

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN MECHANICAL ENGINEERING
SEMESTER- VI

Subject Name: **Fabrication Technology Practice (Elective Practice-I)**

Subject Code: **2361916**

NOTE:- Following are the minimum experiences required, but the college can do more experiences if possible.

LABORATORY EXPERIENCES :			
Experience Type	Experience Number	Description of Laboratory Experience	Hrs.
Preparatory	01	1. Appreciate main objectives of learning this subject: a. Read and interpret given fabrication drawing. b. Develop the skill to prepare simple weld joints. c. Familiarize with various welding codes and standards. 2. Recall and strengthen know-how for orthographic projections , various drafting/welding symbols and fundamentals of metallurgy.	2
Demonstration and study	02	Interpretation of various industrial fabrication drawings having welding symbols and standards(including BIS/ASME etc.). Drawings of piping, structure and process equipments be taken.	2
	03	Welding equipments and consumables.	2
	04	Weld defects- types, causes and remedies.	2
	05	Preparation of three complex jobs, each one of arc, gas & spot welding. This includes followings. (a) Selection of process & process parameters. (b) Selection of consumables. (c) Edge preparation if applicable. (d) Process. (e) Post process treatments. (f) Inspection and testing.	14
Reports	06	Prepare a report on any one given advance welding technique. Specifically include working principle, specifications of equipments used and applications with process parameters. Separate topic will be assigned to each student by teacher.	2

Industrial visit	07	Visit at least two related industries.	-
Download and seminar presentation, (Copy downloaded content and seminar of whole batch In one /one set of CD/DVD)	08	a) Prepare and present seminar individually in your batch. (Seminar topic has to be given by teacher). b) Download individually visual aids, movies, content and other related content for the given case/situation. (Case/situation has to be given by teacher)Present and discuss the same in your batch.	4
Assignments (Home Assignment)	09	Solve the given tutorials and assignments. One assignment must be on preparation of chart / diagram / poster / graph / drawing / etc on half imperial size of drawing sheet.(For subject FAB.TECH.).	-
Total			28

Notes:

A. FOR STUDENTS.

- a. It is advised that student download this copy of syllabus and plan to achieve the objectives of learning this subject.
- b. Attach copy of syllabus as part of term work.

B. FOR STUDENTS AND SUBJECT TEACHER/S.

- a. Term work report content of each experience should also include following.
 - i. Experience description / data and objectives.
 - ii. Skill/s which is / are expected to be developed in student after completion of experience.
 - iii. Steps / procedure to execute experience.
- b. Term work report of student of regular mode should exclude Distance Learning manual, photocopies, printed content(except visual aids), etc. Focus should be on developing the term work as original efforts of students.
- c. Term work content of industrial visit report should also include following.
 - i. Brief details of industry visited.
 - ii. Type ,location, products, rough layout, human resource, etc of industry.
 - iii. Details, description and broad specifications of machineries/ processes observed.
 - iv. Safety norms and precautions observed.
 - v. Student's own observation on Industrial environment, productivity concepts, quality consciousness and quality standards, cost effectiveness ,culture and attitude.

- vi. Any other details / observations asked by accompanying faculty.
- d. Term work should also include experience logbook duly certified by subject teachers.
- e. Term work is to be defended (along with term work) with practical examination by external and internal examiners .Practical examination will include followings:
 - i. Viva.
 - ii. Interpretation of given fabrication drawing.
 - iii. Preparing given job.

Reference Books:

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| 1. Basic Welding and fabrication | W.Kenoyen Pitman |
| 2. Welding and Welding Technology | Richared L. Littlo Mc.
Grawffiee Book Co. |
| 3. Modern Welding Technology | Howard B Cary Prentic Hall
Inc. |
| 4. Welding Processes & Procedures | Learl love ---do--- |
| 5. Modern welding | Althouse Trunquist The Good
Heart Hillcox Co. Inc. |
| 6. Arc Welding theory and Practice | Raymold J. Sacks Affiliated
Cast West press Post Ltd., New
Dehli |

Additional Reference Books:

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| 1. Metals hand Book Vol. 6 | Welding & Brazing American
Society for Metals |
| 2. Metal cutting science & Production
Technology | K.C.Jain & L. N.
Agrawal Khanna Publi.Dehli |
| 3. Repairs of Industrial Equipment | G.Pechlias MIR Publishers |