

10 T Electro Technology

OVERVIEW

Preliminary introduction to electro technology skills and knowledge, highlighting electronic application by utilising electronic kits.

Students learn by doing, and theory is taught in an integrated manner.

Practical task: Soldering

Students learn basic soldering skills to join electrical conductors and to solder electronics components to printed circuit boards.

Class members participate in learning OH&S related to soldering and conduct a Job Safety Analysis prior to commencement of any practical work.

Practical task: Wire cube

Students are required to produce a cube; made of copper wire following the given dimensions.

Participants are required to demonstrate their soldering and assembling skills by completing this practical task.

Introduction to electronics components

Class participants learn to recognise electronics components and the corresponding Australian Standards symbols used to identify these components on electronic circuits diagrams.

Class members conduct research and presentations in class in order to further their knowledge on practical applications of these components.

Practical Task: Line tracking mouse

- Students are given the task to solder and assemble a line tracking mouse.

They are required to interpret and follow written and verbal instructions applying their soldering and assembly skills to complete the line tracking mouse. Once completed the mouse should follow a set route marked by a black tape.

- After completing the practical task students are required to present a folio describing their experience.

Introduction to induction motor principles:

Class members are introduced to induction motors principles; they learn the basic theory to enable them to understand these important principles on what make an electric motor turns.

Practical Task: Using the Hodson motor kit; students build a complete motor, once completed ELV (extra low voltage) is applied to make the motor work.

- After completing the practical task students are required to present a folio describing their experience.

ASSESSMENT

They are assessed by demonstration of ability to complete practical tasks. Also assessed by presentation of a folio, which demonstrates attainment of knowledge and an ability to reflect upon their own work.

SUBJECT PREREQUISITES

Prepared to explore and innovate, and demonstrate patience and persistence to achieve the final goal.