



# Systems Engineering

## Description

*This subject requires you to integrate an electrical and mechanical system to build a functional project. As the year progresses, you will also be required to introduce sensors to your project so it becomes closed loop. Examples of past projects include making a laptop cooler that regulates a fan turning on at a required temperature and fabricating a remote controlled lawn mower. All work completed must be documented and compiled into a digital portfolio that also contributes towards the assessment of this Unit of Study.*

## Unit Topics

**Unit 1 - Introduction to mechanical systems**

**Unit 2 - Introduction to electrotechnology systems**

**Unit 3 - Integrated systems engineering and energy**

**Unit 4 - Systems control and new and emerging technologies**

## Skill Development

*Time Management, Diagnostic Procedures, Microcontrollers, Electronic and Mechanical Concepts, Using Tools.*

## Possible Assessment Tasks

*Folio, Examinations and School Assessed Tasks in the form of research reports.*

## Activities/Camps/Excursions

*Design and Construction.*

## Career Options

*Designers, practical skill for various trades and professions.*