



PROJECT
Electronics

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 Technique

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

2.2 Day One (pm)

2.2.1 Theory and Fault Find

- Answer/identify problems related to the application of electronics
- Identify/repair fault conditions in electronic circuits
- Follow the Electronics Standards, Application of Electronics (section 1 & 2)

2.2.2 Measurement

- Use various methods of measurement related to the application of electronics
- Follow the Electronics Standards, Assembly and Measurement (section 3)

2.3 Day Two (am)

2.3.1 Assembly

- Assemble a given circuit using through hole technology

- Follow the Electronics Standards, Assembly and Measurement (section 3)

2.4 Day Two (pm)

2.4.1 Circuit Analysis

- Reverse engineer a provided electronic circuit and revert to a schematic diagram
- Follow the Electronics Standards, Application of Electronics (section 1)

2.4.2 Rework Technique

- Rework a given electronic circuit using soldering techniques
- Follow the Electronics Standards, Assembly and Measurement (section 3)

