



## SAMPLE ASSESSMENT OUTLINE

---

**ENGINEERING STUDIES**  
**GENERAL YEAR 11**

---

**Copyright**

© School Curriculum and Standards Authority, 2014

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 4.0 International 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 11

#### Unit 1 and Unit 2

Assessment type and weighting	Assessment task weighting	When	Assessment task
Design 20%	2%	Term 1 Weeks 1–2	<b>Task 1:</b> Design project one Engineering design process <ul style="list-style-type: none"> <li>determine design brief</li> <li>investigate and develop ideas</li> <li>use research skills to identify and describe existing solutions or similar products</li> </ul>
	3%	Term 1 Weeks 3–5	<b>Task 2 Part A:</b> Investigate materials and components <ul style="list-style-type: none"> <li>research materials and components suitable for the development of a solution</li> <li>describe materials and components relevant to the design brief</li> </ul> Classify types of materials <ul style="list-style-type: none"> <li>metals (pure), alloys (ferrous), alloys (non-ferrous), polymers, composites</li> </ul>
	3%	Term 1 Weeks 6–8	<b>Task 3:</b> Develop a solution for project one <ul style="list-style-type: none"> <li>use specialist field content and principles</li> <li>complete annotated concept drawings</li> <li>annotate pictorial drawings of design ideas</li> <li>annotate orthographic drawings of design ideas</li> <li>select materials and components</li> <li>describe the chosen option</li> </ul>
	2%	Term 2 Week 9–10	<b>Task 7:</b> Evaluate completed project one <ul style="list-style-type: none"> <li>meet the requirements of the design brief</li> <li>record function and finish of the project</li> <li>write a report on, and use photographs of, completed project</li> </ul>
	3%	Term 3 Weeks 1–5	<b>Task 8:</b> Design project two <ul style="list-style-type: none"> <li>determine design brief</li> <li>investigate and develop ideas</li> <li>investigate materials and components               <ul style="list-style-type: none"> <li>core materials – physical properties of materials</li> <li>research specialist field and physical properties of materials and components suitable for the development of a solution</li> </ul> </li> <li>research efficiency of selected forms of energy</li> </ul>

Assessment type and weighting	Assessment task weighting	When	Assessment task
	5%	Term 3 Weeks 6–10	<b>Task 10:</b> Develop a solution for project two <ul style="list-style-type: none"> <li>through annotated pictorial drawings of ideas to a final drawn proposal</li> <li>annotated orthographic concept drawings, either CAD or hand drawn</li> <li>annotated pictorial drawings of design ideas</li> <li>annotated orthographic drawings of design ideas</li> <li>features of the chosen option</li> </ul>
	2%	Term 4 Week 8	<b>Task 13:</b> Evaluate completed project two <ul style="list-style-type: none"> <li>record testing the requirements of the design brief</li> <li>record the function and finish of the project</li> <li>write a report on, and present photographs, of the completed product</li> </ul>
Production 70%	5%	Term 1 Weeks 9–10	<b>Task 4:</b> Pre-production of proposed project one <ul style="list-style-type: none"> <li>calculations relevant to design brief <ul style="list-style-type: none"> <li>use fundamental engineering calculations for: <ul style="list-style-type: none"> <li>dimensional</li> <li>perimeter</li> <li>surface area</li> <li>quantity estimates</li> </ul> </li> </ul> </li> <li>present specifications for the selected solution <ul style="list-style-type: none"> <li>use specialist field content and principles</li> </ul> </li> <li>working drawings – detailed orthogonal drawings</li> <li>list of materials, parts and components</li> <li>production plan on a timeline</li> </ul>
	5%	Term 2 Weeks 1–2	<b>Task 5:</b> Pre-production skills Develop production skills, applying safe work practices with hand and machine skills. Model or prototype using selected production processes
	25%	Term 2 Weeks 2–7	<b>Task 6:</b> Manufacture of proposed project one <ul style="list-style-type: none"> <li>use prepared production plan, materials and available equipment, and record progress in a design portfolio</li> <li>manufacture the solution by selecting and using appropriate tools and machines, and following safe work practices</li> <li>use timelines to construct and test the solution</li> </ul>
	5%	Term 4 Weeks 1–3	<b>Task 11:</b> Pre-production of proposed project two <ul style="list-style-type: none"> <li>calculations relevant to design brief of: <ul style="list-style-type: none"> <li>volume</li> <li>density</li> <li>quantity estimates</li> </ul> </li> </ul>

Assessment type and weighting	Assessment task weighting	When	Assessment task
			<ul style="list-style-type: none"> <li>specialist field content, principles, and specifications for the selected solution</li> <li>working drawings – detailed orthogonal drawings</li> <li>lists of materials, parts and components</li> <li>develop production plan on a timeline</li> </ul>
	30%	Term 4 Weeks 4–7	<b>Task 12:</b> Manufacture of proposed project two <ul style="list-style-type: none"> <li>use prepared production plan, materials and available equipment, and record progress in design portfolio</li> <li>Construct solution through selection and use of appropriate tools and machines, and following safe work practices</li> </ul>
Response 10%	5%	Term 1 Weeks 4–5	<b>Task 2 Part B:</b> Research the definitions of energy, power and work <ul style="list-style-type: none"> <li>research forms of energy, and determine a form of energy suitable for the project</li> </ul>
	5%	Term 3 Weeks 3–5	<b>Task 9:</b> Research and report on automation and technical innovation <ul style="list-style-type: none"> <li>define the terms automation and technical innovation and give examples of each in the engineering context</li> <li>describe the advantages and disadvantages for society, business and the environment of automation and innovation in the engineering context</li> </ul>
<b>Total</b>	<b>100%</b>		