LEVEL 2 Industrial Design
2TECI

UPDATED

What is this course about?

The focus is on solving real-world problems in creative and practical ways. You'll build on your workshop skills as you design and make your own products using timber and wood-based materials. Along the way, you'll develop greater confidence using tools and machinery, improve your construction skills, and learn how to make informed decisions about your designs.

You'll explore different ideas, techniques, and processes before selecting the best approach for your project. Testing, feedback, and refinement will help you improve your work and produce outcomes that are functional, well made, and fit for purpose.

Level 2 Industrial Design is a creative and practical subject where you'll develop useful skills in design, construction, problem-solving, and project management. It is a great choice for students who enjoy designing, making, and developing practical solutions, and can support future pathways in trades, construction, furniture making, design, and related industries.

What sorts of things will I do?

Students will gain hands-on experience designing and making timber products that are fit for purpose. You'll work on projects based on realistic design briefs that encourage you to be creative, think critically, and develop practical solutions for real-world needs.

You'll learn how to select and work with timber, use workshop tools and machinery safely, apply different construction and joinery techniques, and test your ideas as your project develops. Projects will involve exploring ideas, producing drawings and models, refining designs, gaining feedback, and evaluating how well your finished outcome meets the needs of the user or stakeholder.

Along the way, you'll continue to develop valuable skills in woodwork, joinery, design, problem-solving, planning, and practical construction.

This course provides a strong pathway into Level 3 Technology, apprenticeships, construction, furniture making, product design, engineering, and other trade-related careers.

Learning capabilities/ critical skills

You'll grow a powerful mix of creative and practical skills:

- **Design thinking** – researching, ideating, prototyping, testing, and refining ideas based on user needs.
- **Workshop and material skills** – gaining confidence with tools, materials, and construction techniques.
- **Innovation and originality** – developing your own voice and style as a designer.
- **Critical reflection** – learning to analyse and improve your work at every stage of the process.

- **Communication** – explaining your ideas through sketches, models, prototypes, and visuals.

These skills will set you up for future learning and careers in design, engineering, product development, manufacturing, or any field where creative thinking and making collide.

Nga Rau o Te Whariki o ASHS

Rangatiratanga (self-determination) supports ākonga to achieve. Thinking and meaning-making are promoted. Learning is meaningful and connected.

To experience success, students will have opportunities to develop their learning dispositions through:

Engagement: **Active Information Seeking:** Students will actively seek out information about real-world challenges and innovative solutions in industrial design. **Perseverance:** By persevering through challenges in modelling and prototyping, they learn to overcome obstacles and refine their designs.	Managing self: **Setting Personal Goals:** Students will set personal goals for their projects, from initial sketches to final presentations, ensuring they have clear objectives and aspirations. **Effective Time Management:** Manage their time effectively, ensuring they stay on track and meet deadlines independently. **Resilience and Focus:** Recognize that resilience and focus support the generation of design ideas and the communication of high-quality outcomes.	Learning relationships: **Collaborative Improvement:** Students will work together, and with the teacher, to critique and improve each other's designs, learning from diverse perspectives and providing constructive feedback. **Supportive Dialogue:** Ongoing dialogue with the teacher helps students understand their strengths and areas for improvement, fostering a supportive learning environment.

What standards can I enter?

Your teacher will work with the whole class and with you to devise a learning programme that is responsive to your strengths, interests, and one that sets you up to aim high and achieve your potential.

NCEA	Standard Number	Name of standard	Assessment mode	Credits (W/R)	Time frame
INT	SS40551	Apply controls to maintain a safe BCATS environment	Written Portfolio	4cr	T1
INT	AS 91344	Implement advanced procedures using resistant materials to make a specified product with special features	Portfolio & Physical Product	6cr	T2
INT	AS 91357	Undertake effective development to make and trial a prototype	Portfolio & Physical Product	6cr	Term 3+4
INT	AS 91355	Select and use planning tools to manage the development of an outcome	Portfolio & Physical Product	4cr	Term 3+4

Frequently asked questions

Does it matter if I have not been in the workshop before?

No, it doesn't matter at all! If you are new to the workshop, there are plenty of tutorials and hands-on activities within the class lessons to help you gain the necessary skills. The workshop is designed to be a learning environment where all students, regardless of their prior experience, can develop their abilities. There will be comprehensive tutorials that cover the basics of using workshop tools and equipment. You will engage in various hands-on activities that provide practical experience. These activities are structured to help you progressively build your skills in a supportive setting.
The teacher will work closely with each student, providing personalised assistance and feedback. This ensures that everyone, regardless of their starting point, can achieve success and become proficient in workshop skills.
By the end of the course, you will have developed the practical skills needed to create innovative and functional designs in the workshop.

Where does this course lead?

This course can lead to University courses related to product design and engineering also building apprenticeships.

Do we just make things?

No, this course is about designing and then making technology outcomes in a range of materials ie. wood, acrylic etc. You will need to design your product before you can make it and this will need to be completed before any making can occur. During making you will be testing and trialling materials and techniques to analyse what is best for your project and also getting stakeholder feedback. This is part of the design process and makes up a written component of the project

Are there any external exams?

No there is not in Industrial Design.