ENGN6250/COMP6250
Professional Practice 1

Mode of Delivery	On campus
Workload	130 hours of total student learning time made up from: a) 34 hours of contact over 12 weeks: 2 hours of lectures, 8 hours of Industry Expert lectures, and 24 hours of tutorial and tutorial like activities; and b) 96 hours of independent student research, reading and writing.
Prerequisites and incompatibility	To enrol in this course you must be studying Master of Engineering or Computing
Program Conveners	*Master of Engineering* Professor Ian Petersen, ian.petersen@anu.edu.au *Master of Computing* Dr Priscilla Kan Jon, priscilla.kanjon@anu.edu.au
Course Convener	Professor Joan Leach, joan.leach@anu.edu.au
Administrator	Bea Hogan, bea.hogan@anu.edu.au
Lecturer/ Course coordinator	Dr Emmaline Lear, 02 6125 1073 emmaline.lear@anu.edu.au
Office hours for student consultation:	By appointment
Tutors	Moshiur Farazi, moshiur.farazi@anu.edu.au Ankita Gagrani, ankita.gagrani@anu.edu.au Mona Mahani, mona.mahani@anu.edu.au Richa Awasthy, richa.awasthy@anu.edu.au
Lectures	*Lecture (Week 1 & 12 only)* Monday 2-3pm, John Dedman Mathematical Sciences Building #27 Room JD102 *Industry Expert lecture (Week 2-10 only)* Thursday 11am-12pm PHYS T
Tutorials ***(enrol in a tutorial on Wattle)***	Tuesday 10am-12pm, Brian Anderson Building #115, RSISE A105 *(Tutorial 01)* Tuesday 2pm-4pm, Brian Anderson Building #115, RSISE A105 *(Tutorial 02)* Tuesday 4pm-6pm, Brian Anderson Building #115, RSISE A105 *(Tutorial 03)* Wednesday 2pm-4pm, Ian Ross Building #31, R221 Graduate Teaching Room *(Tutorial 04)* Thursday 3pm-5pm, Brian Anderson Building #115, RSISE A105 *(Tutorial 05)*

SEMESTER S1

2018

COURSE OVERVIEW

This is the first in a series of two courses for engineering and computing graduate students that focus on developing professional and communication skills for the 21st century workplace. Industry bodies and employers of engineering and computing graduates consistently rank communication skills as one of the most important selection criteria when hiring. This course aims to heighten students' awareness of professional practice, and to develop new interpersonal and communication skills, leading to students becoming more competent professionals in their field. Based on Engineers Australia and Australian Computer Society professional competencies, students will develop and practice fundamental skills required by industry to better equip them for the workforce.

Learning Outcomes

Students should be able to:

1. Communicate effectively in written and spoken English to transfer complex knowledge and ideas to technical and nontechnical audiences.
2. Identify and use appropriate sources of information when developing professional documents.
3. Maintain and develop appropriate, effective and professional forms of documentation.
4. Demonstrate effective team membership skills and contribute collaboratively within diverse team environments.
5. Articulate and reflect on the industry expectations of competence and conduct in engineering and computing professions.

Assessment Summary

Assessment Task	**Value (%)**	**Due Date**	**Date for Return of Assessment**	***Linked Learning Outcomes***
1. Communication Tasks	10	Weeks 2-11	*Weekly*	*1, 2, 3, 4, 5*
2. Online quizzes	15, hurdle	Weeks 1-10	*Weekly*	*1, 5*
3. Industry Reviews	10	Weeks 3-11	*Fortnightly*	*1, 2, 3, 5*
4. Professional presentations Part A: Professional introduction Part B: Synopsis and video pitch	 5 10, hurdle	 Week 6 Week 7	 *Week 7* *Week 9*	 *1, 2* *1, 2, 3, 5*
5. Project proposal	20	Week 10	*Week 12*	*1, 2, 3, 4, 5*
6. Final examination	30	Exam period	*n/a*	*1, 5*

Research-Led Teaching

This course allows students to develop preliminary research skills (such as academic integrity, appropriate referencing and using sources) and professional skills using a research-based analytical framework. The course introduces students to scholarly research and case studies that exemplify professional practice, and demonstrates ways in which evidence-based strategies can be developed to improve independent research and professional skills in line with industry requirements.

Student Assessment Moderation

The moderation of marks occurs in this course. The assessment tasks and the judgements made of student learning in a course are reviewed before the final mark or grade is approved to ensure that the judgements of student performance are appropriate, consistent, transparent, reliable and valid (see Policy: Student assessment (coursework), https://policies.anu.edu.au/ppl/document/ANUP_004603)

Feedback

Staff Feedback

Assignments submitted by the deadline will be marked and returned, together with constructive feedback on their performance on assessment tasks, normally within three weeks of the deadline. Students will be given feedback in the following forms:

- Written comments.
- Verbal comments.
- Feedback to the whole class, to groups, to individuals.

Student Feedback

ANU is committed to the demonstration of educational excellence and regularly seeks feedback from students. One of the key formal ways students have to provide feedback is through Student Experience of Learning Support (SELS) surveys. The feedback given in these surveys is anonymous and provides the Colleges, University Education Committee and Academic Board with opportunities to recognise excellent teaching, and opportunities for improvement.

For more information on student surveys at ANU and reports on the feedback provided on ANU courses, go to
http://unistats.anu.edu.au/surveys/selt/students/ and
http://unistats.anu.edu.au/surveys/selt/results/learning/

Students should also raise with the Course Convener any of the following concerns:

- feedback received from the course examiner;
- their progress in all coursework assessment in the course, ie how they have or have not satisfied the assessment criteria in an assessment task;
- any oversight, omission of marking, or mathematical discrepancies in the marking of assessment tasks.

Policies

ANU has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and implement them. You can find the University's education policies and an explanatory glossary at: http://policies.anu.edu.au/

Students are expected to have read the Academic Misconduct Rule before the commencement of their course.

Other key policies include:

- Student Assessment (Coursework)
- Student Surveys and Evaluations

COURSE SCHEDULE *

Week	Week beginning	Summary of Activities	Assessment
1	19 Feb	Introduction to ENGN6250/ COMP6250; Working in industry	Diagnostic Test (non-weighted) Online quizzes start
2	26 Feb	Ethics in Industry	Communication Tasks start
3	5 March	Design Thinking	Industry Reviews start
4	12 March	Team skills	
5	19 March	Knowing your audience	
6	26 March	Presentation Skills	Professional presentations (A)
3-18 April Teaching Break			
7	16 April	Writing with Integrity	Professional presentations (B)
8	23 April	Technical writing	
9	30 April	Report Writing	
10	7 May	Reflective Writing	Online quizzes end Project proposal
11	14 May	Communication Skills	Industry Reviews end Communication Tasks end
12	21 May	Course review	
Exam Period			Final Examination

* Please note that this schedule may be subject to change without prior notice.

DIAGNOSTIC TEST

Students who are seeking an exemption from Professional Practice 1 are required to take a diagnostic test in Week 1. This test is not weighted and does count toward the course result. Students who demonstrate a high level of skills in the context of professional and academic practice may be granted an exemption and permitted to enrol directly into Professional Practice 2. They will then be allowed to take an additional technical course to replace Professional Practice 1 in their program.

Only students who meet the exemption requirements will be notified by email. Please visit the Wattle site for test session details and to enrol in a diagnostic test session.

ASSESSMENT REQUIREMENTS

The ANU is using Turnitin to enhance student citation and referencing techniques, and to assess assignment submissions as a component of the University's approach to managing Academic Integrity. For additional information regarding Turnitin please visit the ANU Online website.

Students may choose not to submit assessment items through Turnitin. In this instance you will be required to submit, alongside the assessment item itself, copies of all references included in the assessment item.

Assessment Tasks

Assessment Task 1: Communication Tasks (10%)

All students will be expected to complete weekly communication tasks during the tutorials during Weeks 2-11. Communication tasks will be based on the lecture material, weekly (& tutorial presentation) readings and may be based on the tutorial presentation topics. Students will need to prepare for the tutorials in advance. Students will be assessed by the tutor and their peers on their ability to communicate effectively in English.

Due date: The weekly tasks will take place during the tutorials from Weeks 2-11
Assessment Rubrics: Assessment Task 1 is supported by the rubrics on page 7
Value: 1% each for a total of 10%
Estimated return date: Weekly
Hurdle Assessment requirements: None

Assessment Task 2: Online Quizzes (15%)

This semester, lectures will be held only in Week 1 and Week 12. Delivery of the Professional Practice 1 course will otherwise be in 'flipped' mode. Flipping the classroom is a method of delivering where the traditional format of lecture / tutorial / homework is flipped – students will need to watch pre-recorded lecture videos in their own time before class, and do pre-assigned readings. After completing these tasks, and before coming to the tutorials each week, students will complete online quizzes. Tutorial classes will then be spent with the tutors engaging in activities, presentations, problem-based learning, or other active learning activities. This may then be followed by a reflective or discussion-type activity after class.

Due date: Mondays 9:00am Weeks 1-10
Assessment Rubrics: Assessment Task 2 is supported by online marking
Value: 15%
Estimated return date: Weekly
Hurdle Assessment requirements: Students must attempt each weekly quiz prior to attending the tutorial and receive 50% or more to pass the course.

Assessment Task 3: Industry Reviews (10%)

All students will have the opportunity to attend and participate in presentations from Industry Experts. These sessions will be hosted by the Professional Practice 2 students during Weeks 2-10. Following the presentations, students will be expected to write five (5) reviews for assessment purposes (~350 words, plus a reference list - not included in the word count):

- Summary of Industry Expert session (~100 words)
- Analysis and connection to the PP1 course content and your professional industry (~200 words)
- Connection to other Masters courses you are currently studying.

Due date: Mondays 9:00 am Weeks 3-11 following the Industry Expert session
Assessment Rubrics: Assessment Task 2 is supported by the rubrics on page 9
Value: 2% each for a total of 10%
Estimated return date: Fortnightly following each submission
Hurdle Assessment requirements: None

Assessment Task 4: Professional presentations (15%)

As prospective employees you will be involved in many situations where you will have to work on your own and as part of a team. This assessment will require you to communicate effectively in written and spoken English to transfer complex knowledge and ideas to technical and nontechnical audiences.

A: Professional Introduction (5%)

Imagine that you are talking to an intelligent person who has no particular background in Engineering or Computer Science. Maybe you are at a party, sitting side by side in an airplane, or riding with them in the elevator. In two minutes tell this person about your research or a project you have worked on in your field and why it matters. Your goal should be to interest this person enough so he/she asks you questions. Your statement should be clear and conversational. It should answer four basic questions: Who are you? What problem are you trying to solve? Why does this matter? How are you trying to solve this problem?

B: Synopsis and video pitch (10%)

You are asked to prepare a synopsis (1 page) and a short video (3-4 minutes) of your area(s) of interest and expertise as part of a pitch to a client for a tender. The client needs to be convinced of your technical proficiency in relation to Engineers Australia (EA) Stage 1 Competencies or SFIA but really wants to be encouraged by your display of expertise, teamwork ability, communication ability, and the general competence of your professionalism.

Due dates: Week 6 Monday 26 March 9:00 am (A); Week 7 Monday 16 April 9:00 am (B)
Assessment Rubrics: Assessment Task 4 is supported by the rubrics on page 9
Presentation requirements: 2 minutes (A); 3-4 minutes (B) & synopsis (1 page)
Value: 5% (A); 10% (B)
Estimated return date: 2 weeks after submission
Hurdle Assessment requirements: Students must attempt Assessment Task 4 Part B and receive 50% or more to pass the course.

Assessment Task 5: Project proposal (20%)

As prospective employees you will be involved in many situations where you will have to work on your own and as part of a team. This assessment is a group task that will allow you to communicate effectively to transfer complex knowledge and ideas to technical and nontechnical audiences. Students need to form multicultural and cross-disciplinary groups consisting of 3-4 students for this assignment.

Work together with your team to write a proposal of 1500 words (+/- 10%, and not including the executive summary, references, appendices or statement of contribution) that explains the need and value of your project. The project should be a “Chindogu” product or service in one or more of the following areas:

- design, build and deliver projects
- consulting projects
- start-up projects
- system optimisation problems

- open-ended explorations
- education and outreach
- research-supported projects
- other negotiated projects

In your proposal, you need to answer the following questions:

- Why undertake the project? Explain the relevance of the work and how it relates to research/practice needs in the discipline.
- What will be the scope of the project? Develop a concise statement of the specific aims/objectives of the work.
- How will the project be undertaken? Describe the main tasks to be undertaken and identify the resources required to complete the project.
- When will the work be undertaken? Develop a work plan for the project which identifies the timing for each primary task.

Due date: Week 10 Monday 7 May 9:00 am.
Assessment Rubrics: Assessment Task 5 is supported by the rubrics on page 9
Value: 20% (Group mark)
Presentation requirements: Please see the mini video and resources on Wattle for more information about structuring and presenting a project proposal.
Estimated return date: Week 12
Hurdle Assessment requirements: None

Assessment Task 6: Final Examination (30%)

The final examination will cover content from the course, including lectures, tutorials, industry experts and readings. Further information regarding the final examination will be provided in Week 12 in the tutorial and in the face-to-face lecture, which will also be recorded and be available on the Wattle course site.

Due date: Examination period (31 May-16 June 2018)
Value: 30%
Estimated return date: n/a
Hurdle Assessment requirements: None

Assignment submission

Assignments are submitted using Turnitin in the course Wattle site. You will be required to electronically sign a declaration as part of the submission of your assignment. Please keep a copy of the assignment for your records.

Extensions and penalties

Extensions and late submission of assessment pieces are covered by the Student Assessment (Coursework) Policy (https://policies.anu.edu.au/ppl/document/ANUP_004603) and Procedure (https://policies.anu.edu.au/ppl/document/ANUP_004604).

The Course Convener may grant extensions for assessment pieces that are not examinations or take-home examinations. If you need an extension, you must request it in writing on or before the due date. If you have documented and appropriate medical evidence that demonstrates you were not able to request an extension on or before the due date, you may be able to request it after the due date.

No submission of assessment tasks without an extension after the due date will be permitted. If an assessment task is not submitted by the due date, a mark of 0 will be awarded.

Returning assignments

Annotated and graded submissions will be returned via Wattle.

Resubmission of assignments

Resubmission of assignments is not permitted in this course.

Referencing requirements

The author-date system or IEEE is acceptable for referencing academic assignments in Professional Practice 1. Links to documentation on proper referencing methods are available on the Professional Practice Wattle site or from the Academic Skills and Learning Centre website.

SUPPORT FOR STUDENTS

The University offers a number of support services for students. Information on these is available online from http://students.anu.edu.au/studentlife/

ASSESSMENT RUBRICS

Assessment task 1 is supported by the use of the assessment rubrics below.

Theme	**Competency**	**Rubric**			
		Emerging	**Developing**		**Mastering**
		Level 1	*Level 2*	*Level 3*	*Level 4*
Time management	The submission is received on time and would be well regarded by industry standards with regard to quality of presentation.				
Task management	The submission addresses all assignment requirements. Content is original and interesting. Clear connection to the topic and industry and provides convincing, logical support for the argument. Critical, detailed and relevant discussion.				
Information management	Reflects ability to identify, analyse and synthesise information from multiple sources. Reference material used is always used well and is appropriate. References are formatted consistently and appropriately throughout.				
Communication	Effective use of language used to communicate ideas. Logical, well-structured and cohesive text. Demonstrates the ability to justify, interpret and communicate professional propositions and decisions to technical and non-technical audiences.				

Assessment tasks 2, 3, 4 & 5 are supported by the use of the general assessment rubrics below and on the following page.

Meets all assignment requirements according to the specification and all questions have been answered	Yes		No
Generally the submission would be well regarded by industry standards with regard to quality of presentation and content.	Competent	Developing	Not achieved

Review Criteria	High Distinction	Distinction	Credit	Pass	Fail
Overall, holistic evaluation of the submission 20%	Highly original and very interesting Critical, detailed and relevant discussion that develops and enhances understanding of the topic Very clear key message and associated conclusion	Interesting with some originality Relevant discussion of sufficient detail that allows a clear understanding of the topic Identifiable key message and related conclusion	Interesting but lacking originality Although relevant, discussion sometimes lacks sufficient detail to allow consistent understanding of the topic Apparent key message and associated conclusion	Not very interesting or original Discussion is not always relevant nor sufficiently detailed help to develop an understanding of the topic Difficult to be certain what the key message is and how the conclusion relates to it	Uninteresting and lacking originality Discussion lacks detail, is mostly descriptive or irrelevant and doesn't help to develop an understanding of the topic No discernible key message or conclusion
Information literacy 30%	Comprehensive and extensive use of appropriate reference materials All use of others' ideas and materials acknowledged. References are all included and are formatted consistently and appropriately throughout	Reference material used is always used well and is appropriate. All use of others' ideas and material is acknowledged. All references are included though some minor inconsistency of in-text citation or formatting	Adequate use of mostly appropriate reference materials All use of others' ideas and material is acknowledged. Some references are missing and occasional inconsistencies of in-text citation and formatting	Limited use of appropriate materials. Use of some inappropriate reference material All use of other's ideas and material is acknowledged, though sometimes inconsistently. Missing references and inconsistent in-text citation and formatting.	Almost no accurate use of any reference materials, appropriate or otherwise Missing in-text citations, text is copied and or includes inadequate paraphrasing and or does not accurately acknowledge the original source, i.e. plagiarism. References in the reference list not used in the text. Poorly and inconsistently formatted
Relevance and logic of the supporting argument 30%	Highly relevant and focused Excellent, clear connection to the topic and industry and convincing support for the argument Very clear and logical development of the argument Argument is well supported by appropriate evidence drawn from the reference material	Relevant and focused Very good links to the topic and industry and mostly supporting the argument Develops a logical argument Argument is usually supported by appropriate evidence drawn from the reference material	Generally relevant and reasonably focused Good, providing a reasonably complete presentation of the topic and links to industry. Can discern the thread of the argument which is mostly logical Argument is sometimes supported by evidence drawn from the reference material	Somewhat relevant, but not focused Incomplete but useful references to the topic and industry and reasonably connected to the argument Attempts to develop an argument but its development is not logical Limited evidence used to support discussion and argument	Lacking relevancy and focus Incomplete and without connection to the topic, industry or argument No evidence of an argument Little, if any, evidentiary support
Language, expression and structure 20%	Exemplary use of language enhancing the quality of the submission Very well ordered with logical and clear structure supported by strong links well organised sections	Very good use of language Well-ordered and logical. Cohesive and organised sections help to clarify text	Reasonable but needs some revision Mostly well-ordered and logical. Mostly cohesive sections showing evidence of text organisation.	Poor, needs significant revision Order is not always logical though there is some attempt to organise sections. Sections are largely those suggested by the assignment specification and the questions posed	Very difficult to understand Order is confusing and not always logical. Sections are not clearly organised and do little to help clarify the text