UNSW Course Outline

GSOE9820 Engineering Project Management - 2024

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General Course Information

Course Code : GSOE9820
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Mechanical and Manufacturing Engineering
Delivery Mode : Multimodal
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

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. It emphasises not only individual project implementation, but also provides a strategic perspective of how to manage projects at the program and portfolio levels. The course will provide you with a powerful set of 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 also included in the course in order to comprehensively identify the critical knowledge areas that project managers must understand if they are to become successful managers. The course is also a 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.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Translate from organisational strategy into project deliverables
CLO2 : Formulate project scope
CLO3 : Select and apply project management methods
CLO4 : Integrate and justify project plans
CLO5 : Evaluate progress and interpret success in projects

Course Learning Outcomes	Assessment Item
CLO1 : Translate from organisational strategy into project deliverables	• Project Management Plan • Team Based Learning Activities • Individual Knowledge Quiz
CLO2 : Formulate project scope	• Project Management Plan • Team Based Learning Activities • Individual Knowledge Quiz
CLO3 : Select and apply project management methods	• Project Management Plan • Team Based Learning Activities • Individual Knowledge Quiz
CLO4 : Integrate and justify project plans	• Interview • Project Management Plan • Team Based Learning Activities • Individual Knowledge Quiz
CLO5 : Evaluate progress and interpret success in projects	• Interview

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Other Professional Outcomes

https://www.unsw.edu.au/engineering/student-life/student-resources/program-design

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.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Project Management Plan Assessment Format: Group	50%	Due Date: Week 3, Week 7
Team Based Learning Activities Assessment Format: Group	10%	Due Date: Week 8
Interview Assessment Format: Individual	20%	Due Date: Week 9, Week 10
Individual Knowledge Quiz Assessment Format: Individual	20%	Due Date: Schedualed during exam period

Assessment Details

Project Management Plan

Assessment Overview

Assessment length: Approx. 20 pages

In this project assignment, student teams work together to complete an Engineering Project Management Plan (PMP). Feedback is given in stages to help teams check and adjust their work. Students are required to complete a hurdle task where they must present and provide evidence of contribution to the PMP.

The purpose of this task is to ensure all individual students in the group have equally contributed to the PMP to satisfactory standards. The hurdle task is not assessed by marks, however, failure to complete the task will result in an UF grade.

Assessment criteria

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

Hurdle requirement

This course will include the following hurdle requirements that are closely linked to a set of learning outcomes which demonstrate that you have acquired the required skills and competencies within this discipline:

- Students must demonstrate sufficient contribution to the PMP to satisfactory standards. Students must present their contributions and submit evidence for the Week 5 PMP Hurdle task in order to pass this subject. Failure to achieve this minimum requirement will result in an unsatisfactory fail (UF) grade, regardless of the performance in the rest of the course.

Additional details

The PMP 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.

Course Learning Outcomes

- CLO1 : Translate from organisational strategy into project deliverables
- CLO2 : Formulate project scope
- CLO3 : Select and apply project management methods

- CLO4 : Integrate and justify project plans

Team Based Learning Activities

Assessment Overview

Team Based Learning (TBL) activities are graded, timed group assessments that take place during scheduled class or team meeting time. Students must be active and present in the lecture – either in-person or online. Attendance will be marked.

For the first part, students are required to complete a quiz with their assigned groups. For part two, students work in their groups to complete the activities and submit their answers.

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.

Duration: 24 hours

Feedback: Submitted and marked by Moodle.

Course Learning Outcomes

- CLO1 : Translate from organisational strategy into project deliverables
- CLO2 : Formulate project scope
- CLO3 : Select and apply project management methods
- CLO4 : Integrate and justify project plans

Interview

Assessment Overview

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.

Each student group is required to submit a change request based on their PMP. This outcome of the change request is assessed in this individual interview.

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.

Duration: 10 mins

Feedback: Interviewed and marked by an academic staff member or demonstrator with immediate feedback

Course Learning Outcomes

- CLO4 : Integrate and justify project plans
- CLO5 : Evaluate progress and interpret success in projects

Individual Knowledge Quiz

Assessment Overview

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.

Duration: 1 hour

Feedback: Submitted and marked by Moodle.

Course Learning Outcomes

- CLO1 : Translate from organisational strategy into project deliverables
- CLO2 : Formulate project scope
- CLO3 : Select and apply project management methods
- CLO4 : Integrate and justify project plans

General Assessment Information

*There is no final exam; however, the Individual knowledge quiz will be scheduled during exam period

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Introduction to project management and what to expect for this course with A/Prof Susann Beier
Week 2 : 19 February - 25 February	Lecture	Developing scope from functional requirements with A/Prof Edward Obbard
Week 3 : 26 February - 3 March	Lecture	Agile and high performance teams with Rei Yamagishi
	Group Activity	Group practice Moodle quiz
Week 4 : 4 March - 10 March	Lecture	Project management in Organisations with Bernard Hayes
Week 5 : 11 March - 17 March	Lecture	Cost, time and risk with Habib Zughbi
Week 6 : 18 March - 24 March	Workshop	FLEX WEEK - no Lecture Integration workshop during tutorial
Week 7 : 25 March - 31 March	Group Activity	In-lecture group activity with Bernd Hayes Case study activity - Project controls
	Assessment	Hand in project management project (PMP)
Week 8 : 1 April - 7 April	Group Activity	In-lecture group activity with Bernd Hayes Case Study Assessment - Project controls
Week 9 : 8 April - 14 April	Lecture	Success stories of project management
	Assessment	Individual interviews
	Assessment	Hand in Project Management Plan (PMP) changes
Week 10 : 15 April - 21 April	Assessment	Individual interiviews
	Group Activity	Practice quiz and team quiz (Team-Based Learning TBL)
Week 11 : 22 April - 28 April	Assessment	Individual Knowledge quiz during the exam period

Attendance Requirements

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

General Schedule Information

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 Resources

Prescribed Resources

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/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

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Susann Beier				Consultations available during usual business hours upon request	Yes	Yes
Lecturer	Bernard Hayes					No	No
	Edward Obbard					No	No
	Rei Yamagishi					No	No
Demonstrator	Ramya Kumar					No	No
	Anita Cheah					No	No
Lecturer	Habib Zughbi					No	No

Other Useful Information

Academic Information

I. Special consideration and supplementary assessment

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, or within 3 working days of, submitting an assessment or sitting an exam.

Please note that UNSW has a Fit to Sit rule, which means that if you sit an exam, 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.

II. Administrative matters and links

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

- Attendance
- UNSW Email Address
- Special Consideration
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Equitable Learning Services

III. Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equitable Learning Services. Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

IV. Professional Outcomes and Program Design

Students are able to review the relevant professional outcomes and program designs for their

streams by going to the following link: https://www.unsw.edu.au/engineering/student-life/student-resources/program-design.

Note: This course outline sets out the description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle or your primary learning management system (LMS) should be consulted for the up-to-date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline/Moodle/LMS, the description in the Course Outline/Moodle/LMS applies.

Academic Honesty and Plagarism

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. 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.

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 or contract cheating) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Submission of Assessment Tasks

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of five percent (5%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day. This is for all assessments where a penalty applies.

Work submitted after five days (120 hours) will not be accepted and a mark of zero will be awarded for that assessment item.

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

- Weekly online tests or laboratory work worth a small proportion of the subject mark;
- Exams, peer feedback and team evaluation surveys;
- Online quizzes where answers are released to students on completion;
- Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date; and,
- Pass/Fail assessment tasks.

Faculty-specific Information

Engineering Student Support Services – The Nucleus - enrolment, progression checks, 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

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)

School-specific Information

Short Extensions

Short extensions are not currently applicable to Mechanical and Manufacturing Engineering Courses.

Review of Results

The purpose of a review of results is if there was a marking error. Review of results is for when you have cause to believe that there is a marking error. Review of Results cannot be used to get feedback. If you would like feedback for assessments prior to the final exam, you are welcome to contact the course convenor directly. No feedback will be provided on final exams.

Use of AI

The use of AI is prohibited unless explicitly permitted by the course convenor. Please respect this and be aware that penalties will apply when unauthorised use is detected, such as through Turnitin. If the use of generative AI, such as ChatGPT, is allowed in a specific assessment, they must be properly credited, and your submissions must be substantially your own work.

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