



Industrial Training Institute



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**Visvesvaraya Fire & Safety Industrial Training Institute ( ITI )**

Affiliated by

Directorate of Technical Education, Jodhpur

Government of Rajasthan

Directorate General of Training ,New Delhi

Ministry of Skill Development And Entrepreneurship

Govt. of India, NCVT



## About Electrician



Electrician trade under CTS is one of the most popular courses delivered nationwide through network of ITIs. The course is of two years (04 semester) duration. It mainly consists of Domain area and Core area. In the Domain area (Trade Theory & Practical) impart professional skills and knowledge, while Core area (Workshop Calculation and science, Engineering Drawing and Employability Skills) impart requisite core skill, knowledge and life skills.

An electrician is a tradesman specializing in electrical wiring of buildings, transmission lines, stationary machines, and related equipment. Electricians may be employed in the installation of new electrical components or the maintenance and repair of existing electrical infrastructure.

Today's electricians can be divided into four main categories:

**Residential Electricians** – These electricians work in home dwellings that can range from single-family houses to large apartment complexes.

**Commercial Electricians** – Work sites can include office buildings, retail outlets, schools, hospitals, and industrial facilities that do not involve high-voltage. These electricians install and repair electrical systems found in existing commercial buildings, new construction, and renovation projects.

**Industrial Electricians** – These electricians perform maintenance and installation of electrical components and machinery found in industrial settings. This may include working with high-voltage electricity at industrial manufacturing locations.

**Low Voltage Electricians** – As their name implies, these electricians are involved with low-voltage systems that primarily include voice, data, and video (VDV) networks and systems. Inside the industry you may hear these professionals referred to as VDV electricians or Voice-Data-Video electricians. Their work typically focuses on phone lines and fiber optic cable repair and installation in any setting where these materials are used.

Trainee broadly needs to demonstrate that they are able to:

- Read and interpret technical parameters/ documents, plan and organize work processes, identify necessary materials and tools;
- Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- Apply professional skill, knowledge & employability skills while performing jobs.
- Check the job/ assembly as per drawing for functioning identify and rectify errors in job/ assembly.
- Document the technical parameters related to the task undertaken.

### Scope of Course

**Electrician General;** installs, maintains and repairs electrical machinery equipment and fittings in factories, workshops power house, business and residential premises etc. Studies drawings and other specifications to determine electrical circuit, installation details etc. Positions and installs electrical motors, transformers, switchgears. Switchboards and other electrical equipment, fittings and lighting fixtures. Makes connections and solders terminals. Tests electrical installations and equipment and locates faults using megger, test lamps etc. Repairs or replaces defective wiring, burnt out fuses and defective parts and keeps fittings and fixtures in working order. May do armature winding, draw wires and cables and do simple cable jointing. May operate, attend and maintain electrical motors, pumps etc.

**Electrical Fitter;** fits and assembles electrical machinery and equipment such as motors, transformers, generators, switchgears, fans etc., Studies drawings and wiring diagrams of fittings, wiring and assemblies to be made. Collects prefabricated electrical and mechanical components according to drawing and wiring diagrams and checks them with gauges, megger etc. to ensure proper function and accuracy. Fits mechanical components, resistance, insulators, etc., as per specifications, doing supplementary tooling where necessary. Follows wiring diagrams, makes electrical connections and solders points as specified. Checks for continuity, resistance, circuit shorting, leakage, earthing, etc. at each stage of assembly using megger, ammeter, voltmeter and other appliances and ensures stipulated performance of both mechanical and electrical components fitted in assembly. Erects various equipment such as bus bars, panel boards, electrical posts, fuse boxes switch gears, meters, relays etc. using nonconductors, insulation hoisting equipment as necessary for receipt and distribution of electrical current to feeder lines. Installs motors, generators, transformer etc. as per drawings using lifting and hoisting equipment as necessary, does prescribed electrical wiring, and connects to supply line. Locates faults in case of breakdown and replaces blown out fuse, burnt coils, switches, conductors etc. as required.

Industrial training institutions have started the programmes in craftman scheme which have been taken under the guidelines of NCVT & RCVT, Where regular self finance and centre excellence schemes were taken and in this pattern technical skill training programme has been taken for the participants and they can be benefitted by this training and get employment easily. Some one can start his/herself employed business. In this training a person has to do a labour work continuous 8 hrs. where no vacations has to be given like other schools and every candidate has to do hard work which results into a hardcore, that gives a benefit to him/her for better employment. This is entirely a professional programmes.

**OBJECTIVES OF THE CRAFTSMEN TRAINING SCHEME**

to provide semi-skilled/skilled workers to industry by systematic training to school leavers.

to reduce unemployment among educated youth by equipping them with suitable skills for industrial employment.

## FIRE & SAFETY ENGINEERING...



Fire Engineering can be defined as, "The application of scientific and engineering principles, rules and expert judgements, based on understanding of the phenomenon and effects of fire, its reactions and behavior of people, property and the environment from the destructive effects of fire."

This nature and characteristics of fire and the mechanics about how fire spreads is most understood by fire engineers. They are the experts with varieties who can tackle fire & reduce the losses caused by hazards. By virtue of its growing role in saving life and property on a large scale, Fire Engineering is faster going profession becoming one of the world's noble professions. Industrial statistics has put the upcoming Indian requirements of over one lakh personnel of Fire and safety per year. Moreover, unlimited opportunities come from abroad, especially from the Gulf countries.

### Practical and Attachment Training

To expose fire engineering and safety management students to new technologies and practical aspects associated with it, VCFESM has good practical training programs in its curriculum. Apart from curriculum practical, various technical visits at high risk places like Airport, various Ship Yards, Five Star-Hotels, Various Industries etc are arranged.

### Various Drills and Practical Training Contents

- ❖ Fire squad Drill, Parade & P.T.
- ❖ Fire Extinguishers Operation Maintenance and Construction.
- ❖ Fire Hose pipe drill (Dry & Wet).
- ❖ Hydrant drill (Dry & Wet.)
- ❖ Pump & Pump Operation Drill.
- ❖ Fire tender drill (Dry, Wet & Mounting)
- ❖ Ladder drill (Climbing & crew with hose pipe line position)
- ❖ Fire casualty rescue operation drill.
- ❖ Fire salvages parade.
- ❖ First aid as medical bandage practical.
- ❖ Ambulance parade (Casualty stretcher loading & unloading)
- ❖ Conduction of practical seminars on Worker's Health
- ❖ Safety & Environment.
- ❖ Wearing and operational procedure of Entire Range of PPE
- ❖ Fixed Fire Fighting Installation practical
- ❖ Live fire demonstration (Solid, Liquid, L.P.G. Gases & Metal Fire Fighting) etc.

### Students are exposed to

- ❖ Smoke Heat & Fire Alarm Systems.
- ❖ fire equipments & Appliances.
- ❖ Care and Maintenance of Fire Extinguisher.
- ❖ Testing & Installation of Fire Protection system.

### Scope of Course

Many job opportunities are available in just above every type of industries like as Airports, Airlines, Oil Refineries, Railways, Merchant Navy, Chemical & Mechanical Industry, Five Star Hotel, Oil & Gas plant, Tourism, Steel Plant, Power & Irrigation Sector, Ocean, Space, Municipal Corporation, Govt. & Private Sectors etc.

Students investing their time in this emerging industry are creating a great career opportunity for them selves, in addition to getting a head start over job seekers in other fields.

Fire engineers and job openings in the Government Fire Service, Architectural and Building Design, Insurance Assessment Project Management, Aircraft Industry, Refiner Industrial Processing and in any where the possibility of fire or combustion represents a hazard with increasing urbanization, the use of electrical appliances, office automation, etc.

The increasing number of fire disasters in Refineries, Petrochemical Plants, Industries other strategic places is causing tragic loss of precious lives and large scale destruction of property. This confirms the necessity for Fire Fighting Engineers.







## ADMISSION PROCESS AND ELIGIBILITY



S. No	Description	Duration	Qualification
1	Fireman	6 Months	10 <sup>th</sup> Pass
2	Electrician	2 Year	10 <sup>th</sup> Pass
3	Fire Technology and Industrial Safety Management	1 Year	10 <sup>th</sup> Pass
4	Health Safety and Environment	1 Year	10 <sup>th</sup> Pass

### Eligibility criteria

- ❖ A 10<sup>th</sup>, 12<sup>th</sup> (any stream), pass candidate.
- ❖ No entrance examination for admission to these courses, admissions are open on "Personal Interview Basis".
- ❖ Students should know the fact that fees once paid are neither refundable or not adjustable under any circumstances.

### Admission Process

Duly filled application form along with the following documents is to be submitted.

- ❖ All Original Education Documents.
- ❖ Ten passport size recent photographs.
- ❖ Copy of Aadhar Card
- ❖ Two sets of Self & Gazetted attested xerox copies of all Documents / certificate.

A Demand Draft of payment/admission fee in favour of "visvesvaraya fire & safety pvt ITI", Payable at Udaipur (Raj.)

### For Fire and Safety Programme :

Minimum Standard Physical efficiency of weight : 52 kg. Height : 165 cm Chest : 81 cm (Normal) Chest : 85 cm (expanded)

A Registered MBBS doctor must Certify that the Candidates is Medically fit to undertake the Course

**Campus :** Tulsi Niketan, Hiran Magri, Sec. 4, Main road, Udaipur (Raj.) 313002

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