

## About Design and Emerging Technologies

The study of Design and Emerging Technologies focusses on exploring the purposeful use of technologies and creative processes to produce design solutions. Students acquire knowledge and develop skills using technologies and other processes appropriately, to design and create new industrial design solutions.

Students will engage with emerging technologies, make connections with industry, and apply industry standards and practices through the development of their projects.

Design and Emerging Technologies provides pathways in a range of related fields such as architecture, digital 3D modelling, industrial design, engineering, interior design, graphic design, furniture design, fashion, jewellery, ceramics, textiles, and trade-based careers.

### Course Patterns

The course is structured non-sequentially for either major or minor study.

There is flexibility to study a Negotiated Unit in addition to other units.

At least two other units must be completed before undertaking Negotiated Unit.

### What jobs can studies in Design and Emerging Technologies lead to?

- Engineering
- Architecture
- Industrial Design
- Graphic Design
- Digital 3D modelling
- Trade based careers
- Furniture or jewellery design

### Units

All units described below are semester length (value 1.0).

### Design Processes

This unit gives students the opportunity to apply a staged design process to develop design solutions. They will apply design thinking in a focus area such as creating products, systems or environments. Student skills and understanding



are developed by using the design process to define needs or opportunities, collect information, develop ideas, analyse, plan, produce and evaluate final solutions.

### Product Design

Designers play a vital role in shaping the way we live through the design of the products that surround us. This unit gives students the opportunity to develop a user centred product while considering the social, ethical and environmental responsibilities of designers. It provides

opportunities for creative thinking, the development of technical knowledge and understanding design opportunities that are brought about by technological change.

### Design for Manufacturing

Design for manufacture explores the way in which design solutions are produced using existing and emerging technologies. The focus of this unit is on production processes, prototyping, manufacturing, economy of scale, material properties and emerging technologies. This unit offers students the opportunity to design, make and evaluate design solutions using a range of materials, technologies and production processes.

### Innovation & Design

Authentic innovation in design can be achieved by combining process thinking with new ideas and existing and emerging technology. This unit offers students the opportunity to explore an area of futuristic design concepts within the focus areas of systems, product or environment design. Students will use their understanding of: design process; technical knowledge; social, ethical and environmental responsibilities to create, test and evaluate this design solution.

### Negotiated Study

In this unit, students will study an area of special interest to be decided upon by a class, group(s), or an individual student in consultation with the teacher and with the Principal's approval.

