

KINGSCLIFF HIGH SCHOOL

Subject Selection Information

Faculty:

Industrial Arts & Computing Studies

Subject: iSTEM

Nature of the Course

- A new Department of Education approved elective in 2022. The course has been designed in collaboration with industry, universities, business and government sectors. Offer in over 300 schools.
- A great course for those interested in applying STEM to practical projects.
- Emphasis on engineering challenges that involve teamwork, problem solving, communication and creativity.
- Learn industry specific skills in STEM fundamentals, including 3D Computer Aided Design, Rapid Prototyping, Laser Cutting and mechatronics.

Nature of the Course

The 100Hr course includes:

- STEM Fundamentals
- Aerodynamics
- Mechatronics



EV3 Robotics Challenges



Bottle Rockets



Skylap Planes

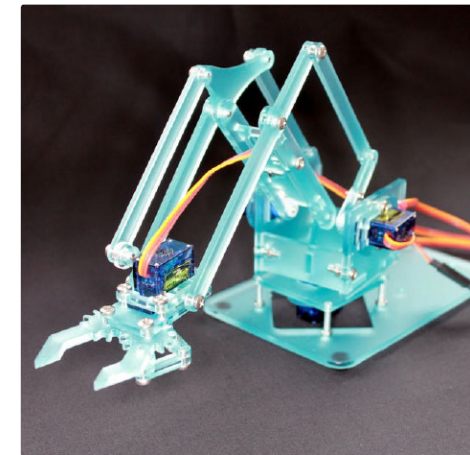
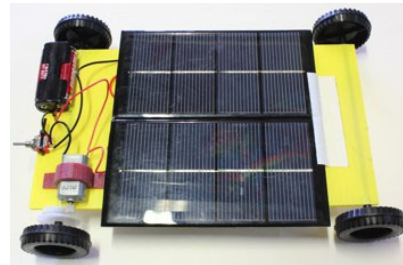
Nature of the Course

The 200Hr course includes:

- Motion & Renewable Energies
- Mechatronics



Solar Powered Cars



Arduino Microcontrollers

Assessment Structure

100Hr Course

2 x Design Projects and Design Folios
Research Assignment
Yearly Exam

200Hr Course

2 x Design Projects and Design Folios
Research Assignment
Yearly Exam

Elective fees for the Course:

100Hr Course - \$80 (one year)

200Hr Course - \$160 (two years)

Students who choose this subject are expected to pay the subject contribution fee to cover resource expenses.

Skills Required for this subject and/or any Prerequisites:

- Students may study up to **two** Industrial Technology subjects that contribute to the award of their Record of School Achievement (RoSA).
- Students will develop skills in drawing and communicating design ideas and plans.
- Students will apply science and engineering maths principles to projects.

Career Opportunities

This course caters for students who wish to undertake further study in Engineering Studies in Stage 6. It is also suited to students wishing to pursue a related trade in engineering.

Career Opportunities

- * Aerospace Engineering
- * Agricultural Engineering
- * Biomedical Engineering
- * Building Services Engineers
- * Chemical Engineering
- * Coastal and Ocean Engineers
- * Civil Engineering
- * Electrical Engineering
- * Electronics and Telecommunications Engineering
- * Environmental Engineering
- * Food Engineering
- * Geotechnical Engineering
- * Hydraulic Engineering
- * Industrial Engineering
- * Marine Engineering
- * Materials Engineering
- * Mechanical and Manufacturing Engineering
- * Mechatronics Engineering
- * Minerals and Metallurgical Engineering
- * Mining Engineering
- * Petroleum and Petrochemical Engineering
- * Pharmaceutical Engineering
- * Process Control Engineering
- * Production Engineering
- * Resource Engineering
- * Risk Engineering
- * Software Engineering
- * Structural Engineering
- * Transportation Engineering