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ENGINEERING PROFESSIONAL PRACTICE REPORT GUIDELINES

School of Science, Technology and Engineering

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INFORMATION REGARDING ENGINEERING PROFESSIONAL PRACTICE REPORT

The Engineering Professional Practice Report does not attract tuition fees, but you must obtain a satisfactory outcome on the report to fulfill your graduation requirements.

The expected content and suggested format for this report are given below. Please note that the report will be assessed as either satisfactory or unsatisfactory. There is no numerical mark associated with this report grade. Students who receive unsatisfactory will be given the opportunity to resubmit their report after having made suitable modifications. Your coordinator will provide feedback highlighting areas for improvement when a report is not satisfactory. For an engineering professional practice report to be assessed as satisfactory, you must demonstrate exposure to and understanding of a variety of elements in the three areas of competency. Assessment is made on a holistic basis, and it is not expected that every element will be met/discussed/covered in detail.

You are required to submit (via Sonia Online) a written report detailing your engineering professional practice. This is to be submitted in electronic format (either .pdf or .docx format) as a single file. Your report may be submitted at any time of year, but you should submit it at least 8 weeks prior to your intended graduation date (this will enable all administrative requirements to be completed). Please note that it is not possible to submit group or team reports, even where two or more students have shared engineering professional practice in an organisation. Each student must submit an individual engineering professional practice report.

As this report is likely to be of interest to prospective employers, you are encouraged to submit a well prepared and presented report. This should include, where possible the use of photographs, maps, plant layouts and work procedures. You are expected to use correct grammar and spelling, and follow the format suggested below. Remember that you must obtain permission in writing if you would like to include material owned by others.

In the report, you are required to include a signed statement from your employer(s), on organisational letterhead, verifying their employment and including their contact details. A proforma of this statement is provided below. It is suggested that you prepare a draft of this proforma highlighting their details and experience and ask a suitable person within the organisation to approve and sign it. Statements must be included from all organisations, where you have obtained engineering professional practice in more than one organisation. As the report is submitted electronically via <u>Sonia Online</u>, the document should include a scanned copy of the written statement(s). The original statement(s) must be provided upon request from the engineering professional practice coordinator. Feedback will normally be given within two weeks.

When <u>Engineers Australia (EA)</u> is considering applications for membership, it does so via a detailed criteria. These criteria have been published and are available on the <u>EA</u> site. Please refer to <u>the Eligibility for</u> <u>Membership Guide Competencies</u> when completing your report. The Stage 1 competency standards provide the base for the assessment of the Engineering Professional Practice Report. You are also expected to have the attributes and skills necessary to function as a professional, and the skills to test and continually extend your knowledge through lifelong learning in formal and informal context.

CONTENT OF PROFESSIONAL PRACTICE REPORT

In the engineering professional practice report, you are expected to demonstrate exposure to and understanding of the three areas of competency.

These areas are:

- 1. Knowledge and Skill Base
- 2. Engineering Application Ability
- 3. Professional and Personal Attributes.

In general, you are asked to demonstrate:

- appropriate understanding of engineering and scientific knowledge;
- how you have applied this knowledge to real world problems and situations; and
- how the attributes and skills you have gained have enabled you to carry out your tasks in a professional manner.

Your report should describe the learning experiences through which you have developed and demonstrated appropriate competencies. This discussion should relate to your experiences gained in engineering employment that occurred after you commenced your engineering studies and be highlighted within the context of the competencies listed.

You should put your effort into developing comprehensive descriptions of several such learning experiences or situations. Describe each experience and then indicate which areas and elements were involved. Do not write separately about each area or element, but rather present a larger picture giving a strong overview. It is not expected that each experience or situation will demonstrate all areas or elements. You should aim to describe various circumstances (possibly in different organisations) that together provide a complete overview of your engineering professional practice to a suitable level.

You must write in the first-person singular (i.e., "I") and describe work you have actually performed personally. This is different to most engineering documents which do not use first person singular. When writing about a team project, you should describe the project overall. However, you must also describe the specific part you played personally, how it contributed to the overall objective, what you did, and what you gained from the experience.

FORMAT OF ENGINEERING PROFESSIONAL PRACTICE REPORT

You should note that the format of the engineering professional practice report is similar to the format required for your final year project report. The comments below should be read carefully and followed closely.

You must remember to write about your own personal performance. It is not enough to say that a project, in which you took part, covered certain activities. You must describe what you did, as an individual.

As a guideline, it is suggested that a total of 3,500 words, covering several situations, should provide ample scope to demonstrate your engineering professional practices. This word limit does not include tables, diagrams, or appendices.

The Engineering Professional Practice report format given below is strongly recommended:

Title page (see example given below)

Table of contents

Acknowledgments

List of symbols and abbreviations

Introduction

Dates and duration of the projects or appointments you are writing about, plus the name, position title, and contact details of your supervisor in your host organisation must be provided in a table (see proforma table below)

Name of employing organisation and location of worksite (note that it will be necessary to include a signed statement from your employer, on organisational letterhead, verifying your employment and providing contact details, see proforma letter below). This statement should be included in an appendix.

Title of the position(s) you occupied.

Background

- Nature and objectives of the overall engineering work (or project)
- Nature of your work area and statement of your duties
- An organisation chart highlighting your position

Personal Performance

- Personal performance
- Detailed description of the work you performed personally, including:
 - technical details of the work.
 - how you applied your engineering and technical knowledge and skills.
 - the tasks delegated to you and how you went about accomplishing them.
 - any difficulties you encountered and how you solved them.
 - strategies you devised, including any original or creative design work.
 - how you worked with other team members.

Summary

- Your view of your engineering professional practice
- How well your work succeeded in meeting its goals and requirements
- How your personal role contributed to the organisation

References

• List of references using the Harvard Referencing system

Appendices

• These may contain, if necessary, drawings or other relevant material. Make sure you have written permission to include such information in your report. The letter(s) of verification from your host organisation(s) should also be included here.

Employer	Start Date	Finish Date	Days	Nature of	Host Supervisor Contact
			Worked	Tasks	Details
ACME	04/03/24	05/04/24	25	Production	John Bossman
Manufacturing				operator, data	Plant Manager
				logging	jbossman@acme.com
					(07) 5599 5599
ACME	02/09/24	11/10/24	35	Trades	John Bossman
Manufacturing				assistant,	Plant Manager
				pump	jbossman@acme.com
				replacement	(07) 5599 5599
				project, data	
				logging	

Proforma for Table summarising Student engineering professional practice

SAMPLE TITLE PAGE FOR REPORT

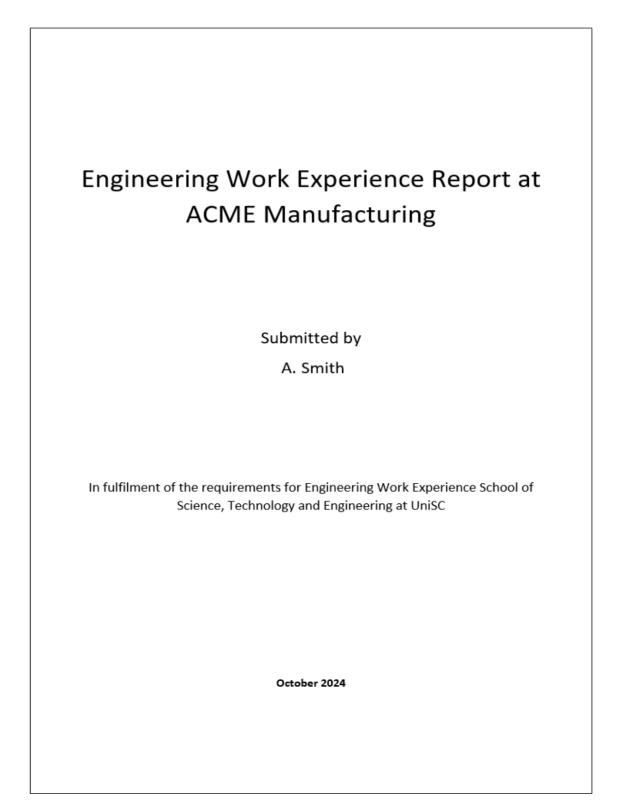


Figure 1 - Example of an Engineering Professional Practice report Title Page

SAMPLE LETTER FROM HOST TO VERIFY WORK PROFESSIONAL PRACTICE

25 October 2024 ACME Manufacturing Pty. Ltd. 121 Acme Rd Acmeville, QLD 4999

To Whom It May Concern,

Re: Employment of USC Engineering Student A.B. Jones

This letter is to inform you that UniSC Engineering student Arthur Smith was employed by ACME Manufacturing Pty.Ltd. at our Acmeville site from 4 March 2024 to 5 April,2024, and again from 2 September,2024 to 11 October, 2024.

During these times Arthur worked as a plant operator on our widget manufacturing line and as a trades assistant based in our maintenance workshop. Both roles involved shift work. He was also given a small project (replacing a centrifugal pump with a diaphragm pump) to complete with a minimum of supervision. He also entered production data onto our computer system.

Should you wish to discuss this, I may be contacted on (07) 5599 5599 or at the address indicated above.

Yours sincerely

CHP. Brow

J.P. Bossman Plant Manager

Figure 2 - Proforma for Statement (on the organisation's letterhead) from Host Organisation regarding Student Engineering Professional Practice report