

Course Brochure

(External Training Wing)



Gedee Technical Training Institute
Coimbatore





**“To Learn for 25 years, though not in school alone. To earn for 25 years.
To spend what I have learnt and earned after these 50 years for
the welfare of others.”**

- Founder Sri. G. D. Naidu

OUR MISSION

**“TO ENHANCE THE SKILL SET OF A PERSON
ENABLING THEM TO PERFORM BETTER
IN THEIR JOBS AND CONTRIBUTE THE
OVERALL PRODUCTIVITY OF THE
PARTICIPATING INDUSTRY”**

Courses Available

GTI / Ext 01 Safety

GTI / Ext 02 Measuring Practice

GTI / Ext 03 General Maintenance

GTI / Ext 04 Technical Awareness for diploma holders / ITI holders

GTI / Ext 05 Grade skill training program for diploma holders

GTI / Ext 06 Shop floor practice for Graduate Engineers

GTI / Ext 07 Practical multi-skill training (Lathe, Milling, Surface Grinding)

GTI / Ext 08 Manufacturing of Press tools - Skill upgradation

GTI / Ext 09 Manufacturing of Moulds - Skill upgradation

GTI / Ext 10 Hydraulics & Electrohydraulics

GTI / Ext 11 Pneumatics & Electro pneumatics

GTI / Ext 12 Programmable Logic Control (PLC)

GTI / Ext 13 Basics on Robotics

GTI / Ext 14 Analog & Digital Servo Technology

GTI / Ext 15 Embedded Technology & Automation (Basic)

GTI / Ext 16 Laser welding

GTI / Ext 17 Mould polishing

GWI / Various - Welding Technology

Module

- ❖ Introduction to safety
- ❖ Handling of large & heavy objects
- ❖ Hazardous materials
- ❖ Electrical safety
- ❖ LOTO & TO
- ❖ Emergency preparedness
- ❖ Confined space
- ❖ First aid
- ❖ Fire
- ❖ Personal protective equipments
- ❖ Work at height



Well experienced staff
4 hours on-site demonstration

Duration : 16 hrs (2days)

Batch size : Minimum 12 participants



Technical Awareness for ITI/Diploma Holders (Mechanical)

Module

- ❖ Metrology
- ❖ Workshop Technology
- ❖ Bench work
- ❖ Machine shop practice
 - ❑ Turning
 - ❑ Milling
 - ❑ Surface grinding



Duration : 80hrs (10days)

Eligibility : ITI / Diploma

Grade skill training program for Diploma holders

Module

- ❖ Safety
- ❖ Tools & Equipments
 - ❑ Safe use of portable power tools
 - ❑ Use of pipe bending, sheet bending
 - ❑ Pipe threading & dies
 - ❑ Types of conduit pipes
 - ❑ Use of knock-out tools
- ❖ Fasteners and bearings
- ❖ Hand skills improvements
 - ❑ Print reading
 - ❑ Fits and tolerance & metrology
 - ❑ Filing and fitting practice
- ❖ Maintenance



Duration : 200 hrs (25 days)

Eligibility : Diploma

Shop floor practice for Graduate Engineers

Module

- ❖ Manufacturing technology
- ❖ Workshop practice on bench fitting
 - ❑ Filing practice
 - ❑ Marking
 - ❑ Punching
 - ❑ Drilling
 - ❑ Counter sinking/boring
 - ❑ Tapping
 - ❑ Self evaluation



Duration : 80hrs (10days)

Eligibility : Graduate

Practical Multi-skill training (Turning, Milling, Surface grinding) for ITI/Diploma holders

Module :

❖ Turning

- ❑ Plain turning
- ❑ Step turning

❖ Milling

- ❑ Plain Milling
- ❑ Step Milling

❖ Surface grinding

- ❑ Plain grinding
- ❑ Step grinding

❖ Assembly & Fitment



Duration 160 hrs (20 days)

Eligibility : ITI / Diploma

Manufacturing of Press tools - Skill upgradation

Press tool making is a highly skilled and specialized field and requires intricate and precise fitment and machining of jobs with exposure to modern techniques. In today's scenario, most engineering industries manufacture precision sheet metal parts in mass production. This training program is designed to impart knowledge and skills to manufacture press tools and to clarify their day-to-day doubts while they design and utilize press tools.



Learning Objectives :

- ❖ To develop the knowledge in the area of press tools
- ❖ To explain the function of various parts of press tool
- ❖ To impart the knowledge of design factors of press tool
- ❖ To make the participants to understand the difference between various types of press tool
- ❖ To guide the participants about manufacture of press tool

Content :

- ❖ Fundamentals of press tool
- ❖ Application of press tool in modern world
- ❖ All types of press tool
- ❖ Design aspect
- ❖ Manufacturing of press tool and elements
- ❖ Demand in today's industrial scenario

Duration : 480 Hrs (60 days)

Eligibility : ITI Fitter / Machinist

Manufacturing of Moulds - Skill upgradation

Mould making is a highly skilled and specialized field and requires intricate and precise fitment and machining of jobs with exposure to modern techniques. In today's scenario, most engineering industries manufacture plastic parts in mass production. This training program is designed to impart knowledge and skills to manufacture mould and to clarify their day-to-day doubts while they design and utilize moulds.



Learning Objectives :

- ❖ To develop the knowledge in the area of moulds and plastics
- ❖ To explain the function of various parts of mould
- ❖ To impart the knowledge of design factors of mould
- ❖ To make the participants to understand the difference between various types of moulds
- ❖ To guide the participants about manufacture of moulds

Content :

- ❖ Fundamentals of plastics
- ❖ Application of moulds in modern world
- ❖ All types of moulds
- ❖ Design aspect
- ❖ Manufacturing of mould and its elements
- ❖ Demand in today's industrial scenario

Duration : 480 Hrs (60 days)

Eligibility : ITI Fitter / Machinist

Measuring Practice

Module :

- ❖ Introduction to the measuring tools
- ❖ Acquiring skills in measuring
- ❖ Exposure in handling all basic measuring equipments



Duration : 16 hrs (2 days)

Laser Welding

Module :

- ❖ Welding methods
- ❖ Laser welding Techniques
- ❖ Pulse welding Techniques
- ❖ Edge building Techniques
- ❖ Surface building techniques



Duration : 24 hrs (3 days)

Eligibility : ITI/Diploma holders, Mould repair shop personnel

Mould Polishing

Module :

- ❖ Techniques of surface finishing
- ❖ Selection of abrasives
- ❖ Selection of machine and tools
- ❖ Surface measuring tools
- ❖ Techniques in hand polishing
- ❖ Modern mould polishing techniques



Duration : 80hrs (10 days)

Eligibility : Anyone who has Knowledge on basic mould polishing methods

Hydraulics and Electro hydraulics

Module :

- ❖ Symbols and Standards
- ❖ Hydraulic pumps
- ❖ Cylinders
- ❖ Motors
- ❖ Directional control valves
- ❖ Flow and pressure control valves
- ❖ Filters and reservoirs
- ❖ Hydraulic fluids
- ❖ Fluid power seal
- ❖ Accumulators
- ❖ Pipe work
- ❖ Experiments



Duration : 40hrs (5 days)

Eligibility : ITI / Diploma / Degree

Pneumatics and Electro Pneumatics

Module :

- ❖ Physical Fundamentals of air
- ❖ Function and Application of Pneumatic Components
- ❖ Designation & Drawing of Pneumatic Components
- ❖ Drawing Pneumatic Circuit Diagrams
- ❖ Pneumatics in different types of Control Systems
- ❖ Valves – Direction, Pressure, Flow, Time Delay
- ❖ Actuators and Output Devices
- ❖ Step Diagram & Process Control systems
- ❖ Fault Finding in Pneumatic Systems
- ❖ Safety Regulations



Duration : 40hrs (5 days)

Eligibility : ITI / Diploma / Degree

Programmable Logic Control (PLC)

Module :

1) Introduction to PLC hardware

- ❖ Architectural Evolution of PLC
- ❖ Role of PLC in automation
- ❖ Introduction to the field devices attached to PLC
- ❖ PLC Fundamentals - (Block diagram of PLC's)
- ❖ Detail information about PLC components
- ❖ Various ranges available in PLCs
- ❖ Types of Inputs & outputs
- ❖ Source Sink Concept in PLC
- ❖ Concept of flags
- ❖ Scan cycle execution



2) Introduction to PLC programming software

- ❖ Addressing concepts
- ❖ Introduction to bit, byte & word concept
- ❖ Programming instructions arithmetic and logical
- ❖ Upload, download, Monitoring of programs
- ❖ Forcing I/P & O/P
- ❖ Monitoring / Modifying data table values
- ❖ Standard procedure to be followed in wiring / writing ladder etc
- ❖ Hands on experience on writing programs
- ❖ Case studies for conveyer, motors control, timer & counter applications etc.
- ❖ Troubleshooting and fault diagnostics of PLC
- ❖ Documenting the project
- ❖ Program assignments for real time applications



Duration : 80hrs (10 days)

Eligibility : ITI / Diploma / Degree

Basics on Robotics

A robot is a reprogrammable, multi-functional manipulator designed to move material, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of tasks

Content :

❖ **Material-handling applications :**

- ❑ Involve the movement of material or parts from one location to another.
- ❑ It includes part placement, palletizing and/or depalletizing, machine loading and unloading.

❖ **Processing Operations :**

- ❑ Requires the robot to manipulate a special process tool as the end effectors.

❖ **Assembly Applications :**

- ❑ Involve part-handling manipulations of a special tools and other automatic tasks and operations.

❖ **Inspection Operations :**

- ❑ Require the robot to position a work part to an inspection device.
- ❑ Involve the robot to manipulate a device or sensor to perform the inspection.



Duration : 80hrs (10 days)

Eligibility : Diploma / Degree

Analog & Digital Servo technology

Module :

- ❖ Servo fundamental
- ❖ Speed control
- ❖ Position control
- ❖ Analog control techniques
- ❖ Digital control techniques



Duration : 40hrs (5 days)

Eligibility : ITI / Diplôme / Degree

Embedded Technology and Automation (Basics)

Module :

- ❖ Basic concepts of embedded automation product development
- ❖ 8-bit CISC & RISC micro controller
- ❖ Keil & MP Lab development tool
- ❖ Interfacing
- ❖ Experiments
- ❖ Projects



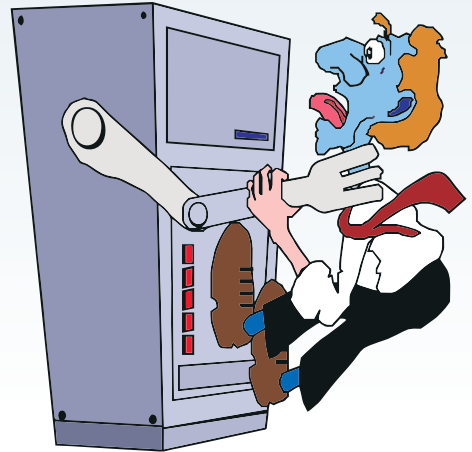
Duration : 80 hrs (10 days)

Eligibility : ITI / Diploma / Degree

Maintenance

Module :

- ❖ Safety
- ❖ Housekeeping
- ❖ Maintenance
- ❖ Types of maintenance
- ❖ Importance and application
- ❖ Frequency and monitoring
- ❖ Maintenance check list
- ❖ History card
- ❖ Spare parts management
- ❖ Stores and inventory
- ❖ Workshop training



Duration : 24 hrs (3 days)

Batch size : minimum 12 participants

Design of Injection Mould

Code : GTI/ETD 18

In today's scenario, most engineering industries manufacture plastic parts in mass production. 80% of the cost of the product is determined in design stage. So a designer is an important part of the product cycle. This program is designed to impart knowledge and skill to design mould and clarify their day-to-day doubts while they design the moulds.



Learning Objectives :

- ❖ To develop the knowledge in the area of moulds and plastics
- ❖ To explain the function of various parts of mould
- ❖ To impart the knowledge of design factors of mould
- ❖ To impart the step by step procedure for design a mould
- ❖ To make the participants to understand the difference between various moulds

Contents :

- ❖ Fundamentals of plastics
- ❖ Application of moulds in modern world
- ❖ All types of moulds
- ❖ Design aspects
- ❖ Design of various number of cavities.
- ❖ Design calculations

Duration : 480 hrs(60 days)

Eligibility : ITI/Diploma/BE mechanical/Mechanical Engineering students

Welding Technology

Fundamental welding skills in the major processes should be acquired before specializing in more advanced techniques. Such courses are found in this welding program. This program covers all processes and prepares the participants for advanced and specialized positions.

Courses Offered :

1. Familiarization courses (Code : GWI-01-G/S/M/T)

Module :

- ◆ Safety in welding
- ◆ Types of welding
- ◆ Methods and types of joints
- ◆ Beading practice
- ◆ Down-hand 1F position welding practice



Duration : 40 hrs (1 week) each for Oxy-Acetylene gas / Arc / MIG / TIG welding

Eligibility : Anyone interested in welding

2. Foundation Course (Code: GWI-02-G/S/M/T) (approved by Indian Institute of Welding)

Module :

- ◆ Safety in welding
- ◆ Welding symbols
- ◆ Methods, types of welding and positions
- ◆ principles of individual processes
- ◆ Classification of different types of electrodes



Welding Technology

- ◆ Beading practice
- ◆ Welding practices up to 3F positions
- ◆ Welding practice in 1G position
- ◆ Examinations



Duration : 120 hrs (3 weeks) for each process of Oxy-Acetylene gas / Arc / MIG/TIG welding

Eligibility : Minimum 8th standard pass and 17 years of age

3. Industry - Oriented Courses (approved by Indian Institute of Welding)

a. MMAW STRUCTURAL WELDING-Standard course (Manual Metal Arc Welding) (Code: GWI-03-SM)

Module :

- ◆ Safety hazards in welding
- ◆ Welding symbols
- ◆ Methods, types of welding and positions
- ◆ Principles of Oxy-Acetylene Gas welding and cutting
- ◆ principles of MMAW (Arc) processes
- ◆ Classification of different types of electrodes
- ◆ Beading practice
- ◆ Welding practices up to 4F positions
- ◆ Welding practice in 4G position
- ◆ Practice fillet weld on stainless steel
- ◆ Practice butt weld on stainless steel in 1G position



Welding Technology

- ◆ Mock test in 2F & 3F positions
- ◆ Mock test in 1G & 3G positions
- ◆ Examinations

Duration : 400 hrs (10 weeks)

Eligibility : Minimum 8th standard pass and completed 17 years of age

b. GMAW STRUCTURAL WELDING-Standard course (Gas Metal Arc Welding or MIG welding)(Code: GWI-03-MS)

Module :

- ◆ Safety hazards in welding
- ◆ Welding symbols
- ◆ Methods, types of welding and positions
- ◆ Principles of Oxy-Acetylene Gas welding and cutting
- ◆ principles of MMAW (Arc) processes and GMAW process
- ◆ Classification of different types of electrodes used in MMAW and GMAW
- ◆ Beading practice for MMAW and GMAW
- ◆ Welding practices up to 3F positions in MMAW
- ◆ Welding practice in 1G position in MMAW
- ◆ Welding practice up to 3F and 3G positions in GMAW using globular / Dip/Spray transfer mode
- ◆ Practice fillet weld on stainless steel
- ◆ Practice butt weld on stainless steel in 1G position



Welding Technology

- ◆ Mock test in 2F & 3F positions
- ◆ Mock test in 1G & 3G positions
- ◆ Examinations

Duration : 400 hrs (10 weeks)

Eligibility : Minimum 8th standard pass and 17 years of age

c. **AUTO SECTOR WELDING-Standard course (Code: GWI-03-MA)**

Module :

- ◆ Safety hazards in welding
- ◆ Welding symbols
- ◆ Methods, types of welding and positions
- ◆ Principles of Oxy-Acetylene Gas welding and cutting
- ◆ principles of MMAW (Arc), GMAW and GTAW processes
- ◆ Classification of different types of electrodes used in MMAW, GMAW & GTAW
- ◆ Beading practice for MMAW, GMAW & GTAW
- ◆ Welding practices up to 3F positions in MMAW, GMAW & GTAW
- ◆ Welding practice in 1G position in MMAW & GTAW
- ◆ Welding practice up to 3F and 3G positions in GMAW using globular / Dip / Spray transfer mode
- ◆ Practice fillet weld on stainless steel
- ◆ Practice butt weld on stainless steel in 1G position
- ◆ Mock test in 2F & 3F positions for MMAW, GMAW & GTAW



Welding Technology

- ◆ Mock test in 1G & 3G positions for MMAW, GMAW & GTAW
- ◆ Examinations

Duration : 400 hrs (10 weeks)

Eligibility : Minimum 8th standard pass and 17 years of age

d. **BOILER & PRESSURE VESSEL Welding-Standard course (Code: GWI-03-MA)**

Module :

- ◆ Safety hazards in welding
- ◆ Welding symbols
- ◆ Methods, types of welding and positions
- ◆ Principles of Oxy-Acetylene Gas welding and cutting
- ◆ principles of MMAW (Arc), GMAW and GTAW processes
- ◆ Classification of different types of electrodes used in MMAW, GMAW & GTAW
- ◆ Beading practice for MMAW, GMAW & GTAW
- ◆ Welding practices up to 3F positions in MMAW, GMAW & GTAW
- ◆ Welding practice in 1G position in MMAW & GTAW
- ◆ Welding practice up to 3F and 3G positions in GMAW using globular / Dip / Spray transfer mode
- ◆ Practice 5G & 6G position on pipe in GTAW process
- ◆ Practice fillet weld on stainless steel
- ◆ Practice butt weld on stainless steel in 1G position
- ◆ Mock test in 2F & 3F positions for MMAW, GMAW & GTAW

Welding Technology

- ◆ Mock test in 1G & 3G positions for MMAW, GMAW & GTAW
- ◆ Mock test in 6G position for GTAW
- ◆ Examinations

Duration : 480 hrs (12 weeks)

Eligibility : Minimum 8th standard pass and 17 years of age

4. Special Courses (Code: GWI-04-TA/TS/TC/ML) (approved by Indian Institute of Welding)

- GTAW on Aluminum
- GTAW on Stainless Steel
- GTAW on Copper
- GMAW on Aluminum



Duration : 1 week each

Eligibility : Any person who has experience in carbon steel welding

5. Regular Courses (Code: GWI-06-C) (approved by Indian Institute of Welding)

Module :

Combination of

- ◆ MMAW structural welding
- ◆ GMAW Auto Sector Welding
- ◆ Boiler & Pipe vessel welding

Duration : 24 weeks (6 months)

Eligibility : Minimum 8th standard pass and 17 years of age

Welding Technology

6. Familiarization for Engineering Students (GWI-09-ES)

Module :

- ◆ Familiarization in Arc welding
- ◆ Familiarization in MIG welding
- ◆ Familiarization in TIG welding

Duration : 10 days (2 weeks)

Eligibility : Any Engineering student who has interest in welding



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L & T

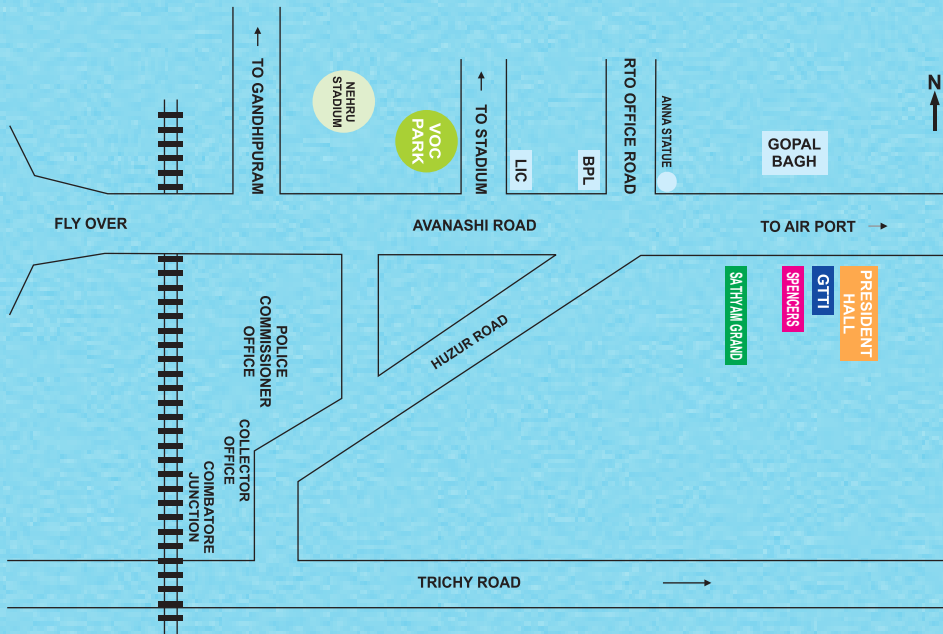
Gedee Weiler

Mega Switch Gear

Godrej

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**To suit customers need,
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SCHEMATIC ROAD MAP



Gedee Technical Training Institute



(In technical collaboration with IH -Nurenbeg, Germany)

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