**SYSTEMS ENGINEERING**

Not only is

Systems Engineering fun, but it can provide a sound basis for entry into a broad range of tertiary technology courses such as engineering and applied sciences, skilled trades and vocational training, in the electro-technology and automotive sectors or lead to employment in technological enterprises. This course is open to student in Years 10 and above.

**UNIT ONE: INTRODUCTION TO MECHANICAL SYSTEMS**

1. **Fundamentals of mechanical systems**
2. **Construction of a system that has mechanical components**

**UNIT TWO: ELECTRO-TECHNOLOGY ENGINEERING FUNDAMENTALS**

1. **Fundamentals of electrical/electronic systems**
2. **Construction of a system that includes electrical/electronic components**

**UNITS 3 AND 4 (INTEGRATED SYSTEMS)**

These units involve a study of the principles associated with integrated systems. The focus is on the integration of a mechanical subsystem with an electro-technology subsystem and the design factors to be considered.

One substantial production is to be undertaken across both Units 3 and 4. (50% of the study score)

**UNIT 3: INTEGRATED SYSTEMS ENGINEERING AND ENERGY**

1. **Controlled integrated systems engineering design**
2. **Clean energy technologies**

(Students also start planning for the construction of their integrated project in Unit 4.)

**UNIT 4: SYSTEMS CONTROL AND NEW AND EMERGING TECHNOLOGIES**

1. **Producing, testing and evaluating an integrated technological system**
2. **New and emerging technologies**

**Important Message to all students thinking about undertaking Systems Engineering**

A significant part of **all** Systems Engineering units involves the construction of projects. Some of the smaller compulsory construction projects are paid for by the school. However, **students must pay for the projects that they choose to make.**

**Entry**

Students are advised to do at least Units 1 & 2 Systems Engineering if they intend to study Unit 3 and 4 Systems Engineering.