



Maharashtra State Board of Technical Education's
MAHARASHTRA SKILL DEVELOPMENT CENTER



कौशल्य विकासासाठी
कौशल्य सर्वासाठी

Maharashtra Skill Development Center

The Maharashtra State Board of Technical Education acknowledging the critical importance of Skill Development of the working class as an instruction for States overall development remains deeply committed to dissemination of skills sets, both as a crucial engine of Eco growth & as a tool for increasing productivity, solution for unemployment, un-employability and improved quality of life for common man. Co-ordinate and concentrated effort is needed for reaping the benefits of various Skill Developments initiatives to achieve this objective the concept of Multi Skill Development Center is formed and wrested with the responsibility of the implementation of this mass Human Resource development initiative through setting up such center for the Skill Development in different domain

Salient features

The MSDC offers short duration vocational skill development courses in order to make the unemployed unskilled youth to skillful employable ready to work in industry. The focus is also on the personality development, Communication skill and behavioural sciences. The emphasis is on developing the mindset of the student either to work in the industry or for the entrepreneurship development.

The programme being offered are :-

Dialysis Technician

- Basic of Science
- Principle of Dialysis and History of Dialysis
- Physiological Principle of Dialysis
- Dialysis Dylizer and processing
- Documentation & AOR Process
- Renal Anatomy and Physiology
- Computing in Dialysis
- Hemodialysis Equipment
- Medical Waste Management
- Exposure Control Plan, Bloodborn Pathogens and Introduction to Infection Control



Robotics

- Basic concepts of robotics which includes scope and application of robotics, system components and schematic design.
- Electrical and mechanical systems which includes AC and DC circuits, hydraulic and pneumatic systems etc.
- Control system which includes transfer function of simple electrical and mechanical systems. Control system components like servomotors, servomechanisms, stepper motors etc.
- Programmable Logic Controller(PLC) which includes necessity of PLC, block diagram of PLC, types of PLC, basics of ladder programming.
- Robotic systems which includes types of robots, work envelope, degree of freedom, robot end effectors etc.



Paint Technician

- Color Theory
- Graphics Editing Techniques
- Importance of paint in Automotive Industry
- Physical properties of paints
- Different types of painting Process
- Process for spray application for body in white
- Function of different type of fire fighting Equipment and safety precaution.
- Factors affecting paint application techniques
- Project Work



CNC Programming / Operator

- Fundamentals of CNC
- Basic concept of CNC
- Axis designation
- Program format for TURNING / MILLING
- Axes convention
- Turret features
- Program structure
- Compensation commands
- Sub-programs
- Canned Cycles - single cut
- Structure of NC & CNC machine



Tool & Diamaker / Fitter / Machinist

- Introduction and use of different tools and equipments.
- Introduction to various machine tools, lathe m/c, milling m/c, drilling m/c, grinding m/c, shaping m/c, slotting m/c etc., its construction and working, different types of work holding devices and tool holding devices, operations performed etc.
- Different types of cutting tools used, its cutting geometry, and sharpening techniques.
- Selection of speed, feed and depth of cut for the machining of various materials on different machine tools.
- Introduction and use of various measuring instruments and measuring techniques.



Fork Lift Operator

- Knowledge of types of vehicles used in workplace.
- Basic types and functions of forklifts.
- Truck design consideration and safety rating.
- Purpose and importance of pre-operational checkouts.
- Understanding the elements of safe movements of a powered industrial truck.
- Elements of load lifting safety.
- Elements and procedures of safely refueling.
- Procedure of charging the batteries.



Automotive Mechatronics

- Car Layout which includes transmission system in rear wheel drive, front wheel drive, four wheel drive with mounting of different components such as engine, clutch, gear box, propeller shaft, rear axle, suspension system, braking system, steering system, wheels and tyres etc.
- Car electrical system includes battery starter, alternator, ignition coil, wiring diagram of various electrical accessories and lighting systems.
- Sensors and actuators includes speed sensor, temperature sensor, motion, acceleration sensors, infrared light, motor, valve, relays etc.
- Engine management system includes fuel ignition and injection system function, engine speed signal function, synchronizing fuel injection and firing order function, fuel supply function, electronic accelerator function etc.



Beauty Therapy & Hair Dressing

- Skin beauty treatment
- Skin care & hair care
- Party makeup & bridal makeup
- Bridal Mehendi, bridal polishing
- Hot stone therapy
- Anti tanning treatment
- Pigmentation treatment
- Antiwrinkle treatment
- Pimples treatment

Sewing Machine

- Introduction to sewing machine and function of important parts.
- Knowledge of basic of sewing machine control which includes stitching on determined straight line(long/short distance), stitching on various shapes (curves and angles).
- Knowledge of threading of sewing machine .
- Knowledge of basic seams used on garments such as French seam, Flat felled seam, edge binding, top stitching on seams, edge top stitching.
- Knowledge of preparation of trousers and Shirts with all accessories which includes front pockets.



Refrigeration / AC Technician

- Introduction to basic refrigeration which includes familiarization and use of general and special tools used in refrigeration, various equipments of vapour compression refrigeration system.
- Working on soft copper tubing like cutting, bending, flaring, swaging, pinching etc., brazing of tube joints.
- Assembly, disassembly and testing of direct cooled domestic refrigerator, frost free refrigerator. Familiarization of electrical and mechanical components, gas charging in the system and installation.
- Introduction, construction and working window/room air conditioner, split air conditioner, cassette air conditioner, package air conditioner etc.
- Vapour compression, refrigeration, cycle and its components
- Service & Maintenance of air conditioners
- Parts of a Refrigerator (electrical and non-electrical).
- Checking compressor and refrigerator electrical circuits.

Wireman & Electrician

- Knowledge of hand tools, measuring tools, electrical equipments, cables, wires and electrical accessories used in industrial wiring.
- Knowledge of wiring diagram residential, industrial and O.H. lines
- Knowledge of IE rules and regulations.
- Use of fuses, MCB and its selection.
- Knowledge of properties of magnetizing metal.
- Types and importance of earthing.
- Knowledge of Quality Assurance required in Electrical work.
- Energy saving concept.



Mobile Repairing

- Basics of mobile phone repairing which includes assembling and disassembling of different types of mobile phones, use of latest tools and equipments, understanding and testing various electronic components.
- Knowledge of mobile software which includes understanding different software faults, formatting of virus affected handsets, unlocking of different handsets through secret codes and software.
- Fault finding and trouble shooting, section wise fault finding and repairing of hardware and software problems.
- Support program which includes how to open and manage mobile repairing business, how to deal with customers etc.



Security Guard

- Importance of Security for Society, Institution and corporate.
- Risk and threats to society & corporate
- Record & Report incidence
- Communication skill
- Assisting in lodging of complaint & first information report
- Understanding legal & illegal action
- Emergencies
 - a) Accident b) Medical c) Fire incidence



Information Technology Center

- Information Technology & You
- Overview of the Internet & Web
- Introduction of Basic application software
- Introduction of Specialised application software
- Overview of system software
- Input & Output