete, for both regular and intensive terms. Each course includes a prescribed number of hours per week (h/w) of scheduled face-to-face and/or online contact. Any additional time beyond the prescribed contact hours should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations.

### On-campus class attendance

**\*\*T1-2022 UPDATE\*\***

Public distancing conditions must be followed for all face-to-face classes. To ensure this, only students enrolled in those classes will be allowed in the room. No over-enrolment is allowed in face-to-face classes. Students enrolled in online classes can swap their enrolment from online to on-campus classes by Sunday, Week 1. Please refer to your course's Microsoft Teams and Moodle sites for more information about class attendance for in-person and online class sections/activities.

Your health and the health of those in your class is critically important. You must stay at home if you are sick or have been advised to self-isolate by [NSW health](#) or government authorities. Current alerts and a list of hotspots can be found [here](#). **You will not be penalised for missing a face-to-face activity due to illness or a requirement to self-isolate.** We will work with you to ensure continuity of learning during your isolation and have plans in place for you to catch up on any content or learning activities you may miss. Where this might not be possible, an application for fee remission may be discussed. Further information is available on any course Moodle or Teams site.

In certain classroom and laboratory situations where physical distancing cannot be maintained or there is a high risk that it cannot be maintained, face masks will be considered **mandatory PPE** for students and staff.

For more information, please refer to the FAQs: <https://www.covid-19.unsw.edu.au/safe-return-campus-faqs>

### Guidelines

All students are expected to read and be familiar with UNSW guidelines and policies. In particular, students should be familiar with the following:

- [Attendance](#)
- [UNSW Email Address](#)
- [Special Consideration](#)
- [Exams](#)
- [Approved Calculators](#)



- [Academic Honesty and Plagiarism](#)

## **Image Credit**

*'no attributions required'*

## **CRICOS**

CRICOS Provider Code: 00098G

## **Acknowledgement of Country**

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.

## Appendix: Engineers Australia (EA) Professional Engineer Competency Standard

Program Intended Learning Outcomes	
Knowledge and skill base	
PE1.1 Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline	
PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline	
PE1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline	✓
PE1.4 Discernment of knowledge development and research directions within the engineering discipline	
PE1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline	✓
PE1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline	
Engineering application ability	
PE2.1 Application of established engineering methods to complex engineering problem solving	✓
PE2.2 Fluent application of engineering techniques, tools and resources	✓
PE2.3 Application of systematic engineering synthesis and design processes	✓
PE2.4 Application of systematic approaches to the conduct and management of engineering projects	✓
Professional and personal attributes	
PE3.1 Ethical conduct and professional accountability	
PE3.2 Effective oral and written communication in professional and lay domains	✓
PE3.3 Creative, innovative and pro-active demeanour	
PE3.4 Professional use and management of information	✓
PE3.5 Orderly management of self, and professional conduct	
PE3.6 Effective team membership and team leadership	✓