



# STEAM Technologies

Design  
Technologies  
Food Specialisation  
Technology &  
Materials  
Specialisation  
(Wood)

The purpose of the STEAM Institute - Technologies is to give students the skills and knowledge they need to thrive in today's fast-changing technological world. We focus on creativity, critical thinking, and problem-solving, encouraging innovation and practical applications.

The curriculum covers three main subjects: Design and Technologies, Food Specialisations, and Digital Technologies. In Years 7-9 (junior secondary), students engage in hands-on projects, learning to design, create, and evaluate solutions to real-world problems. They explore exciting topics like recipe design, robotics, engineering principles, and sustainable design, building essential skills along the way.

For Years 10-12 (senior secondary), the curriculum dives deeper, offering specialized subjects that match students' interests and career goals. This includes advanced studies in Materials Specialisations, Food Specialisations, Design, and Emerging Technologies.

Senior students work on complex projects, often with input from industry partners, preparing them for further education and careers in their chosen technology fields.

# Technology & Materials Specialisation (Wood) A

STEAM - Technologies

<b>Subject information</b>	<p>Explore the exciting world of Materials and Technologies in Year 10, where students enhance their creative and critical thinking, problem-solving, decision-making, and practical skills. By the end of the semester, students will have developed a solid foundation in working with various materials such as wood, plastics and foam. They will learn to skilfully and safely produce projects in the workshop, gaining hands-on experience and valuable skills that will benefit them in many future endeavours. This course not only equips students with technical know-how but also fosters a sense of accomplishment and confidence as they see their creative ideas come to life.</p>	
<b>Unit Summary</b>	<b>Unit 1</b>	<b>Unit 2</b>
	<p><b>Timber Techies</b></p> <p>In this unit, students develop their craftsmanship skills and production techniques with a variety of materials to skilfully and safely produce a product.</p>	<p><b>Joinery Genius</b></p> <p>Design and produce with traditional and contemporary materials and technologies for project with a combination of wood joints.</p>
<b>Types of Assessment</b>	Project (10 weeks)	Examination
<b>Timetabling</b>	<p>This subject is offered in Semester 1 only. Students can also choose to study Technology &amp; Materials Specialisation (Wood) B in Semester 2 for the full course.</p>	
<b>Special subject requirements</b>	<p>Enclosed shoes must be worn at all times for this subject.</p>	
<b>Fees</b>	<p><b>Subject fees:</b> \$75 includes stationery: sketching pencils, steel ruler, eraser, sharpener, safety glasses.  <b>User pays:</b> To support engagement with the curriculum, students may be given an opportunity to participate in activities related to the study of Technology &amp; Materials Specialisation (Wood) that may incur a cost.</p>	
<b>Why choose Technology and Material Specialisation (Wood)?</b>	<p>Studying Technology &amp; Material Specialisation - Wood in Year 10 offers extensive benefits beyond the classroom. This hands-on course develops students' craftsmanship and practical skills crucial for future trade endeavours. They learn to use tools and machinery skilfully and safely, gaining a deeper understanding of safety and precision. Students develops their problem-solving and decision-making, throughout the production process. Students will also demonstrate skills in interpreting technical information, selecting methods, sequencing processes, evaluating their work, and adapting plans. These skills prepare them not only for careers in a trade but also enhance cognitive abilities and confidence, equipping them for future pathways.</p>	
<b>Pathways</b>	<p>In Years 11 and 12 students can continue to study Design (General), Building &amp; Construction Skills, Furnishing Skills, Industrial Technology Skills (Applied) or complete a VET Certificate course.</p>	
<b>Careers</b>	<p>Studying Technology and Material Specialisation (Wood) can establish a basis for further education and employment in the trade industry. With additional training and experience, potential employment opportunities may be found in trades such as, wood machinist, cabinet-maker, painter and decorator, carpenter, plumber, landscaper and electrician.</p>	

Please note that the information in this subject guide is subject to change. We encourage you to stay in touch with the College for the most up-to-date details and any adjustments to the curriculum.

<b>Subject information</b>	This subject builds on the foundational skills acquired in the semester one course, allowing students to deepen their knowledge and refine their techniques in working with wood, plastics, and foam. Students will further develop their craftsmanship by tackling more complex projects, enhancing their production processes, and mastering advanced tools and machinery. The course emphasizes innovation, precision, and problem-solving in the wood workshop.	
<b>Unit Summary</b>	<b>Unit 1</b>	<b>Unit 2</b>
	<b>EcoWise</b> Design and produce with traditional and contemporary materials and technologies for topic focussed on global sustainability.	<b>Precision Manufacturing</b> Interpret technical drawings to manufacture a product ready for the consumer market. Make use of laser cutting, CNC routing and 3D printing technologies.
<b>Types of Assessment</b>	Project (10 weeks)	Examination
<b>Timetabling</b>	This subject is offered in Semester 2 only. It is recommended that students complete Technology & Materials Specialisation (Wood) A to ensure that they developed the foundation skills for this course.	
<b>Special subject requirements</b>	Enclosed shoes must be worn at all times for this subject.	
<b>Fees</b>	<b>Subject fees:</b> \$75 includes stationery: sketching pencils, steel ruler, eraser, sharpener, safety glasses. <b>User pays:</b> To support engagement with the curriculum, students may be given an opportunity to participate in activities related to the study of Technology & Materials Specialisation (Wood) that may incur a cost.	
<b>Why choose Technology and Material Specialisation (Wood)?</b>	Building on the foundational skills acquired in the Technology and Material Specialisation (Wood) A course, this subject allows students to deepen their knowledge and refine their techniques in working with wood, foam and plastics. Students will tackle more complex projects, mastering advanced joinery methods and using sophisticated tools and machinery. The course emphasizes innovation, precision, and problem-solving, enhancing students' abilities to plan, produce, and evaluate their work. By the end of the semester, students will have a portfolio of impressive projects, demonstrating their advanced craftsmanship and technical skills. This extension course not only prepares students for future trade careers but also boosts their cognitive abilities and confidence, paving the way for diverse vocational and academic pathways.	
<b>Pathways</b>	In Years 11 and 12 students can continue to study Design (General), Building & Construction Skills, Furnishing Skills, Industrial Technology Skills (Applied) or complete a VET Certificate course.	
<b>Careers</b>	Studying Technology and Material Specialisation (Wood) can establish a basis for further education and employment in the trade industry. With additional training and experience, potential employment opportunities may be found in trades such as, wood machinist, cabinet-maker, painter and decorator, carpenter, plumber, landscaper and electrician.	

# Design Technologies A

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<b>Subject information</b>	<p>Explore the exciting world of design in Year 10, where students enhance their creative and critical thinking, problem-solving, decision-making, and practical skills. By the end of the semester, students will have developed impressive portfolios that showcase their design ideas and production processes through sketching, prototyping, and 3D modelling. Students will learn the skills to independently create lo-fidelity prototypes using contemporary methods like 3D printing and laser cutting, and will design and produce innovative products, services, or environments. Join us to unleash your potential and bring your innovative ideas to life!</p>	
<b>Unit Summary</b>	<b>Unit 1</b>	<b>Unit 2</b>
	<p><b><i>Innovate &amp; Create</i></b></p> <p>In this unit, students develop a variety of visual communication skills, including sketching, card modelling and 3D prototyping.</p>	<p><b><i>Inclusive Smart Living</i></b></p> <p>In this unit, students become effective problem solvers and ethical designers when re-designing an architectural space.</p>
<b>Types of Assessment</b>	Project (10 weeks)	Examination
<b>Timetabling</b>	This subject is offered in Semester 1 only. Students can also choose to study Design Technologies B in Semester 2 for the full course.	
<b>Special subject requirements</b>	NA	
<b>Fees</b>	<p><b>Subject fees:</b> \$50 includes sketching and prototype stationery, fine liner pens, coloured pens, colour pencils, sketching pencils, ruler, eraser.</p> <p><b>User pays:</b> To support engagement with the curriculum, students may be given an opportunity to participate in activities related to the study of Design Technologies that may incur a cost.</p>	
<b>Why choose Design Technologies?</b>	<p>Design technologies enriches us in every aspect of our daily lives, moulding our experiences moment by moment. Each day, we engage with meticulously crafted products, environments, and services that captivate our senses through touch, sight, sound, and so much more.</p> <p>Studying Design technologies offers students a unique opportunity to develop their critical thinking, creativity, and problem-solving skills. Engaging with design principles and prototyping processes, allows students to explore innovative solutions to real-world challenges, fostering a sense of curiosity and inventiveness. Design education significantly boosts visual communication abilities and technological proficiency, both of which are essential in today's rapidly evolving world of work. By studying design, students can build a strong foundation for future careers in various creative fields or use they can use the versatile and beneficial skills gained across other disciplines. Studying design ensures students are well-prepared for a wide range of opportunities.</p>	
<b>Pathways</b>	In Years 11 and 12 students can continue to study Design (General), Building & Construction Skills, Furnishing Skills, Industrial Technology Skills (Applied) or complete a VET Certificate course.	
<b>Careers</b>	Studying Design technologies can establish a basis for further education and employment in a variety of creative problem-solving fields of architecture, interior design, landscape design, fashion design, graphic design and digital media design.	

<b>Subject information</b>	<p>Continue your exploration of the design world with Design B in semester two. Building on the foundational skills acquired in the initial course, this subject allows students to deepen their knowledge and application of design thinking. Design is a complex and sophisticated form of problem-solving that uses divergent and convergent thinking to develop solutions. Students will further develop their skills in lo-fidelity prototyping using advanced techniques such as 3D printing and laser cutting. They will also delve into the impact of design on economic, social, and cultural aspects, understanding how human creativity and imagination shape future possibilities. Throughout the course, students will refine their ability to design, develop and present innovative products, services, or environments. By the end of the semester, they will have a comprehensive portfolio showcasing their advanced design skills and conceptual thinking.</p>	
<b>Unit Summary</b>	<b>Unit 1</b>	<b>Unit 2</b>
	<p><b>Zero-waste Design</b></p> <p>In this unit, students will develop their design thinking and visual communication skills to present a sustainable service design.</p>	<p><b>Cultural Commerce</b></p> <p>In this unit, students will consider the role of the client and consumer to design for a product diverse market.</p>
<b>Types of Assessment</b>	Project (10 weeks)	Examination
<b>Timetabling</b>	This subject is offered in Semester 2 only. Students can also choose to study Design Technologies A in Semester 1 for the full course.	
<b>Special subject requirements</b>	NA	
<b>Fees</b>	<p><b>Subject fees:</b> \$50 includes sketching and prototype stationery, fine liner pens, coloured pens, colour pencils, sketching pencils, ruler, eraser.</p> <p><b>User pays:</b> To support engagement with the curriculum, students may be given an opportunity to participate in activities related to the study of Design Technologies that may incur a cost.</p>	
<b>Why choose Design Technologies?</b>	<p>Design technologies enriches us in every aspect of our daily lives, moulding our experiences moment by moment. Each day, we engage with meticulously crafted products, environments, and services that captivate our senses through touch, sight, sound, and so much more.</p> <p>Studying Design technologies offers students a unique opportunity to develop their critical thinking, creativity, and problem-solving skills. Engaging with design principles and prototyping processes, allows students to explore innovative solutions to real-world challenges, fostering a sense of curiosity and inventiveness. Design education significantly boosts visual communication abilities and technological proficiency, both of which are essential in today's rapidly evolving world of work. By studying design, students can build a strong foundation for future careers in various creative fields or use they can use the versatile and beneficial skills gained across other disciplines. Studying design ensures students are well-prepared for a wide range of opportunities.</p>	
<b>Pathways</b>	In Years 11 and 12 students can continue to study Design (General), Building & Construction Skills, Furnishing Skills, Industrial Technology Skills (Applied) or complete a VET Certificate course.	
<b>Careers</b>	Studying Design technologies can establish a basis for further education and employment in a variety of creative problem-solving fields of architecture, interior design, landscape design, fashion design, graphic design and digital media design.	

# Food Specialisation A

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<p><b>Subject information</b></p>	<p>Dive into the fascinating world of Food Specialisations within the Year 10 Australian Curriculum. Students will enhance their creative and critical thinking, problem-solving, decision-making, and practical skills in this comprehensive program. By the end of the semester, they will have developed impressive portfolios showcasing their understanding of food science, nutrition, and culinary principles through research, analysis, and innovative projects. Students will gain hands-on experience in food-related activities, including food safety, sensory evaluations, and product development. Join us to unleash your potential and bring your innovative food ideas to life!</p>	
<p><b>Unit Summary</b></p>	<p><b>Unit 1</b></p>	<p><b>Unit 2</b></p>
	<p><b><i>Sustainable Food Systems</i></b> In this unit, students research sustainable food practices, organic farming and how to reduce food waste.</p>	<p><b><i>Food Product Development</i></b> In this unit, students explore and create food items based on target market, nutritional value and food presentation.</p>
<p><b>Types of Assessment</b></p>	<p>Project (10 weeks)</p>	<p>Examination</p>
<p><b>Timetabling</b></p>	<p>This subject is offered in Semester 1 and is repeated in Semester 2. Students can choose to study this subject in one semester only.</p>	
<p><b>Special subject requirements</b></p>	<p>NA</p>	
<p><b>Fees</b></p>	<p><b>Subject fees:</b> \$60 for food consumables <b>User pays:</b> To support engagement with the curriculum, students may be given an opportunity to participate in activities related to the study of Food Specialisation that may incur a cost.</p>	
<p><b>Why choose Food Specialisation?</b></p>	<p>Studying Food Specialisation offers students a unique opportunity to develop essential skills in nutrition, food science, and food safety, while also exploring the cultural, social, and environmental aspects of food. Engaging in this subject fosters creativity, critical thinking, and problem-solving abilities, as students tackle real-world challenges such as sustainable food practices and healthy eating. Additionally, students gain practical knowledge that enhances everyday life and lays a strong foundation for careers in the food industry, health sciences, or hospitality.</p> <p>By studying Food Specialisation, students not only enrich their understanding of the foods we consume but also prepare themselves for a world of opportunities in a field that touches every aspect of our lives. It's an exciting and versatile subject that offers a blend of theoretical knowledge and practical skills, equipping students to make informed choices and contribute positively to their community.</p>	
<p><b>Pathways</b></p>	<p>In Years 11 and 12 students can continue to study Food &amp; Nutrition (General). Hospitality Practices (Applied) or complete a VET Certificate course, for example Certificate II in Hospitality.</p>	
<p><b>Careers</b></p>	<p>Studying Food Specialisation can establish a foundation for further education and employment in various fields within the Hospitality and Food and Nutrition sectors. This includes careers in culinary arts, food science and technology, nutrition and dietetics, hospitality management, food marketing, and event planning.</p>	