

ST. JOSEPH INDUSTRIAL TRAINING INSTITUTE

An ISO 9001:2015 & 29990:2010 Certified Institute

PROSPECTUS 2020



Educating the young for life and livelihood

ABOUT THE INSTITUTE

The foundation stone of St. Joseph Industrial Training Institute was laid on the 30th January 1963, the eve of the feast of St. John Bosco the founder of the congregation.

The first course offered was that of a general nature which was called 'Machinist' and it included abilities of Turners, Fitters and Machine Operators. Later recognition was sought from the government for the same courses and these came under the guidelines of National Council for Vocational Training (NCVT).

With the advent computers the Institute began courses in computer education from the year 1987 and has kept abreast with the recent developments.

This institute boasts of several of its alumni who have set up their own small-scale industries, in addition many others have perfected their skills, specialized themselves and have found lucrative jobs within the country and overseas.

The medium of instruction is English. The minimum qualification for all I.T.I trades is S.S.C or equivalent with Mathematics and Science. For Vocational / Non I.T.I courses the minimum qualification, Std. VII and the candidates age has to be 15 years or above.

At this Don Bosco Institute we impart excellent levels of technical skills, we provide opportunities for emotional and spiritual growth of our students. We emphasize the value of sports and games as a means of all round education. The many extra-curricular activities help the youngster in their physical development. Besides it affords relief from tension at work, assist in formation of character and creates a cheerful environment.

The institute constantly seeks to widen its services to cater to a large section of youngsters who are poor in keeping with the mind and spirit of Don Bosco.

OUR VISION

is to educate the young for life and livelihood

OUR MISSION

is to empower the marginalized and disadvantaged youth by imparting market driven employment linked skill training.

OUR VALUES

SELF - ACTUALISATION • DETERMINATION • IMPROVISATION
INDUSTRY - RELEVANCE • COMPETENCE • COPING SKILLS
SOCIETY - AVAILABILITY • GENEROSITY • RESPONSIBILITY

OUR SYSTEM

Preventive / Presence
RAPPORT – EMOTIONAL NEEDS • REASON – INTELLECTUAL NEEDS
• RELIGION – SPIRITUAL NEEDS



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I. Government Certificate Courses	Duration	Qualification	Seats Available	Commencement	
A. I.T.I. Courses (NCVT) Certificate:					
1. Fitter	2 Years	Std. X Passed (Science & Maths)	20	1st August	06
2. Machinist	2 Years	Std. X Passed (Science & Maths)	20	- do -	07
3. Electronic Mechanic	2 Years	Std. X Passed (Science & Maths)	24	- do -	07
4. M.M.V. [Mechanic Motor Vehicle]	2 Years	Std. X Passed (Science & Maths)	48	- do -	08
5. Electrician	2 Years	Std. X Passed (Science & Maths)	20	- do -	10
6. Draughtsman Mechanical	2 Years	Std. X Passed (Science & Maths)	20	- do -	11
7. Refrigeration & Airconditioning Technician	2 Years	Std. X Passed (Science & Maths)	24	- do -	12
8. Mechanic Auto Body Repair	1 Year	Std. X Passed (Science & Maths)	20	- do -	13
9. Mechanic Auto Body Painting	1 Year	Std. X Passed	20	- do -	14
10. Mechanic Two and Three Wheeler	1 Year	Std. X Passed (Science & Maths)	20	- do -	14
11. Plumber	1 Year	Std. X Appeared	24	- do -	15
B. MSBVEE (Maharashtra State Board Vocational Education Examination) Certificate:					
1. Automobile Mechanic Technician -Ford ASSET	1 year	Std. X Passed	25	1st August	16
2. Air Conditioner Mechanic	6+6 months	Std. VIII Passed	25	- do -	16
C. B.Voc. in Automobile Servicing Technology	3 Years	HSC / Std. X + 2 years ITI	30	Aug. / Feb.	17
II. Don Bosco and Industry Affiliated Courses					
A. Don Bosco Tech. and Toyota Certificate Courses:					
1. Automotive Body Repair	1 year	Std. X Passed	25	1st August	18
2. Automotive Paint Repair	1 year	Std. X Passed	25	- do -	18
B. Don Bosco Tech. and GROHE Certificate Course:					
1. Sanitary Hardware Fitter (Plumber)	9+3(OJT) months	Std. 8th, 15 years & above	20	Aug. / Feb.	19
C. Don Bosco Tech., ACME and DAIKIN Certificate Course:					
1. Mechanic Refrigeration and Air Conditioning	1 Year	Std. 8th, 15 years & above	25	1st August	19
D. Don Bosco Tech. and MOTUL Certificate Course:					
1. Two & Three Wheeler Service Technician	1 year	Std. X Passed	25	1st August	20
E. Don Bosco Tech. and Volkswagen Certificate Course:					
1. Automotive Service Advisor	3 months	ITI/Diploma, 17 years & above	15	Aug./Nov./Feb./ May	21
F. Don Bosco Tech. and SCHNEIDER Certificate Course:					
1. Advanced Industrial Electrical	1 week	ITI, Engineering Students Industrial Experience	15	Aug./Nov./Feb./ May	21
III. Don Bosco Tech. Certificate Courses					
1. Autotronic Technician	6 months	Std. 10th Passed, ITI, Engineering Students Autotronic Industrial Experience	20	Aug. / Feb.	21
2. CNC Programming and Operating	90 hrs.	ITI, Engineering Students Industrial Experience	15	Aug./Nov./Feb./ May	23
3. Draughtsman Mechanical and CAD	2 Year	Std. 8th, 15 years & above	05	1st August	23
4. Domestic Wireman	1 Year	Std. 8th, 15 years & above	10	- do -	24
5. Electronics Mechanic	1 year	Std. 8th, 15 years & above	05	Aug. / Feb.	24
6. Fitter	2 Year	Std. 8th, 15 years & above	05	- do -	24
7. Machinist	2 Year	Std. 8th, 15 years & above	05	- do -	24

GENERAL INFORMATION REGARDING THE INSTITUTE

1. St. Joseph Industrial Training Institute is run by the Salesians of Don Bosco. This Institute is affiliated to the Government of India's National Council for Vocational Training {N.C.V.T.} in the trades of Fitter, Machinist, Electronic Mechanic, Electrician, Draughtsman Mechanical & Mechanic Motor Vehicle. It also offers other courses certified by the Institute.
2. The aim of the Institute is to provide the young with a sound moral and technical education so as to form them into upright citizens able to fulfill their obligation towards God, Family and Country. All activities whether moral, cultural, social or recreational have this aim in view. Fee structure of the Institute is based on No Profit No Loss concept
3. The Salesian system of education is based upon the Preventive System of Don Bosco, which is founded, chiefly on reason, religion and kindness.
4. In Don Bosco's system, sports and games form an integral part of education, since they promote sound physical development, afford relief from the tension of work, help effectively in the formation of character and makes for a cheerful environment. Cheerfulness is the distinguishing mark of a Don Bosco Institution.
5. The Head of the Institute is the Rector. He is aided by other Management Staff who are responsible in their own field of activities. Each department has its own head who is in charge of it.
6. The medium of Instruction is English. The minimum qualification for all I.T.I. trades is S.S.C. or equivalent with Mathematics and Science (Physics and Chemistry)
7. The above mentioned private courses are conducted on a non-formal basis by the Institute and are meant for school drop outs. The minimum qualification required for admission to these courses is Std. VII and above, but any exception will be considered by the Principal. Candidates who have completed Std. X and above may also be eligible to undergo training in the Private courses.
8. The examinations for the I.T.I. trainees are conducted in the month of July every year by NCVT. The successful candidates will be awarded certificates by NCVT. An unsuccessful candidate can avail of five consecutive attempts in 3 years for the I.T.I. examination. Successful private course trainees will be awarded certificates by the Institute on passing their final examination.

Note: Trainees aspiring to join diploma programme after successful completion of I.T.I., should have passed SSC with Maths/Mathematics with Code 71.

NON-I.T.I.: Examinations are conducted at the end of the every year.

9. All the trainees of the institution will undergo following modules of Workplace Readiness:
 - English Literacy
 - I.T. Literacy
 - Communication Skills
 - Personality Development
 - Entrepreneurship Skills
 - Productivity
 - Occupational Safety, Health and Environment Education
 - Labour Welfare Legislation
 - Quality Tools

RULES

1. Each trainee must have a copy of the handbook, read and note its contents and bring it daily to class. The trainee's handbook must be perused regularly by the Parents/Guardians, so as to be conversant and in touch with his performance in the Institute. Loss of handbook constitutes a serious offence and must be replaced immediately on payment of a fine. Trainee losing the Handbook a second time during the course will be liable to summary dismissal.
2. At the appropriate place, the signature of the Parent/Guardian, who will sign all communications to and from the Institute, should be affixed. This should be the same as the one furnished in the Admission and Declaration Forms. Any change in the person authorised to sign all correspondence to and from the Institute must be communicated in advance to the Institute authorities by the signatory.
3. Report and all remarks made in the handbook should be countersigned by the authorized signatory. The trainee should then show the same to the Instructor concerned. This should be done on the very next day of the report or of the remarks made.
4. The academic year of the Institute commences in August and ends in July.
5. The Institute hours are from 7.55 a.m. to 12:15 p.m. and from 1:15 p.m. to 4.45 p.m.
6. Each day begins with the assembly of trainees and staff. All must be in the Institute premises on time and cannot leave the premises without the permission of the concerned authority.
7. **WORKING HOURS:**

a) Practical Instructions	25 hrs per week
b) Theoretical Instructions	15 hrs per week
i) Trade Theory	9 hrs per week
ii) Workshop Science & Calculations	2 hrs per week
iii) Engineering Drawing	2 hrs per week
iv) Entrepreneurship Training, Soft Skill	
Employability Skills & Communication Skill	4 hrs per week
8. Absentees must bring a written justification in the prescribed leave form and report to the Principal before the assembly. A doctor's certificate must be produced in case of absence due to sickness for two days and more.
9. Leave, must be obtained by prior application in writing from Parents or Guardians on the prescribed leave application. Parents must check truancy.
10. Late comers should get the necessary sanction noted in their handbook and report to the Principal before entering the workshop or class.
11. Irregular attendance, late coming, habitual idleness, disobedience or misconduct justifies serious action and even dismissal at any time of the year.

12. a) The minimum compulsory attendance for trainees in regard to their eligibility for the final trade test has been fixed at 80 percent for I.T.I. trainees and 85 percent for one year and Private course trainees, of the actual number of working days.
b) For the purpose of calculating 85 percent of the actual number of working days in respect of a trainee, the number taken will be the number of days for which attendance was marked in the attendance register during the period between the day of his admission and the date of the beginning of the trade test.
13. a) Trainees who are absent for 5 days or more without telephonic information or written permission and those trainees who according to the Institute authorities do not show adequate interest/progress in their work and duties are liable to be struck off the rolls and forfeit their deposit.
b) Those trainees who remain absent before and after the weekend holiday and those who report late after any extended holiday which is given gratuitously, will be marked absent for the period of holidays.
14. Trainees who remain absent at the examination for any reason will be considered as failed. Trainees who fail in two consecutive quarterly examinations are liable for disciplinary action or suspension not exceeding 15 days. Should they yet fail in the third consecutive quarterly examination, they can be dismissed from the Institute. The Institute will not hold itself responsible for the consequence of any communication missed during the time of suspension.
15. Every trainee MUST carry the Identity card to the Institute daily failing, which he may not be permitted to enter the premises. Similarly, no trainee will be permitted to the examination hall without a valid Identity Card.
16. There will be silence in those places where all assemble for study, class, work, assembly hall or wash places.
17. In the interest of individual and general safety trainees are cautioned not to touch, operate or use any tools, equipment or machinery without adequate knowledge, guidance and permission.
18. The equipment entrusted to the trainees must be treated with care and consideration. Trainees must indemnify the Institute for breakage, damage or loss. This amount will be deducted from their deposit. In case the damage exceeds the deposit, a new deposit will have to be paid.
19. No books, newspapers, periodicals, mobile phones/gadgets or any other articles, which are not prescribed for training, may be brought to the Institute. Any report observed or objectionable conduct of the trainee out of the Institute shall make him liable for disciplinary action.
20. The use of Mobile phones in classrooms and workshops are prohibited. Any report observed or objectionable conduct of the trainee out of the Institute shall make him liable for disciplinary action.
21. Consumption of alcohol, tobacco products (cigarettes, gutka, paan, supari, etc.) and drugs is strictly prohibited and punishable.

22. FEE: Fees to be inquired at SJITI Office.

Contingency fees may be collected during the course. Additional fees will be collected for allied courses.

Foreign students will be charged additional fees.

23. The original SSC / Last Examination Mark sheet and the School/College Leaving Certificate / Residential Proof / Current Electricity Bill will have to be submitted to the Institute authorities at the time of admission. If it is required in the course of the training period, a suitable declaration and deposit will have to be made before it is handed over to the trainee. The amount of the deposit will be equal to the balance amount of fees for the entire course.
24. Trainees who leave or who are dismissed before the completion of the course forfeit their deposit and will not be entitled to any certificates.
25. A trainee joining or leaving the Institute in the middle of the training period shall pay the fees for the entire duration of the course. A trainee wishing to leave the Institute shall give notice in writing to the Principal. No certificates will be returned until all dues to the Institute have been paid and all tools and equipment taken from the Institute returned to the Head of the Department concerned. NO FEES WILL BE REFUNDED.
26. Trainees coming from financially weak families have to apply for scholarships and concession in fees and maybe considered as per the discretion of the Management.
27. Any variation required by the Government authorities as regards the I.T.I./M.S.B.V.E.E. trainees will be notified from time to time on the Institute notice board. Directives from the Institute authorities also, to all trainees, will be similarly displayed.
28. Every trainee will provide himself with two sets of uniforms, and a pair of safety shoes as prescribed by the Institute. No trainee will be allowed to work in the workshop / classroom without proper uniform and shoes.
29. Refund of Security Deposit, if any MUST be collected against return of the receipt of Deposit Money within one month from the date of completion of the course. Refund not collected during the specified time will be forfeited.
30. Similarly, Original Certificates submitted to the Institute at the time of admission should be collected within one month from the date of completion of the course. The Institute does not hold itself responsible for certificates not collected within the specified period.
31. Trainees joining the Trade shall not engage himself in other Training/Courses or College.

Brief description of the various courses offered at the Institute

I. Government Certificate Courses

A. I.T.I. COURSES (NCVT) CERTIFICATE – 2 YEARS

1. FITTERS

The Fitters course entails the following job descriptions, which will qualify a person to skillfully work in any mechanical workshop. He is conversant in the subject of his trade with theoretical knowledge, has the ability for calculations related to workshop practice and can execute fabrication work from Blue Print reading of Engineering Drawings.

After successful completion of this course the trainee shall be able to perform the following skills with proper sequence.

1. The trainees can work in the industry as semi-skilled fitter.
2. The trainee can work in the field of pipe fitting, lathe, drilling, welding, inspection & measurement, general fitting work observing safety precautions.
3. The trainees can work on dismantle & assemble of various valves, test the accuracy of machine tools.
4. Perform simple repair on machinery, dovetail slides and assemble with location dowel pins, stud and bolts.
5. Prepare snap gauge for checking diameters to an accuracy of ± 0.02 mm.
6. Handle different type of fire extinguishers.

The student also gets to learn to do jobs coming from different companies with high degree of accuracy.

Employment Opportunities:

On successful completion of this course, the trainees shall be gainfully employed in the following industries:

1. Production & manufacturing industries.
2. Structural Fabrication like bridges, roof structures, building & construction.
3. Automobile and allied industries
4. Service industries like road transportation and railways.
5. Ship building and repair
6. Infrastructure and defense organizations
7. In public sector industries like BHEL, BEML, NTPC, etc and private industries in India & abroad.
8. Self-employment

Further learning pathways:

- On successful completion of the course trainees can pursue apprenticeship training in the reputed Industries / Organizations.
- On successful completion of the course trainees can opt for diploma course (Lateral entry).
- On successful completion of the course trainees can opt for CITS course.

2. MACHINIST

The Machinist Course trains the candidate to skillfully work on various precision machine tools used in Machine Shop. He is conversant in the subjects of Trade Theory, Workshop Calculations and Science related especially to this trade, Engineering Drawing (Blue Print reading of Orthographic and Isometric views according to specifications) and Workshop Practical.

After successful completion of this course the trainee shall be able to perform the following skills with proper sequence:

1. The trainees work as a semi-skilled worker in industry.
2. The trainees can be able to work as basic fitter, can operate and able to perform various operation drilling, shaping, slotting, planer, lathe, milling, grinding.
3. The trainees can be able to do simple programming & operate CNC machine.
4. Knowledge of technical english term used in industry.

The student also gets to learn to do jobs coming from different companies with high degree of accuracy.

Employment Opportunities:

On successful completion of this course, the trainees shall be gainfully employed in the following industries:

1. Production & manufacturing industries.
2. Service industries like road transportation and railways.
3. Ship building and repair.
4. Infrastructure and defense organizations.
5. In public sector industries like BHEL, BEML, NTPC, etc. and private industries in India & abroad.
6. Self-employment.

Further learning pathways:

- On successful completion of the course trainees can pursue apprenticeship training in the reputed Industries / Organizations.
- On successful completion of the course trainees can opt for diploma course (Lateral entry).
- On successful completion of the course trainees can opt for CITS course.

3. ELECTRONICS MECHANIC

The Electronics Mechanic Course trains the candidate to skillfully work in the industry. He is conversant in the subjects of Trade Theory, Workshop Calculations & Science especially related to his trade, Engineering Drawing (Circuit Diagrams, Component Layout, Test Points, etc.) and Workshop Practical.

After successful completion of this course the trainee shall be able to perform the following skills with proper sequence.

1. Identify various active and passive components and their applications.
2. Handle different types of electronic measuring instruments
3. Identify different types of faults in electronics equipments.

4. Repair & maintenance computer hardware & networking
5. Repair and maintenance of SMPS, UPS, inverter, solar power system and various analog and digital circuits.
6. Repair and maintenance of electronics communication equipment's and fibre optics.
7. Installation of various transducer, sensor.
8. Repair maintenance of microcontroller based systems.
9. Repair maintenance& installation of LED/ LCD TV, cell phone (Mobile).

Employment Opportunities:

On successful completion of this course, the trainees shall be gain fully employed in the following industries:

1. Various electronics equipment manufacturing industries.
2. Automobile electronics and allied industries.
3. Industries manufacturing solar power based inverters.
4. Industries manufacturing LED lights
5. Service industries like BSNL, MTNL, home appliances manufacturing company, railways, ISRO, naval dockyard, RCF, BPCL etc.
6. Various mobile industries like LG, Samsung, Nokia, Sony etc.
7. In public sector industries like BHEL, BEML, NTPC, etc and private industries in India & abroad. Petrochemical industries like ONGC, OCL, and HPCL etc.
8. Self-employment.

Further learning pathways:

- On successful completion of the course, trainees can opt for additional NCVT certificates in the following courses by doing the third and forth semester since the first and second semester is common for all three Electronics courses.
 - 1) Mechanic Electronic Consumer appliance (Only 4th Semester)
 - 2) Technician Power Electronics Systems (3rd and 4th Semester)
- Also on successful completion of the course they can pursue apprenticeship training in the reputed Industries / Organizations.
- They can have lateral entry to diploma course

4. MECHANIC MOTOR VEHICLE

The Mechanic Motor Vehicle (4 Wheeler) course trains the candidate to work skillfully by himself or in the Industrial Workshop. He is conversant in the subjects of Trade Theory, Workshop Calculations and Science especially related to his trade and Engineering Drawing (Components, Assembly and Systems).

After successful completion of the above course, the trainee shall be able to perform the following skills with proper sequence.

1. Mechanic, automobile repairs overhauls and services motor vehicles to keep them in good running condition.
2. Examines vehicle to ascertain nature and location of defects either by running engine or driving vehicle on road.
3. Dismantles partially or completely defective unit or parts of vehicle such as engine, gear box, rear axle, front axle, steering assembly, radiator, etc. according to nature of repairs to be done, using hoist, jack, pullers, hand tools and other devices.
4. Measures essential parts like cylinder, bores piston, sizes crank pins etc. using gauges, micrometer and other precision tools and gets cylinders rebored, liners filled, valve seats refaced, bearings replaced etc. as necessary.
5. Repairs or overhauls and assembles engine such as replacing defective parts, scrapping bearings, setting timing, cleaning injectors, tuning carburetor etc. according to maker's specification.
6. Replaces or repairs defective parts of gear box, rear axle, steering mechanism etc. and sets them right ensuring correct alignment, clearance, meshing of gears, specified movements and operations.
7. Relines and builds brakes, sets wheel alignment, adjust, steering, clutch, hand brakes etc fits new or repaired accessories and body parts, makes electrical connection, and performs other tasks to effect repairs.
8. Lubricate joints, tightens loose parts, tests performance of vehicle by driving on road and makes necessary adjustments to attain desired standard.

Employment Opportunities:

On successful completion of the course the trainee can either get employed, or become a self-employed entrepreneur in any one of the following fields.

<i>a) Wage Employment</i>	<i>b) Self Employment</i>
1. Auto Mechanic	1. Automobile Mechanic
2. Vehicle Service Technician	2. Diesel Fuel System Service Mechanic
3. Auto Fitter in Manufacturing Concern in Assembly Shop or Test Shop	3. Vehicle Operator
4. Mechanic in Auto Manufacturing Industry	4. Spare Parts Salesman
5. Dealers service mechanic	5. Spare Parts Dealer
6. Driver/Vehicle Operator	
7. Spare Parts Sales Assistant / Manufacturers' Representative	
8. Laboratory Assistant	
9. Auto Electrician	

Further learning pathways:

- On successful completion of the course trainee can get themselves enrolled in apprenticeship training in reputed Industrial organisation.
- The qualified candidates have scope for lateral entry into the Diploma courses offered by some of the State Governments

- The qualified candidates can also get themselves upgraded by taking up the second semester at his own convenience in the CTS scheme, since the first semester is common to the following trades.

5. ELECTRICIAN

The Electrician course trains the candidates to install, maintain and repair electrical machinery equipment and fittings in factories, workshops power house, business and residential premises etc. He studies drawings and other specifications to determine electrical circuit, installation details, etc. This course also helps him to position and install electrical motors, transformers, switchgears, switchboards, microphones, loud-speakers and other electrical equipment, fittings and lighting fixtures. He learns to make connections and solders terminals. He tests electrical installations and equipment and locates faults using megger, test lamps etc.

After successful completion of this course the trainee shall be able to perform the following skills with proper sequence.

1. Carry out installation, maintenance & repair works of electrical AC, DC, machinery, lighting circuits, domestic appliances and equipment's used in domestic and industries.
2. Read and interpret the blue print reading (Electrical layout Drawing as per BIS specification & standards)
3. Carry out domestic and industrial wiring, earthing system.
4. Test electrical wiring installation, locate and rectify the faults by using megger and earth tester.
5. Make and solder the wire joints, wires on PCB and do de-soldering technique.
6. Use of electrical instrument(analog/digital) like voltmeter, ammeter, wattmeter, energy meter, wheatstone bridge, oscilloscope, earth tester, tong tester, etc. to measure to different electrical quantities.
7. Armature winding, single & three phase motor winding and small transformer winding.
8. Operate, maintain and test the switch gears, circuit breakers, relays and transformer.
9. Identify and maintain the power generating stations (conventional and non-conventional), transmission and distribution system protecting devices.
10. Construct & test semiconductor devices.
11. Practice on using fitting carpentry and sheet metal tools.
12. Carried out break down, over hauling, routine & preventive maintenance of electrical machines and equipment's.

Employment Opportunities

1. All state Electricity Boards and departments
2. Public sectors, MNC, Private and Govt. Industries
3. License Certificate for self-employment
4. Wiring Contractors
5. Huge job opportunities in power generation, transmission, distribution station.
6. Huge abroad job opportunities

Further Learning Pathways:

- Apprentice training in designated trade
- Craft Instructor certificate course
- License Certificate in all State Electricity Boards
- Diploma in Electrical Engineering

6. DRAUGHTSMAN MECHANICAL

This course will prepare the trainee to work on drawing of machine parts and components independently by taking sketches from shop floor, either manually or by using mechanical design software like Auto CAD 2008, inverters, etc. And specialisations in different designing like Civil, Electrical, Piping and Landscaping. He is conversant in the subjects of Trade Theory, Workshop Calculations and science related especially to the trade.

After successful completion of this course the trainee shall be able to perform the following skills with proper sequence.

1. Trainees will work as a Junior Draughtsman in industry
2. Prepare drawing, design new parts, assembly, details, sections, drawing
3. Knowledge in CAD/CAM.
4. Knowledge of Technical English terms used in industry.

Employment Opportunities:

On successful completion of this course, the candidates shall be gainfully employed in the following industries:

1. Production & manufacturing industries.
2. Structural Fabrication like bridges, roof structures, building & construction.
3. Automobile and allied industries.
4. Service industries like road transportation and railways.
5. Ship building and repair.
6. Infrastructure and defense organizations.
7. In public sector industries like BHEL, BEML, NTPC, etc. and private industries in India & abroad.
8. Self-employment.

Further learning pathways:

- On successful completion of the course trainees can pursue Apprenticeship training in the reputed Industries / Organizations.
- On successful completion of the course trainees can opt for Diploma course.
- On successful completion of the course trainees can opt for CITS course.

7. REFRIGERATION & AIR CONDITIONING TECHNICIAN

The Air Conditioning and Refrigeration Mechanic course is a private course designed to train candidates to work skillfully in any workshop or to even set up a private business. The candidate is conversant in the subject of Trade Theory, Workshop Calculations and Science especially related to his trade and Engineering Drawing.

The course contents are:

1. Handling of Fitters tools and equipment for repairs, measuring and marking tools used for fabrication and simple fitting, chipping, chiseling, grinding, filing and drilling.
2. Electrical circuits, measurement of electrical units of current, voltage, power. Types of circuits – wiring and layout of electrical connections using conductors, switches, fuses, plug, sockets, holders, circuit breakers, etc.
3. Welding (gas and arc) and brazing particularly for the use in the trade.
4. Use of refrigeration Service tools. Knowledge of their applications and types.
5. Cutting, bending, flaring, swaging of copper tubing. Use of different types of reamers to provide proper fitting.
6. Identifying the different systems. Stripping components of refrigeration system, checking for wear and tear and possible repairs and replacements.
7. Servicing and testing of different compressors, valve shaft seals, piston assembly and valve plate assembly.
8. Cutting gaskets of compressor, assembling of compressor parts – Leak and seal testing after pressurizing of whole assembly.
9. Servicing and cleaning of Evaporators and cooling coil.
10. Checking out refrigeration controls, writing of the control system, Servicing of automatic expansion valve, thermostatic expansion valve and capillary Checking out the operation of the related system components.
11. Dismantling of rotary compressor, checking and servicing components and parts. Assembly of rotary compressor and testing. Servicing of water pumps and pipeline valves.
12. Working with different refrigerants of Freon group – knowing their properties, storage and appropriate usage, gas charging using pressurized gas.
13. Window Air Conditioners, Types, functions and applications, trouble shooting, diagnosis and remedies.
14. Handling of gas cylinders, gas regulators, oil charging to compressors, installation of compressors, cooking coil and condenser of refrigeration unit. Wiring of system using conductors, capacitors, fan motors and relay units, switching system, motor speed control.

15. Water coolers: servicing, maintenance and repairs, checking of gas charging system, compressor and fan motors, evaporators and switching relay with thermostatic switch, switching of over load, electrical assembly.
16. Checking leaks, vacuuming the whole system, repair and testing of the system, checking and servicing of capillary tubes and expansion valves, servicing refrigerator cabinets, checking body, liner, door liner, replacing thermal insulating material, adjusting door alignment and service of other related mechanical parts.
17. On site/ Outdoor servicing, maintenance and repairs of Air Conditioners (One and two tons capacity) together with service/ supervisory personnel.
18. Hands on experience at assembly and repair workshop. On site installation and commissioning of Air Conditioners, room and split units, tubing and insulation of refrigeration pipes.
19. Introduction of Central Air Conditioning plant, automobiles Air Conditioning, railways and aircraft Air conditioning.

Projects Works

A. I.T.I. COURSES (NCVT) CERTIFICATE – 1 YEAR

8. MECHANIC AUTO BODY REPAIR

The course conducted by SJITI in collaboration with Toyota is designed to train the trainees in Automotive Body repairing jobs. It includes outer panel dent repair by using Hammer & Dolly. Outer panel dent repair by using washer welding and shrinking method. Outer panel dent filling by putty application. Butt joint by using MIG welding. Plug joint / lap joint by using welding. Lap joint by using spot welding. Basic operations at Toyota Dealer Partners

Employment opportunities:

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

a) Wage Employment

1. Mechanic Auto body repairer
2. Welder in Auto Body shop
3. Gas cutter in Auto body shop
4. Dealers service mechanic
5. Spare Parts Sales Assistant /
Manufacturers' Representative
6. Laboratory Assistant

b) Self Employment

1. Auto Body repair
2. Auto Body welder
3. Spare Parts Salesman
4. Spare Parts Dealer

Further learning pathways:

- On successful completion of the course trainee can get themselves enrolled in industrial apprenticeship training in reputed Industrial organisation.

9. MECHANIC AUTO BODY PAINTING

The course conducted by SJITI in collaboration with Toyota is designed to train the trainees in Automotive Body repairing jobs. It includes outer panel dent filling by putty application. Surface preparation of outer panel before painting. Spraying techniques using air spray gun. Color matching of solid color. Masking methods to avoid overspray mist. Polishing methods of the vehicle. Basic operations at Toyota Dealer Partners.

Employment Opportunities:

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

- | | |
|--|---|
| <i>a) Wage Employment</i> <ol style="list-style-type: none">1. Mechanic Auto body Painting2. Painter in Auto Body shop3. Dealers service mechanic4. Spare Parts Sales Assistant /
Manufacturer's Representative5. Laboratory Assistant | <i>b) Self Employment</i> <ol style="list-style-type: none">1. Auto Body Painter2. Auto Paint Dealer |
|--|---|

Further learning pathways:

- On successful completion of the course trainee can get themselves enrolled in an industrial apprenticeship training in reputed Industrial organisation.

10. MECHANIC TWO & THREE WHEELER

After successful completion of the above course, the trainee shall be able to perform the following skills with proper sequence.

1. Repairs, services and overhauls motor cycles, autorickshaws, scooters; etc., to make and keep them roadworthy.
2. Examines motor cycle or scooter to locate faults by running engine in stationary position or by driving it on road.
3. Dismantles parts such as engine, ignition system, dynamo forks, shock absorbers, gear box etc., as necessary.
4. Grinds valves, sets timings, relines brakes, rebushes steering mechanism, replaces worn out parts, assembles gear box clutch etc.
5. Performs other tasks to effect repair, cleans and sets carburettor, fits driving chain, wheels silencer, kick, gear, clutch and brake levers and other accessories.
6. Adjusts control cables for brake, clutch and accelerator, sets tappets and wheel alignment, tightens loose parts and makes necessary fittings and connections.
7. Changes engine and gear box oil, starts engine and tunes it up.

8. Tests performance of vehicle by driving on road and makes further adjustments to remove defects noticed if any.
9. May assemble motor cycle or auto-rickshaws from assembled parts.

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

a) Wage Employment

1. Mechanic Motor cycle
2. Motor Cycle Service Technician
3. Auto Fitter in Manufacturing Concern in Assembly Shop or Test Shop
4. Mechanic in Auto Manufacturing Industry
5. Dealers service mechanic
6. Driver/Vehicle Operator
7. Spare Parts Sales Assistant / Manufacturers' Representative
8. Laboratory Assistant

b) Self Employment

1. Two/Three wheeler Mechanic
2. Diesel Fuel System Service Mechanic
3. Spare Parts Salesman
4. Spare Parts Dealer

11. PLUMBER

This course is designed to train candidates to work skillfully as a plumber (Sanitary Hardware Fitter). The training period is nine months of institutional training and three months on job training in different enterprises/sites. A trainee receives on job training which enhances his skill. He can work at any plumbing sites at constructions, households or set up his own business. After successful completion of the course a trainee should be able to perform the following tasks :

1. Install European / Indian water closet
2. Install high / low flushing cistern
3. Install urinals, automatic tank, flush valve, wash basin, sink, bathtub, water heater (geyser).
4. Method of installing a bidet, working through range urinals.
5. Laying jointing of drainage pipes.
6. Fixing of gully trap / vent pipe in drainage.
7. Maintaining sanitary fitting.
8. Estimating material requirement for pipe layout for building.
9. Knowledge of Hydro-Pneumatic System.

B. MAHARASHTRA STATE BOARD VOCATIONAL EDUCATION EXAMINATION (MSBVVE) COURSES -1 YEAR

1. AUTOMOBILE MECHANIC TECHNICIAN - Ford Asset

The objectives of vocational education in the context of fulfillment of national goal are to train the students for self-employment.

After successful completion of the above course, the trainee shall be able to perform the following skills with proper sequence.

1. Repairs, services and overhauls motor cycles, auto rickshaws, scooters, etc., to make and keep them roadworthy.
2. Examines motor cycle or scooter to locate faults by running engine in stationary position or by driving it on road.
3. Dismantles parts such as engine, ignition system, dynamo forks, shock absorbers, gear box etc., as necessary.
4. Grinds valves, sets timings, relines brakes, rebushes steering mechanism, replaces worn out parts, assembles gear box clutch etc.
5. Performs other tasks to effect repair, cleans and sets carburettor, fits driving chain, wheels silencer, kick, gear, clutch and brake levers and other accessories.
6. Adjusts control cables for brake, clutch and accelerator, sets tappets and wheel alignment, tightens loose parts and makes necessary fittings and connections.
7. Changes engine and gear box oil, starts engine and tunes it up.
8. Tests performance of vehicle by driving on road and makes further adjustments to remove defects noticed if any.
9. May assemble motor cycle or auto-rickshaws from assembled parts.

Automobile Mechanic Technician can have ample opportunities if skills are learned with commitment.

- Able to seek employment as a Technician in any Automobile concern / Garage .
- Able to start an Automobile repair shop / Garage.

2. AIR CONDITIONER MECHANIC

Air Conditioning Mech. course by MSBVVE, which has been evolved in such a way that after completion of course of 6 months, the student would acquire good working skill suited to work as Air Conditioning Mechanic. He would also gain confidence to handle all types of tools and equipment. The trainee will also be certified with Bosco Tech & Acme Certification.

To develop skills in Air Conditioning repairing, brazing, handling tools and equipment and provide adequate knowledge of maintenance of air conditioner.

The Course will generally comprise of servicing of Air-Conditioner & Refrigerator. This will full-fill the long felt need of availability of lower grade Technician in this field.

After completion of course, he can open service center or work with wage employment.

C. B.VOC. IN AUTOMOBILE SERVICING TECHNOLOGY - 3 YEARS

The Vocational course is a three year program & consists of a combination of Practical, Theory and Generic (provided by TISS) courses. The three year program will be divided into 6 semesters; 2 semesters per year. 1st year will be a Diploma, 2nd year will be Advance Diploma & 3rd year will be a Degree. The program is a work integrated training which include on – the - job training (practical) for 4 to 5 days a week and 1 day of theory training. The courses also include generic module for overall development of the candidate. The 1st two years of this program are in line with the Community College framework of the AICTE. The B.Voc Degree program is designed as per the UGC guidelines. The objective of the course is to provide immediate and definite interventions to improve the lives of the disadvantaged and marginalized youth, especially who are excluded by the formal school education system through appropriate vocational training programmes. The target beneficiaries would include organized and unorganized labour, women, children, dalits and tribals.

The approach adopted by TISS-SVE is called the Work Integrated Training Programme (WITP). This Vocational Educational Programme is being implemented for the first time in India with a focus on job- specific skills rather than providing only a broad based education. The aim is to enable the students to learn the skill by engaging in on - the - job training at real shop floor of the industry/ company along with classroom theoretical training.

Through this “Earn while you Learn” approach model, the trainee may also earn a modest stipend during on – the - job duration of the course. Although, this is not mandatory for any institution, TISS - SVE strongly encourages the training partners to adopt this practice.

Minimum educational qualification is H.S.C. / 10 th +2 years ITI course. It is mandatory that the candidate must be an working professional from Automobile Service Sector. This model gives the candidate a chance to balance their work and study, as the course timings shall be flexible according to mutually agreed timings.

1. To provide judicious mix of skills relating to a profession and appropriate content of General Education.
2. To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.
3. To provide flexibility to the students by means of pre-defined entry and multiple exit points. To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.
4. To provide vertical mobility to students coming out of 10+2 with vocational subjects.

Employment Opportunities:

- Considering the work integrated approach adopted by Tata Institute of Social Science-School of Vocational Education (TISS-SVE) the industry will be open to employ the students which are attached with them for the purpose of training as full time employees.
- The certification levels will lead to Diploma/Advanced Diploma/B. Voc. Degree in Manufacturing Technology (Pharmaceutical Chemistry) and will be offered under the aegis of the TISS.

II. DON BOSCO AND INDUSTRY AFFILIATED COURSES.

A. DON BOSCO TECH AND TOYOTA CERTIFICATE COURSES (1 Year)

1. AUTOMOTIVE BODY REPAIR

The course conducted by SJITI in collaboration with Toyota is designed to train the trainees in Automotive Body repairing jobs. It includes outer panel dent repair by using washer welding and shrinking method. Outer panel dent filling by putty application. Outer panel dent repair by using Hammer & Dolly. Butt joint by using MIG welding. Plug joint / lap joint by using welding. Lap joint by using spot welding. Basic operations at Toyota Dealer Partners

Employment opportunities:

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

a) *Wage Employment*

1. Dealers service mechanic
2. Welder in Auto Body shop
3. Gas cutter in Auto body shop
4. Mechanic Auto body repairer
5. Laboratory Assistant

b) *Self Employment*

1. Auto Body repair
2. Auto Body welder
3. Spare Parts Salesman
4. Spare Parts Dealer

Further learning pathways:

- On successful completion of the course trainee can get themselves enrolled in industrial apprenticeship training in reputed Industrial organisation.

2. AUTOMOTIVE PAINT REPAIR

The course conducted by SJITI in collaboration with Toyota is designed to train the trainees in Automotive Body repairing jobs. It includes outer panel dent filling by putty application. Surface preparation of outer panel before painting. Spraying techniques using air spray gun. Color matching of solid color. Masking methods to avoid overspray mist. Polishing methods of the vehicle. Basic operations at Toyota Dealer Partners.

Employment Opportunities:

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

a) *Wage Employment*

1. Mechanic Auto body Painting
2. Painter in Auto Body shop
3. Dealers service mechanic
4. Laboratory Assistant

b) *Self Employment*

1. Auto Body Painter
2. Auto Paint Dealer

Further learning pathways:

- On successful completion of the course trainee can get themselves enrolled in an industrial apprenticeship training in reputed Industrial organisation.

B. DON BOSCO TECH AND GROHE CERTIFICATE COURSE (1 YEAR)

1. SANITARY HARDWARE FITTER (PLUMBER)

This course is designed to train candidates to work skillfully as a plumber (Sanitary Hardware Fitter). The training period is nine months of institutional training and three months on job training in different enterprises/sites. A trainee receives on job training which enhances his skill. He can work at any plumbing sites at constructions, households or set up his own business. After successful completion of the course a trainee should be able to perform the following tasks :

1. Install European / Indian water closet
2. Install high / low flushing cistern
3. Install urinals, automatic tank, flush valve, wash basin, sink, bathtub, water heater (geyser).
4. Method of installing a bidet, working through range urinals.
5. Laying jointing of drainage pipes.
6. Fixing of gully trap / vent pipe in drainage.
7. Maintaining sanitary fitting.
8. Estimating material requirement for pipe layout for building.
9. Knowledge of Hydro-Pneumatic System.

C. DON BOSCO TECH, ACME AND DAIKIN CERTIFICATE COURSE (2 YEARS)

1. MECHANIC REFRIGERATION & AIR CONDITIONING

The Air Conditioning and Refrigeration Mechanic course is a private course designed to train candidates to work skillfully in any workshop or to even set up a private business. The candidate is conversant in the subject of Trade Theory, Workshop Calculations and Science especially related to his trade and Engineering Drawing.

The course contents are:

1. Handling of Fitters tools and equipment for repairs, measuring and marking tools used for fabrication and simple fitting, chipping, chiseling, grinding, filing and drilling.
2. Electrical circuits, measurement of electrical units of current, voltage, power. Types of circuits – wiring and layout of electrical connections using conductors, switches, fuses, plug, sockets, holders, circuit breakers, etc.
3. Servicing and testing of different compressors, valve shaft seals, piston assembly and valve plate assembly.
4. Cutting gaskets of compressor, assembling of compressor parts – Leak and seal testing after pressurizing of whole assembly.
5. Servicing and cleaning of Evaporators and cooling coil.
6. Checking out refrigeration controls, writing of the control system, Servicing of automatic expansion valve, thermostatic expansion valve and capillary Checking out the operation of the related system components.
7. Use of refrigeration Service tools. Knowledge of their applications and types.

8. Cutting, bending, flaring, swaging of copper tubing. Use of different types of reamers to provide proper fitting.
11. Hands on experience at assembly and repair workshop. On site installation and commissioning of Air Conditioners, room and split units, tubing and insulation of refrigeration pipes.
12. Introduction of Central Air Conditioning plant, automobiles Air Conditioning, railways and aircraft Air conditioning.

Projects Works

D. DON BOSCO TECH AND MOTUL CERTIFICATE COURSE -1 YEAR

1. TWO & THREE WHEELER SERVICE TECHNICIAN

After successful completion of the above course, the trainee shall be able to perform the following skills with proper sequence.

1. Repairs, services and overhauls motor cycles, autorickshaws, scooters; etc., to make and keep them roadworthy.
2. Examines motor cycle or scooter to locate faults by running engine in stationary position or by driving it on road.
3. Dismantles parts such as engine, ignition system, dynamo forks, shock absorbers, gear box etc., as necessary.
4. Performs other tasks to effect repair, cleans and sets carburettor, fits driving chain, wheels silencer, kick, gear, clutch and brake levers and other accessories.
5. Adjusts control cables for brake, clutch and accelerator, sets tappets and wheel alignment, tightens loose parts and makes necessary fittings and connections.
6. Changes engine and gear box oil, starts engine and tunes it up.
7. Tests performance of vehicle by driving on road and makes further adjustments to remove defects noticed if any.
8. May assemble motor cycle or auto-rickshaws from assembled parts.

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

a) *Wage Employment*

1. Mechanic Motor cycle
2. Motor Cycle Service Technician
3. Auto Fitter in Manufacturing Concern in Assembly Shop or Test Shop
4. Mechanic in Auto Manufacturing Industry
5. Dealers service mechanic
6. Driver/Vehicle Operator
7. Spare Parts Sales Assistant / Manufacturers' Representative
8. Laboratory Assistant

b) *Self Employment*

1. Two/Three wheeler Mechanic
2. Diesel Fuel System Service Mechanic
3. Spare Parts Salesman
4. Spare Parts Dealer

E. DON BOSCO TECH AND VOLKSWAGEN CERTIFICATE COURSE

1. AUTOMOTIVE SERVICE ADVISOR (3 months)

The Automotive Service Advisor course trains the trainee for service core process, customer complaint handling, service KPI's, customer satisfaction survey's, telephone etiquettes, email communication, body language , personal grooming, service marketing.

Along with this it also makes the trainee conversant with basics of automobiles, warranty policy & procedures, diagnostic check sheet, repeat repair reduction, brand & product orientation. Dealer visits for exposure after skill training arranged by Volkswagen.

F. DON BOSCO TECH AND SCHNEIDER CERTIFICATE COURSE

1. ADVANCED INDUSTRIAL ELECTRICAL (1 week)

SJITI has collaborated with Schneider Electric foundation and French Ministry of Education to empower advanced industrial electrical training. Duration of each module is a week. The module can be customized according to needs.

Module 1 (Safety and Security) : At the end of the module trainee will be able to do electrical work following safety procedures, choose right protective devices according to load and circuit characteristics, implement earthing system.

Module 2 (Domestic Insulations) : At the end of the module trainee will be able to choose and carry out a home automation system and energy efficiency solutions.

Module 3 (Industrial Insulations) : At the end of the module trainee will be able to read and design industrial electrical diagrams, make industrial wiring according to industrial standards, choose and carry out an electronic starter and electronic drivers.

III. DON BOSCO TECH CERTIFICATE COURSES

1. AUTOTRONICS TECHNICIAN (6 months)

1. After successful completion of the above course, the trainee shall be able to perform the following skills with proper sequence.
2. Installs, repairs replaces and overhauls wiring, starters, generators, distributors and other electrical equipment of motor vehicles.
3. Examines vehicle battery, checks voltage and specific gravity using special equipment such as voltmeter hydrometer, heavy discharge tester, etc. and ensures that battery is in good condition.
4. Checks vehicle wiring, locates faults and rectifies defects by replacing damaged wire or connecting ends with insulation tape.
5. Starts engine to check whether alternator is charging correctly, and if distributor, condenser coil and cut out are functioning properly.
6. Estimates nature of defects and reports components to be replaced or repaired.
7. Dismantles and repairs electrical units and components such as generator, distributor etc. where required.

8. Replaces repaired kit or unit in vehicle and connects it with battery.
9. Conducts thorough examination of various electrical fittings such as lights, panel indicators, fuel pumps, etc and rectifies defects.
10. Checks condition and makes necessary adjustments. May do armature winding. May drive vehicles on road. May charge batteries.
11. Fits, assembles and repairs various kinds of electronic equipment in factory or workshop or at place of use.
12. Examines drawings and wiring diagrams; checks parts for accuracy of fit and minor adjustments; assembles parts or mounts them on chassis or panels with aid of hand tools; Installs and connects wiring, soldering joints equipment, diagnoses faults with aid of electronic testing equipment;
13. Dismantles equipment if required and replaces faulty parts or wiring.

Training Stand:

1. Functional Model – Sensors/ Actuators, CAN BUS System, Locktronic CAN BUS System (Basic CAN BUS System Learning), Dual Zone Climatronic Control.
2. Working with maintenance plans, circuit diagrams, circuit diagrams, terminal designations, cables, cable connections.
3. Documenting work results and evaluating by comparing with calculated sizes.
4. Document, analyze and evaluate the measured values, signals and error logs.
5. Take advantage of the possibilities of workshop-standard measuring and diagnostic devices.
6. Identification of individual components and getting to know their operating characteristics and parameters.
7. Check individual components and decide on necessary repair measures.
8. Documenting work results and evaluating by comparing with calculated sizes and manufacturer specifications.
9. Working with circuit diagrams, circuit diagrams, terminal designations, cables, cable connections.
10. Take advantage of the possibilities of workshop diagnostic equipment.
11. Inclusion of problem-solving strategies or alternatives in the diagnosis.
12. Check individual components and decide on necessary repair measures.
13. Encoding ECUs, customizing software releases, and checking data communications lines in compliance with legal and manufacturer-specific regulations.
14. Testing and repair of mechanical, electrical and electronic circuits and systems.
15. Measuring and assessing electrical quantities and signals.
16. Processes in the control and in the control circuit.
17. Functions of sensors and actuators according to the EVA principle (input processing output)
18. Sequential and selective final control diagnosis, basic setting of actuators
19. Constructing a fully functional CAN BUS system with 5 MIAC Electronic Control Units (ECUs). Can be simulated z. B. Instrument panel ECU, Front ECU, Powertrain ECU and rear ECU. The fifth MIAC Electronic Control Unit is used for system diagnostics (Gateway) and for displaying CAN bus messages. It also allows you to enter errors. Tasks include, for example, building a fully functional CAN bus system, inserting faults, and troubleshooting with hardware and software fault diagnosis tools to understand and learn about the various procedures and practices.

Employment opportunities:

On successful completion of the course the candidates can either get employed, or become a self-employed Entrepreneur in any one of the following fields.

a) Wage Employment

1. Auto Electrician
2. Spare Parts Sales Assistant
/ Manufacturers' Representative
3. Laboratory Assistant
4. Diagnostic Mechanic
5. Car AC Mechanic

b) Self Employment

1. Diagnostic Mechanic
2. Spare Parts Salesman
3. Spare Parts Dealer

2. COMPUTERISED NUMERICAL CONTROL PROGRAMMING & OPERATING (90 hrs)

This course trains the candidate to develop skills in CNC programming to boost employability. It teaches the concepts and operations of CNC to candidates who have passed I.T.I./NCVT in Trade of Turners and Machinists or 3 years of work experience in Industry.

The course contents :

1. Computer Basic Training CNC Fundamental Classification and working system.
2. Difference between CNC and NC. Advantages and disadvantages of CNC.
3. What is a G code and M code and how to use it. How to use G90 (ABS) & G91 (INC) Group 1G code.
4. Simple programming on Graph paper.
5. How to use NC verify software. How to use G02 and G03 with I JK (circular I.P.).
6. How to use subroutine and file editing. Introduction of CNC machine & controlling system.
7. How to take Data Settings. How to use all cycles. Planning of job operation, tool path, simulation, setting, clamping and holding.
8. How to use CNC & DNC. Full practical on industry grade and CNC milling machine. Hands on experience on programming and processing of Industrial jobs CNC milling machine (with Siemens Controller and Preventive maintenance).

3. DRAUGHTSMAN MECHANICAL & CAD (2 Year)

Basic Mechanical Drafting & Modeling with Autocad and Solid Works.

1. Able to Read & draw various geometrical figures.
2. Able to construct various curves, scales, lines.
3. Able to draw Views of different object in both 1st & 3rd angle projection method
4. Able to draw isometric & oblique projection plans, solid & objects, sectional views of different object.
5. Able to develop surface of various solid object in parallel & Radial Method
6. Able to draw different curves obtained at intersection & interpenetration of solids
7. Able to Read & draw simple Machine Parts & Industrial Drawings.

8. Do the work on Mechanical 3D Modeling & design.
9. Apply this knowledge to understand the engineering design work flow process in the Manufacturing Industry.
10. Acquire knowledge of 3D design visualization.

4. DOMESTIC WIREMAN (1 Year)

The Domestic Wireman course enables a student to carry on any electrical maintenance on both Domestic and Industrial Installation & Equipment.

The course contents include:

- 1 Hand tools specifications, care and maintenance.
- 2 Fundamental of electricity wires and cables types.
- 3 Electrical circuit (AC & DC) cells and batteries.
- 4 Wiring circuits, repair of domestic wiring and appliances.
- 5 Should be able to connect, test and run DC motor.
- 6 To study different types of meters, magnetism, resistors, transformers DC generators, DC motors, AC motors (1 ϕ & 3 ϕ), alternator, converter, inverter, rectifier circuits, different types of lamps, electrical measuring instruments, diodes, transistors, amplifiers, oscillators.
- 7 Carry out simple winding, rewinding of detected faults in both AC & DC machines.
- 8 Should be able to repair lighting circuits, horn circuits etc.
- 9 Working principles of UJT, FET, SCR, DIAC & TRIAC Stabilizer.
- 10 Carry out commercial lighting for decorators, etc.

5. ELECTRONICS MECHANIC (1 Year)

The Electronics Mechanic is a private course certified by the institute. It trains the candidate to skillfully work in the industry. He is conversant in the subjects of Trade Theory, Workshop Calculations & Science especially related to his trade, Engineering Drawing (Circuit Diagrams, Component Layout, Test Points, etc.) and Workshop Practical.

6. FITTERS (2 Years)

The Fitters course with duration of two years entails the following job descriptions, which will qualify a person to skillfully work in any mechanical workshop. He is conversant in the subject of his trade with theoretical knowledge, has the ability for calculations related to workshop practice and can execute fabrication work from Blue Print reading of Engineering Drawings.

7. MACHINIST (2 Years)

The Machinist course over a two-year period trains the candidate to skillfully work on various precision machine tools used in Machine Shop. He is conversant in the subjects of Trade Theory, Workshop Calculations and Science related especially to this trade, Engineering Drawing (Blue Print reading of Orthographic and Isometric views according to specifications) and Workshop Practical.

Our collaborators in Training & Placement



Our Associates



St. John Bosco was born in Turin, Italy, in 1815. Two years later his father died. This future saint, raised by his mother, experienced the pains of poverty at a very tender age. John's life work was inspired by these early years. He wanted to become a priest, especially to assist youth. In order to pursue his dream, John had to leave home at a young age to join the city school. Being bigger than his classmates, he was often the object of much ridicule. Little did they know what it cost him - earning whatever he could after school by working as a tailor or a cobbler, and studying by the light of a candle at night.

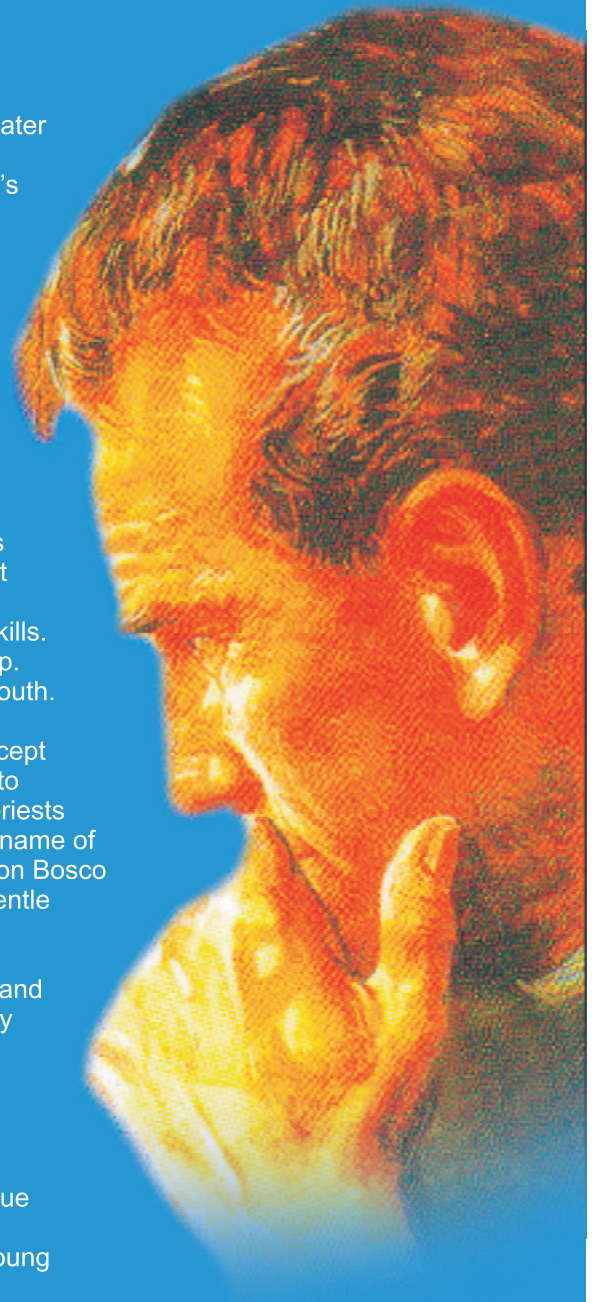
John Bosco – commonly called Don (Father) Bosco was ordained a priest at the age of twenty-six. He immediately began his work with orphans. He opened a hospice for boys where his mother served as the housekeeper. Within a short time 150 homeless boys who were living with him were instructed in religion and given opportunities to learn trade skills. Workshops for tailoring, shoemaking and printing were set up. Don Bosco trained his own staff to assist in the care of the youth.

Those associated with Don Bosco and his work began to accept him as their father and guide. Some expressed their desire to become like him. And so, the Salesian Society comprising priests and lay brothers was born. (The word 'Salesian' is from the name of the patron, St. Francis de Sales, a saint much admired by Don Bosco for his conversion from an angry young man to a kind and gentle bishop.

The Salesians dedicated themselves to the care of orphans and other boys who were homeless. Their mission spread rapidly from northern Italy to the entire country. When Don Bosco died in 1888, the congregation, which was only twenty years old, numbered over 1000 members. It had spread to seven countries in Europe and South America.

The greatest gift that Don Bosco has left posterity is his unique way of educating, a method that was inspired by his one magnificent obsession: "It is enough to know that you are young and abandoned for me to love you very much."

More than a century after the death of Don Bosco, thousands of people have dedicated themselves to the continuation of his apostolic love for young people all over the world. Their mission is to be "signs and bearers of God's love to the young."



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