The Materials Design and Technology General WOODWORK course is a practical course. Students will work with wood in the design and manufacture of products as the major focus. Students have the opportunity to develop and practice skills that contribute to creating a physical product, while acquiring an appreciation of the application of a design process, and an understanding of the need for materials sustainability. Students will learn and practice manufacturing processes and technologies, including principles of design, planning and management.

Assessment table – Year 11

<table>
<thead>
<tr>
<th>Type of assessment</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong>&lt;br&gt;Students apply a design process to develop a product or project.&lt;br&gt;Students are assessed on how they:&lt;br&gt;• investigate products or projects&lt;br&gt;• devise, develop and modify design solutions throughout the technology process&lt;br&gt;• present their findings in written, oral or multimedia form. Types of evidence can include: images, observation checklists, evaluation tools (self or peer), journal, design proposal and project proposal, using a range of communication strategies.</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Production</strong>&lt;br&gt;Extended and manufacturing project(s) where students control, evaluate and manage processes. Students are assessed on their:&lt;br&gt;• understanding, confidence and competence when using skills in manufacturing processes and when managing production plans&lt;br&gt;• manufactured product in terms of quality and finish. Types of evidence can include: manufactured products, journal, observation checklists and evaluation tools (self or peer) and on-balance judgements.</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Response</strong>&lt;br&gt;Students apply their knowledge and skills in responding to a series of stimuli or prompts in the following formats: examinations, essays, oral responses, ICT visual responses and product evaluation reports.</td>
<td>15%</td>
</tr>
</tbody>
</table>

Grading

Schools report student achievement in terms of the following grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent achievement</td>
</tr>
<tr>
<td>B</td>
<td>High achievement</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory achievement</td>
</tr>
<tr>
<td>D</td>
<td>Limited achievement</td>
</tr>
<tr>
<td>E</td>
<td>Very low achievement</td>
</tr>
</tbody>
</table>
## Assessment outline

**Materials Design and Technology – General Year 11**

### Unit 1 and Unit 2

<table>
<thead>
<tr>
<th>Assessment type and weighting</th>
<th>Assessment task weighting</th>
<th>When</th>
<th>Assessment task</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong> 25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>Term 1 Weeks 1-3</td>
<td><strong>Task 1 Part A:</strong> Students are to use a design process to design a product for their own use, using all or some recyclable materials.</td>
</tr>
</tbody>
</table>
| | 5% | Term 1 Weeks 4-6 | **Task 1 Part B:** Students are to use a design process to prepare drawings, patterns or templates, and then develop a production plan to manufacture the product.  
**Design fundamentals and skills**  
- Investigate, devise, evaluate  
**Use of technology – Skills and techniques**  
- ICT, portfolio development and communication skills  
- context appropriate drawings and relevant technical information to produce the final product to demonstrate  
- workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the quantities of materials required to complete the project |
| | 8% | Term 3 Weeks 1-4 | **Task 4 Part A:** Students are to use a design process to design a product using a combination of different materials.  
Investigate different materials within context and/or from outside the designated context.  
**Design fundamentals and skills**  
- investigate, devise, evaluate |
| | 5% | Term 3 Weeks 5-7 | **Task 4 Part B:** Students are to use a design process to prepare drawings, patterns or templates, and then develop a production plan to manufacture the product.  
**Use of technology – Skills and techniques**  
- ICT, portfolio development and communication skills  
- develop context appropriate drawings and relevant technical information to produce the final product  
- use workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the correct amount required to order and purchase materials to complete the project  
- operate machinery and tools appropriate to context |
| **Production** 60% | | | |
| | 5% | Term 1 Weeks 7-8 | **Task 2 Part A:** Skills development, as per context-specific skills and techniques.  
Skills development exercises, prior to the production of the proposed product  
Daily work log/time sheet to record skills development |
| | 25% | Term 2 Weeks 9-16 | **Task 2 Part B:** Safe production methods to produce the product. Document a daily work log/timesheet including record of production with stage photos of production.  
**Use of technology**  
**Skills and techniques**  
- workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the quantities of materials required to complete the project |
<table>
<thead>
<tr>
<th>Response 15%</th>
<th>30%</th>
<th>Term 3  Weeks 8-10  Term 4  Weeks 11-16</th>
</tr>
</thead>
</table>
| Use of technology  
Skills and techniques  
Task 6: Manufacture of proposed product  
Safe production methods to produce the product. Document a daily work log/timesheet including record of production with stage photos of production.  
• use workroom/studio terminology appropriate to context  
• select appropriate materials and calculate the correct amount required to order and purchase materials to complete the project  
• operate machinery and tools appropriate to context  
Safety  
• correct use of Personal Protective Equipment (PPE) where applicable  
• conduct risk assessment for using specific tools/machinery  
• demonstrate OSH practices appropriate to tasks being undertaken in workshops  
• apply risk management strategies in the workshop/studio  
• recognise need and purpose of Materials Safety Data (MSD) with regard to storage and handling of hazardous substances and hazardous operations appropriate to situation |

<table>
<thead>
<tr>
<th>5%</th>
<th>Term 3  Weeks 2-3</th>
</tr>
</thead>
</table>
| Nature and Properties of materials – as per context  
Task 5: Collect information and present a report on the nature and properties of materials. This assignment requires students to gather and synthesise information about the physical differences on materials within context. |

<table>
<thead>
<tr>
<th>2%</th>
<th>Term 2  Week 17</th>
</tr>
</thead>
</table>
| Design fundamentals and skills  
Evaluate  
Task 1 Part C: Evaluation of completed product  
Evaluate finished product by responding to evaluation questions. |

<table>
<thead>
<tr>
<th>5%</th>
<th>Term 1  Weeks 2-3</th>
</tr>
</thead>
</table>
| Materials in context – as per context  
Task 3: Research and identify environmental considerations of the three ‘Rs’ – reduce, re-use and recycle  
This assignment requires students to gather and synthesise information on the topic of: the environmental benefits of the three ‘Rs’ – reduce, re-use and recycle. |

<table>
<thead>
<tr>
<th>3%</th>
<th>Term 4  Week 17</th>
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</thead>
</table>
| Design fundamentals and skills  
Evaluate  
Task 4 Part C: Evaluation of completed product  
Evaluate finished product by responding to evaluation questions. |

Total 100%
# Course outline

**Materials Design and Technology – General Year 11**

Unit 1 and Unit 2

**Semester 1**

<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
</tr>
</thead>
</table>
| 1–3  | Overview of unit and assessment requirements  
Design fundamentals and skills. Introduction to design process; investigate and devise through development of a design portfolio.  
**Task 1 Part A**  
**Design fundamentals and skills**  
- investigate  
- devise  
- evaluate |
| 2–3  | Materials in context. Investigate materials; research and identify environmental considerations of the three ‘Rs’—reduce, re-use and recycle.  
**Task 3**  
**Materials in context – as per context**  
- broad areas of use of specific materials  
- identification of environmental considerations  
  - three ‘Rs’ – reduce, re-use, recycle  
  - ways to reduce waste  
  - ways to re-use and recycle |
| 4–6  | Design fundamentals and skills. Devise a solution; through concept drawings, working drawings, patterns or templates. Materials list/s, costing and production planning.  
**Task 1 Part B**  
**Use of technology**  
**Skills and techniques**  
- ICT, portfolio development and communication skills  
- Context-appropriate drawings and relevant technical information to produce the final product  
- workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the quantities of materials required to complete the project |
| 7–8  | Use of technology – skills and techniques. Production skills; task/s to develop practical hand and machine skills.  
**Task 2 Part A**  
**Use of technology**  
**Skills and techniques**  
- workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the quantities of materials required to complete the project  
- with supervision, operate machinery and tools appropriate to context  
**Safety**  
- correct use of Personal Protective Equipment (PPE) where applicable  
- Occupational Safety and Health (OSH) practices appropriate to tasks being undertaken in workshops  
**Production management**  
- production plan  
- ongoing evaluation techniques: diary, journal or portfolio notes and use of photography to record ongoing progress/decision changes made to the project |
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<thead>
<tr>
<th>Week</th>
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</thead>
</table>
| 9–16 | Use of technology – skills and techniques, production management. Manufacture of proposed product; using prepared production plan, materials and available equipment; record progress in design portfolio.  
Task 2 Part B  
Use of technology  
Skills and techniques  
Safety  
Production management |
| 17   | Design fundamentals and skills. Evaluation of completed product; written report on and photographs of completed product.  
Task 1 Part C |

Semester 2

<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
</tr>
</thead>
</table>
| 1–4  | Overview of Unit 2 and assessment requirements  
Design fundamentals and skills. Revise design process; investigation and development of a design portfolio.  
Task 4 Part A  
Design fundamentals and skills  
- investigate  
- devise  
- evaluate |
| 2–3  | Nature and properties of materials. Investigate materials; research and identify physical differences between materials within selected context.  
Task 5 |
| 5–7  | Design fundamentals and skills. Devise a solution; through concept drawings, working drawings, patterns or templates. Prepare materials list/s, costing and production planning.  
Task 4 Part B  
Use of technology  
Skills and techniques  
- ICT, portfolio development and communication skills  
- develop context-appropriate drawings and relevant technical information to produce the final product  
- use workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the correct amount required to order and purchase materials to complete the project  
- operate machinery and tools appropriate to context |
| 8–10 | Use of technology – skills and techniques, production management. Manufacture of proposed product; using prepared production plan, materials and available equipment; record progress in design portfolio.  
Task 6  
Use of technology  
Skills and techniques  
- use workroom/studio terminology appropriate to context  
- select appropriate materials and calculate the correct amount required to order and purchase materials to complete the project  
- operate machinery and tools appropriate to context |
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<td><strong>Production management</strong></td>
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<td>17</td>
<td>Design fundamentals and skills. Evaluation of completed product; written report on and photographs of completed product.</td>
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