Project

Electronics

POST-SECONDARY

1 INTRODUCTION

Electronics is very diverse field, and while some technicians/engineers work across multiple aspects of electronics, specialization is increasing in areas including the assembly and wiring of electronic products; the designing of prototype circuits; the installation and commissioning of equipment including customer support; service and maintenance; monitoring and testing sub-assemblies or systems; and approving fit-for purpose and simulating outcomes. They will need to work with a wide range of both hand and computer tools and should be capable of explaining elements of complex electronics principles to clients.

2 DESCRIPTION OF PROJECT AND TASKS

2.1 Day One (AM)

2.1.1 Fault Finding

- Identify/Repair fault conditions in electronic circuits.
- Follow World Skills Standards Specifications section 5
- Link to WSS

2.2 Day One (PM)

2.2.1 Schematic entry and PCB Design and Layout

- Enter schematic diagram from circuit provided
- Create a PCB Gerber file from schematic
- Project to be completed using KiCad software
- Follow World Skills Standards Specifications section 3
- Link to WSS

2.3 Day Two (AM)

2.3.1 Analog Design & Embedded Systems Programming

- Program an assigned task in a microcontroller application
- Design a basic analog circuit to be interfaced with a microcontroller application
- Follow World Skills Standards Specifications section 4
- Link to WSS

2.4 Day Two (PM)

2.4.1 Assembly

- Assemble a given circuit using through hole and surface mount applications
- Follow World Skills Standards Specifications section 6
- Link to WSS