



Course Outline

Semester 2 2015

Never Stand Still

Engineering

Mechanical and Manufacturing Engineering

GSOE9820

Engineering Project Management

Contents

1. Staff Contact Details	2
2. Course details	2
3. Teaching strategies.....	4
4. Course schedule	4
5. Assessment	5
6. Expected Resources for students.....	7
7. Course evaluation and development	8
8. Academic honesty and plagiarism	8
9. Administrative Matters.....	9
Appendix A: Engineers Australia (EA) Professional Engineer Competency Standards.....	10

1. Staff Contact Details

Contact details and consultation times for course convenor

Mr Corey Martin
Office: Electrical Engineering (G17), room 414
Email: corey.martin@unsw.edu.au

Consultation concerning this course is available immediately after the classes. Face-to-face consultation outside this time is available by appointment only.

Contact details and consultation times for additional demonstrators

Ms Sandra Cowan
Email: sandra.cowan@unsw.edu.au

Mr Lars Moller
Email: lars.moller@unsw.edu.au

2. Course details

Credit Points:

This is a 6 unit-of-credit (UoC) course, and involves 3 hours per week (h/w) of face-to-face contact.

The UNSW website states “The normal workload expectations of a student are approximately 25 hours per semester for each UoC, including class contact hours, other learning activities, preparation and time spent on all assessable work. Thus, for a full-time enrolled student, the normal workload, averaged across the 16 weeks of teaching, study and examination periods, is about 37.5 hours per week.”

This means that you should aim to spend about 9 h/w on this course. The additional time should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations.

Contact Hours

	Day	Time	Location
Lectures	Monday	6pm – 9pm	Mathews Theatre B (K-D23-203)
Demonstrations	Are the Web-based activities and require you to work in project teams.		

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.

Aims of the Course

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 both the contents of the course, terminologies used and exposure to several real world cases will support your preparations.

Student learning outcomes

This course is designed to address the below learning outcomes and the corresponding Engineers Australia Stage 1 Competency Standards for Professional Engineers as shown. The full list of Stage 1 Competency Standards may be found in Appendix A.

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

Learning Outcome		EA Stage 1 Competencies
1.	Know what a project is as well as understand the role and responsibilities of a project manager	PE1.1, 1.3, 1.6 PE2.4 PE3.1
2.	Be able to create project plans, schedules and budgets	PE1.1, 1.2, 1.3, 1.5 PE2.1, 2.2, 2.3, 2.4
3.	Be able to select and use the appropriate tools to aid in managing a project	PE2.1, 2.2, 2.3, 2.4
4.	Be able to select and develop appropriate management styles to successfully complete a project.	PE3.1, 3.2, 3.3, 3.4, 3.5, 3.6

3. Teaching strategies

Lectures in the course are designed to 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. They do not simply reiterate the texts, but build on the lecture topics using examples taken directly from industry to show how the theory is applied in practice and the details of when, where and how it should be applied.

Web-based activities are designed to provide you with the opportunity to put your learning into practice and allow you to strengthen your understanding of key concepts.

4. Course schedule

TOPICS	WEEK
Introduction to modern project management	1
Organisational strategy and project selection	2
Defining the project	3
Organisational structure and culture	4
Estimating project times and costs	5
Developing a project plan	6
Managing risk	7
Scheduling resources and costs	8
Reducing project duration	9
MID-SEMESTER BREAK (no class)	10
Labour Day Public Holiday – Monday, October 5th (Note: no classes will be taught on Monday of this week)	11
Outsourcing, managing inter-organisational relationships and Project closure	12
Effective leadership and team management	13

5. Assessment

General

You will be assessed by way of short web-based activities and an examination, both of which involve calculations and descriptive material.

The parts of the course contribute towards the overall grade as follows:

ASSESSMENT	WEIGHTING	LEARNING OUTCOMES ASSESSED
Web-based activities	40%	1, 2, 3, 4
Final Examination	60%	1, 2, 3
TOTAL	100%	

In order to pass the course, you must achieve an **overall mark of at least 50%**.

Web-Based activities

The purpose of the web-based activities is to provide students with the opportunity to consolidate and apply the materials covered in the lectures, therefore you are strongly advised to cover lecture/support materials regularly every week of the session.

These activities will be facilitated and assessed through individual and team discussions. Web-based participation marks will be assessed on your contributions to online discussions, exercises and other learning activities via UNSW Moodle.

Marking Criteria used for Web-based activities

1. Participation
 - a. Discuss team member's posts
 - b. Put your thoughts forward
 - c. Work to plan
 - d. Be early, rather than late
2. Content of Posts
 - a. Quality posts
 - b. Correct answers
 - c. 'Outside of Box' thinking
 - d. Presentation
 - e. Proper English. E.g. no slang.
3. Final Report
 - a. Correct answers
 - b. Presentation
 - c. On time

4. Project Management Skills
 - a. Early start
 - b. Provide structured plan
 - c. Follow up on deadlines
 - d. Responses to posts
 - e. Leadership
5. Team member skills
 - a. Respond to PM's plan and requests
 - b. Provide answers and discussion
 - c. Interaction. Give feedback on posts
 - d. Provide quality work, not quantity

There will be several web-based groups. Each of you will be randomly assigned to one of these web-based groups by the end of Week 3. You will be notified of your web-based facilitator name and contact details through UNSW Moodle.

Submission of web-based activities

Web-based projects commence in week 3 and are made available on Moodle during the semester. The due date and duration of each project is specified in Table 1. Each project is equally weighted.

ACTIVITIES	DURATION (Weeks)	RELEASED	DUE
Project teams Kick-off	1	Week 3	Week 4
Project 1	1	Week 4	Week 5
Project 2	1	Week 5	Week 6
Project 3	2	Week 6	Week 8
Project 4	1	Week 8	Week 9
Project 5	2	Week 9	Week 11
Project 6	2	Week 10	Week 12

Table 1 - Schedule for web-based activities

Late submission of assignments will be NOT accepted.

Examination

There will be a single, two (2) hour examination at the end of the semester.

The final examination assesses all materials covered throughout the semester to meet the course learning outcomes.

The final examination consists of both multiple choice as well as short answer questions.

You must be available for all tests and examinations. Final examinations for each course are held during the University examination periods, which are June for Semester 1 and November for Semester 2.

Provisional Examination timetables are generally published on myUNSW in May for Semester 1 and September for Semester 2

For further information on exams, please see [Administrative Matters](#).

Examination Materials

It is strongly recommended that you provide your own B or 2B pencil as well as an eraser in which to answer the multiple-choice questions.

Calculators

You will need to provide your own calculator, of a make and model approved by UNSW, for the examination. The list of approved calculators is shown at <https://student.unsw.edu.au/exam-approved-calculators-and-computers>

It is your responsibility to ensure that your calculator is of an approved make and model, and to obtain an “Approved” sticker for it from the School Office or the Engineering Student Centre prior to the examination. Calculators not bearing an “Approved” sticker will not be allowed into the examination room.

Special Consideration and Supplementary Assessment

For details of applying for special consideration and conditions for the award of supplementary assessment, see [Administrative Matters](#), available on the School website and on Moodle, and the information on UNSW’s [Special Consideration page](#)

6. Expected Resources for students

Textbook

Gray C.F. and Larson E.W. Project Management, 6th edition, McGraw Hill International edition, 2014. ISBN: 9781743071809

Additional materials provided in UNSW Moodle

This course uses UNSW Moodle (<http://moodle.telt.unsw.edu.au>).

Items found on UNSW Moodle include:

- Web-based activities;
- Copies of weekly lectures;
- Class announcements.

Recommended Internet sites

There are many websites giving lectures, papers and data on project management in general. A useful reference site is <http://www.pmi.org>

Other Resources

If you wish to explore any of the lecture topics in more depth, then other resources are available and assistance may be obtained from the UNSW Library. One starting point for assistance is: <http://info.library.unsw.edu.au/web/services/services.html>

7. Course evaluation and development

Feedback on the course is gathered periodically using various means, including the Course and Teaching Evaluation and Improvement (CATEI) process, informal discussion in the final class for the course, and the School's Student/Staff meetings. Your feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

In this course, recent improvements resulting from student feedback and peer review include the realignment and restructure of the course schedule with the web-based activities; the use of interactive tools during lectures and the introduction of online review seminars via Moodle.

8. 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: <https://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:

<http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf>

Further information on School policy and procedures in the event of plagiarism is presented in a School handout, [Administrative Matters](#), available on the School website.

9. Administrative Matters

You are expected to have read and be familiar with *Administrative Matters*, available on the School website: https://www.engineering.unsw.edu.au/mechanical-engineering/sites/mech/files/u41/S2-2015-Administrative-Matters_20150721.pdf

This document contains important information on student responsibilities and support, including special consideration, assessment, health and safety, and student equity and diversity.

C. Martin
17th July 2015

Appendix A: Engineers Australia (EA) Professional Engineer Competency Standards

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-depth understanding of specialist bodies of knowledge
	PE1.4 Discernment of knowledge development and research directions
	PE1.5 Knowledge of engineering design practice
	PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice
PE2: Engineering Application Ability	PE2.1 Application of established engineering methods to complex 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
PE3: Professional and Personal Attributes	PE3.1 Ethical conduct and professional accountability
	PE3.2 Effective oral and written communication (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