

Expert Welding Day to Day Schedule

SL No.	Day	Faculty	(Theory Session (90min))	Practical session (4hr 15 min)
1	Day 1	MC , RNB, SS	Inauguration. Introduction- Keepsake CoE, Safety protocols of Center, Setting the context-MC. Fundamentals of welding- RNB Gas Cutting & Grinding -SS	Spark Test, Gas Cutting & Grinding
2	Day 2	Dr MC & RNB	Welding Metallurgy, Preheating & Post heating during Welding.	Practice on Welding Simulator.
3	Day 3	SS MRB	Types of Welding Position & Joints. Electrode & Filler Material. Automation in Welding	Actual practice on SMAW & GMAW.
4	Day 4	NC & SS	Types of Welding Defects, Causes & Remedies; .DT, NDT & X-Ray Film Review (Various Techniques of Welding Inspection).	Demo on GTAW & Automated welding. Q& A. Feedback/ Certificate distribution & SSClosure
Total - 8 hr Theory				
Total - 17 hr Practical				

Bach No: 2018-2019/Keepsake/B2

A report about the Short-Term Training Program on “Beginners/Fresher Welding Training Course” at the GTU’s Keepsake Welding research and skill development center at the at L.D College Engineering.

- **Course Name:** Beginners/Fresher Welding Training Course
- **Trade Name** Fabrication
- **Duration:** 02/04/2018 to 07/04/2018
- **Venue:** Keepsake Welding research and skill development center at the at L.D College Engineering
- **No of participant:** 2
- **Inauguration function date:** 02/04/2018

GTU has established Skill Development Center in Welding Sector at L.D College Engineering. To develop such center Keepsake Engineering Consultancy Pvt.Ltd (Industry Partner), CED and GTU (Host Institute) work jointly.

During the 02/04/2018 to 07/04/2018, “Fundamentals of Welding Technology” tanning was arranged under the Keepsake Welding Research & Skill Development Centre at the L.D College Engineering.

Welding & Fabrication technologies are the most important job skills for Mechanical Engineers. It is very essential technology in Industrial infrastructure development such as erection, commissioning of pipes, shipping, Power plants, steel plants, cement plants etc. The course curriculum includes classes by faculty, video classes, PowerPoint presentations. This is pure workshop training and it gives the opportunity to the students, hands on experience on welding & fabrication equipment, safety engineering, plant technologies etc.

Objective of the Tanning Program:

The Internationally accredited Welder (Fabrication & Fitting) Courses classroom training and Onsite training program improve your technical skill and that you bring to expand your career potential, it will help you to achieve a standard professional career.

Topic covered under the Tanning Program:

- Introduction to Welding, Material selection, Design considerations, Mathematical calculations, Formulas
- Safety instructions and checklist, Personal protection, Welding fumes, Work site protection
- Cutting, Joining, rebuilding, hardfacing, Coating, cold repairs,
- Filler material consumption, Metal identification, Evaluation of welds
- Coated Electrodes, TIG Welding Rods & Fluxes, Wires for Wire Welding, Gas Welding Rods & Fluxes, Brazing Rods & Fluxes
- Arc Welding: Electrode welding & gouging, TIG Welding, Wire Welding, Plasma Cutting, Current Distribution System
- Gas Welding: AC/OX cutting, welding, brazing, Gas Supplies and gas distribution system

Course syllabus – Fabrication

- Introduction to fabrication, Design considerations, Mathematical calculations, Formulas, Codes and Standards

- Material selection, Method selection for production and fabrication, Different Metals available for Metal Fabrication,
- most common forms of stock sizes and materials, metal fabricator's tool box
- Occupational hazards, personal safety, Workplace safety

Outcome of the training Program:

The trainee learns about elementary first aid, firefighting, environment regulation and housekeeping etc. The practical part starts with basic welding work on stainless steel, cast iron, aluminum and brass viz. cutting of pipes, brazing, arc gauging etc. Cutting of MS sheets & plates in different angles as per drawing, related to structural and pressure parts. Joining of pipes of different diameter and angles by gas welding, thread cutting on different types of pipes & fitting accessories and carry out drilling machine operations to steel structures for fabrication of structures. On completion of each welding job the trainees will also evaluate their jobs by visual inspection and identify the defects for further correction/improvement.

They learn to adapt precautionary measures such as preheating; maintaining inter-pass temperature and post weld heat treatment for Welding Alloy steel, Cast Iron etc. The Workshop calculation taught will help them to plan and cut the required jobs economically without wasting the material and also used in estimating the Electrodes, filler metals etc. The Workshop Science taught will help them to understand the materials and properties, effect of alloying elements etc. Engineering Drawing taught will be applied while reading the job drawings and will be useful in understanding the location, type and size of weld to be carried out.