SkillsCompétences Canada
Québec2021

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 Breadboard and Measurement

- Breadboard a circuit from a given schematic
- Competitor uses best breadboard practices as outlined in document General Lab Tips
- Follow the Electronics Standards, Assembly and Measurement (section 3)

2.2 Day One (pm)

2.2.1 Printed Circuit Board Layout

- Design a printed circuit board from a given schematic
- Follow the Electronics Standards, Prototype Hardware Design (section 2)

2.2.2 Fault Find

- Identify/repair fault conditions in electronic circuits
- Follow the Electronics Standards, Fault Finding and Repair (Section 4)

2.3 Day Two (am)

2.3.1 Embedded Systems Programming

- Program an assigned task in a microcontroller application
- Follow the Electronics Standards, Embedded Systems Programming (Section 5)

2.4 Day Two (pm)

2.4.1 Assembly

- Assemble a given circuit using through hole and surface mount applications
- Follow the Electronics Standards, Assembly and Measurement (section 3)