

Materials, Design and Technology (Wood Materials) General

Year 11 Course Code	GEMDTW
Year 12 Course Code	GTMDTW
Cost	\$165.00 (cost is approximate – subject to change)

Year 11 and Year 12 Course Overview

The Materials Design and Technology General course is a practical course. Students work with wood, with the design and manufacture of products as the major focus. Students have the opportunity to develop and practise 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 practise manufacturing processes and technologies, including principles of design, planning and management.

Year 11 Course Structure

Unit 1 – Students interact with a variety of items that have been specifically designed to meet certain needs. Students are introduced to the fundamentals of design. They learn to communicate various aspects of the technology process by constructing what they design.

Throughout the process, students learn about the origins, classifications, properties and suitability for purpose of the materials they are using, and are introduced to a range of production equipment and techniques. They develop materials manipulation skills and production management strategies, and are given the opportunity to realise their design ideas through the production of their design project.

Unit 2 – Students interact with products designed for a specific market. They use a range of techniques to gather information about existing products and apply the fundamentals of design. Students learn to conceptualise and communicate their ideas and various aspects of the design process within the context of constructing what they design.

Throughout the process, students learn about the origins, classifications, properties and suitability for end use of materials they are working with. Students are introduced to a range of technology skills and are encouraged to generate ideas and realise them through the production of their design projects. They work within a defined environment and learn to use a variety of relevant technologies safely and effectively.

Year 12 Course Structure

Unit 3 – Students develop an understanding of the elements and fundamentals of design and consider human factors involved in the design, production and use of their projects. They develop creative thinking strategies and work on design projects within specified constraints. Students learn about the classification and properties of a variety of materials and make appropriate materials selection for design needs. Students learn about manufacturing and production skills and techniques. They develop the skills and techniques appropriate to the materials being used and gain practice in planning and managing processes through the production of design project. They learn about risk management and ongoing evaluation processes.

Unit 4 – Students learn about the nature of designing for a client, target audience or market. Students apply an understanding of the elements and fundamentals of design and consider human factors involved in their design projects. Students learn about the nature, properties and environmental impacts related to a variety of materials and production techniques. They develop creative thinking strategies, work on design projects within specified constraints and consider the environmental impacts of recycling of materials.

Students extend their understanding of safe working practices and contemporary manufacturing techniques and develop the knowledge, understanding and skills required to manage the processes of designing and manufacturing.