



SAMPLE ASSESSMENT OUTLINE

ENGINEERING STUDIES
GENERAL YEAR 12

Copyright

© School Curriculum and Standards Authority, 2015

This document – apart from any third party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that the School Curriculum and Standards Authority is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the School Curriculum and Standards Authority. Copying or communication of any third party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the [Creative Commons Attribution-NonCommercial 3.0 Australia licence](#)

Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course.

Sample assessment outline

Engineering Studies – General Year 12

Unit 3 and Unit 4

Assessment type and weighting	Assessment task weighting	Duration	Assessment task
Design 25%	3%	Semester 1 Week 1–2	<p>Introduction to unit and assessment requirements</p> <p>Task 1: Design project one</p> <p>Using the Engineering design process</p> <ul style="list-style-type: none"> develop a design folio <ul style="list-style-type: none"> develop a design brief/proposal identify and assess existing solutions or similar products
	8%	Semester 1 Week 6–7	<p>Task 4: Devise a solution for project one</p> <ul style="list-style-type: none"> investigate materials and components within selected specialty field relevant to the design brief <p>Specialty fields: Mechanical materials, Mechatronics components</p> <ul style="list-style-type: none"> apply theory from specialty fields relative to project one develop annotated pictorial drawings of ideas devise annotated, orthographic concept drawings, either CAD or hand drawn, to develop ideas towards a final drawn proposal calculations to estimate design function
	2%	Semester 1 Week 15	<p>Task 7: Evaluation of completed project one</p> <ul style="list-style-type: none"> written report on, and photographs of, completed project
	3%	Semester 2 Week 1–2	<p>Task 8: Design project two</p> <ul style="list-style-type: none"> develop a design folio apply design process to determine design brief and investigate and develop ideas investigate materials and components research materials and components suitable for the development of a solution
	7%	Semester 2 Week 5–6	<p>Task 11: Devise a solution for project two</p> <ul style="list-style-type: none"> apply theory from specialty fields through annotated pictorial drawings of ideas to a final drawn proposal annotated orthographic concept drawings, either CAD or hand drawn <ul style="list-style-type: none"> calculations to estimate design function
	2%	Semester 2 Week 14–15	<p>Task 14: Evaluation of completed project two</p> <ul style="list-style-type: none"> evaluate completed project two; written report on, and photographs of, completed project

Assessment type and weighting	Assessment task weighting	Duration	Assessment task
Production 50%	5%	Semester 1 Week 8–9	Task 5: Production plan for project one <ul style="list-style-type: none"> working drawings – detailed orthogonal drawings lists of materials, parts and components, costing develop production plan on a timeline
	20%	Semester 1 Week 10–14	Task 6: Production of proposed project one <ul style="list-style-type: none"> construct and test solution (prototype or working model) using appropriate tools, machines and equipment, and following safe work practices record progress in the design folio
	5%	Semester 2 Week 7–8	Task 12: Production plan for project two <ul style="list-style-type: none"> working drawings – detailed orthogonal drawings lists of materials, parts and components develop production plan on a timeline
	20%	Semester 2 Week 9–14	Task 13: Production of proposed project two <ul style="list-style-type: none"> construct and test solution (prototype or working model) using appropriate tools, machines and equipment, and following safe work practices record progress in the project folio
Response 10%	2%	Semester 1 Week 3	Engineering in society – relationships between energy, power and work, and forms of energy Task 2: Investigate forms of energy <ul style="list-style-type: none"> research forms of energy determine form of energy suitable for the project
	3%	Semester 1 Week 4–5	Task 3 Part A: Mechanical: Research materials suitable for the development of a solution Mechanical – materials <ul style="list-style-type: none"> processes in relation to steels stress, strain, Young’s modulus, pressure, equilibrium and moments machines, mechanical advantage and velocity OR Task 3 Part B: Mechatronics: Research materials and electronic/electrical components suitable for development of a solution Mechatronics – components, laws and principles <ul style="list-style-type: none"> general characteristics of components and the circuit symbols applications of laws and principles
	3%	Semester 2 Weeks 3–4	Task 9: Investigate physical properties of materials and fitness for purpose <ul style="list-style-type: none"> research physical properties of materials selection of materials i.e. fitness for purpose

Assessment type and weighting	Assessment task weighting	Duration	Assessment task
	2%	Semester 2 Week 3–4	Task 10: Research forms of obsolescence <ul style="list-style-type: none"> define and compare forms of obsolescence as per Unit 4 of the syllabus report on the advantages and disadvantages for society, business and the environment, of forms of obsolescence
Externally set task	15%	Semester 1 Week 13	All students enrolled in the Engineering Studies General Year 12 course will complete the externally set task developed by the Authority. Schools are required to administer this task in Term 2 at a time prescribed by the Authority.
	100%		