

**CONSTRUCTION SKILLS TRAINING INSTITUTE**

**BASIC COURSE SYLLABUS**

**ELECTRICAL WIREMAN**



**LARSEN & TOUBRO LIMITED**

**ECC DIVISION**

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# **SYLLABUS FOR ELECTRICAL WIREMAN**

## **TRAINING**

### **CONTENTS**

1. Introduction to L&T / ECCG
2. Introduction to the Trade
3. Introduction to Trade Glossary
4. Introduction to Tools & Equipment
5. Documentation
6. Materials
7. Testing
8. Safety
9. Practice Modules
10. Introduction to Trade on Job Site
11. Overall Revision
12. Final Testing

## SYLLABUS FOR ELECTRICAL WIREMAN TRADE

<b>Duration at Skills Training Institute (Spread in three months)</b>	<b>: 600 Hrs</b>
<b>1. Introduction to L&amp;T / ECGG</b>	<b>: 3 Hrs</b>
<b>2. Introduction to the Trade</b>	<b>: 3 Hrs</b>
<b>3. Introduction to Trade Glossary</b>	<b>: 6 Hrs</b>
<b>4. Introduction to Tools &amp; Equipment</b>	<b>: 12 Hrs</b>
• Hand tools of the trade	
• Bench Tools	
• Electrical Drill	
• Microgauge	
<b>5. Documentation</b>	<b>: 24 Hrs</b>
• Basic Theory	
• Basic Sketches	
• IEE Rules	
• Log sheets	
• Store requisition	
<b>6. Materials</b>	<b>: 16 Hrs</b>
• P.V.C.Flexible Cables	
• LT Cables	
• HT Cables	
• Telephone Cables	

- Wires
  - Conduits
  - Switch Gears
  - \* Electrical Fixtures
- 7. Testing : 16 Hrs**
- Line Tester
  - Continuity Tester
  - Earth Tester
  - Megger
  - Multimeter
  - Clamp Meter
  - Tacho Meter
  - Hydro Meter
  - Discharge Tester
  - Phase Sequence Meter
  - \* Growler
- 8. Safety : 24 Hrs**
- Causes Of Accident
  - Type Of Extinguishers
  - Artificial Respiration
  - Reason For Shock
  - Method Of Isolating Supply
  - Personal Safety & Responsibility
  - Working At Height Ladder/Scaffold
- 9. Practice Modules : 348 Hrs**
- F1 Work Shop Practice : 44 Hrs**
- ✓ Making external thread on mild steel (MS) rod.

- ✓ Type of filing.
- ✓ Checking the flatness and square of the surface.
- ✓ Method of using centre punch.
- ✓ Method of hack sawing.
- ✓ Drilling through holes.
- ✓ Internal threading.
- ✓ Operate an electrical drill.
- ✓ Use of Jig saw for cutting metal sheet.
- ✓ Holes by knock out punch.
- ✓ Holes by holes saw cutter.
- ✓ Safety
- ✓ Site tidiness.

**F2 Wire Termination & Joints : 28 Hrs**

- ✓ Termination to metal clad top & other plug top
- ✓ Connecting up appliance socket
- ✓ Basic flexible joints.
- ✓ Safety
- ✓ Site tidiness

**F3 Cable Glanding, Termination Lug and Soldering. : 28Hrs**

- ✓ Soldering procedure
- ✓ Basic wire soldering
- ✓ Soldering in lug
- ✓ Crimping procedure
- ✓ LT cable joint
- ✓ Making hole in GI sheet by coldchisel for Glanding.
- ✓ Safety
- ✓ Site tidiness.

- F4 Basic Wiring (P.V.C.) : 32 Hrs**
- ✓ One lamp controlled by one SPT switch
  - ✓ Two lamp controlled by two independent SPT switch
  - ✓ Independently controlled one lamp and one socket
  - ✓ Connection of measuring instrument, rotary switch
  - ✓ Safety
  - ✓ Site tidiness.
- F5 Basic Wiring MS : 32 Hrs**
- ✓ Cut thread on MS pipe using a die stock.
  - ✓ One lamp controlled by one SPT switch metal conduit
  - ✓ Two lamp controlled by two SPT switch in metal conduit
  - ✓ Independently controlled one lamp and one socket in metal conduit
  - ✓ Safety
  - ✓ Site tidiness.
- F6 Basic Wiring (Concealed Type) : 32 Hrs**
- ✓ Method of marking through Plumb bob, Spirit level, & Water level
  - ✓ Wall Chasing for wiring.
  - ✓ Fixing DB, Switchboard & other electrical boards.
  - ✓ One lamp controlled by one SPT switch in concealed
  - ✓ Two lamp controlled by two SPT switch in concealed
  - ✓ Independently controlled one lamp and one socket in Concealed
  - ✓ Safety
  - ✓ Site tidiness.
- F7 Termination & Fault Finding In Construction M/C. & Fittings : 32Hrs**
- ✓ Memco Rectifier
  - ✓ K320 Generator.

- ✓ Transformer 2 Phase
- ✓ Transformer 3 Phase
- ✓ Rod binding M/c.
- ✓ Halogen Fitting.
- ✓ Sodium vapor fitting
- ✓ Safety
- ✓ Site tidiness.

**F8** Simple Control Circuit : 32 Hrs

- ✓ DOL Starter
- ✓ Forward & Reverse Starter.
- ✓ Star de;ta starter
- ✓ Connection of measuring instrument, rotary switch
- ✓ Safety
- ✓ Site tidiness

**F9** Making Of Earth Pit : 48 Hrs

- ✓ Instalation of earth electrode as per IE rule
- ✓ Safety
- ✓ Site tidiness

**F10** Testing Of Circuits : 32 Hrs

- ✓ Insulation test
- ✓ Continuity test.
- ✓ Polarity test
- ✓ Phase sequence test.
- ✓ Panel board test
- ✓ Earth test
- ✓ Secondary Battery Test
- ✓ Simple fault finding

- ✓ Armature test
- ✓ Safety
- ✓ Site tidiness

<b>10. Introduction to Trade on Job Site</b>	<b>:</b>	<b>64 Hrs</b>
<b>11. Revision</b>	<b>:</b>	<b>60 Hrs</b>
<b>12. Final Testing &amp; Evaluation</b>	<b>:</b>	<b>24 Hrs</b>