GANPAT UNIVERSITY

FACULTY OF DIPLOMA ENGINEERING

Programme	Diploma in Civil Engineering				
Semester	I		Version	1.0.0.0	
Effective from Academic Year	2025-26		Effective for the batch Admitted in		JULY 2025
Course code	1ES1111	Course Name	Civil Workshop Practices		

I.TEACHING-LEARNING AND ASSESSMENT SCHEME

Course Type	Course Code	Learning Scheme						Assessment Scheme										
		Actual Contact Hrs./Week			SLH	NLH	Credits	Theory				Practical				Based on SL		Total Marks
		CL	TL	LL				FA-TH	SA-TH	TOTAL		FA-PR	SA-PR	TOTAL		SLA		
								MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MIN	
SEC	1ES1111	0	0	4			2	-	-	-	-	60	40	100	40	20	8	120

Abbreviation:			
	CL- Classroom Learning	**TL -** Tutorial Learning	**LL -** Laboratory Learning
	SLH - Self Learning Hours	**NLH -** Notional Learning Hours	**SLA -** Self Learning Assessment
	FA - Formative Assessment (Term work +Mid Sem Exam +Attendance)		**SA -** Summative Assessment

II. PRE-REQUISITES

Basic knowledge of drawings skills to understand construction tools and techniques.

III. INDUSTRY / EMPLOYER EXPECTED OUTCOMES

The aim of this course is to help the student to attain the following industry identified outcomes through various teaching learning experiences: Perform the basic civil engineering operations using relevant tools and identifying appropriate materials, tools and equipment required for each construction activity. The course will develop awareness, knowledge & skills of various Civil Engineering practice with safety precautions and quality control at the construction site.

IV. COURSE LEARNING OUTCOMES

At the end of the course, students will be able to achieve the following course learning outcomes:
CO1. Aware about safety precautions and quality control at the construction site.
CO2. Identify the various construction activities at site.
CO3. Identify wall section related to brick / stone masonry construction activity.
CO4. Aware about different types of construction materials & equipments used on going field.
CO5. Apply practical knowledge of workshop practices in small construction works and repair activities.

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL

Sr. No.	Practical/Laboratory Learning Outcome (LLO)	Practical Titles	Relevant COs
1	**LLO 1.1** Safety Practices, Causes of accidents, General safety rules, Safety signs and symbols, Safety Precaution. **LLO 1.2** Fire, Causes of Fire, Basic ways of extinguishing the fire Classification of fire, Fire fighting equipment, fire extinguishers (Class A, B, C, D). (As per NBC 2016).	**Safety Practices & Precautions.** Operate the fire extinguisher available in laboratory.	CO1
2	**LLO 2.1** Interpretation of Construction activities such as layout, excavation, brick masonry, concreting, plumbing, electrification, Interdependency of various activities.	**Construction Activities.** Prepare the report of site visit of a construction project with reference to substructure construction activities along with the equipment used.	CO2

3	**LLO 3.1** Brick and stone Masonry work, Types of bonds and joints (vertical and horizontal)	**Masonry Work Practices.** Demonstrate different type of bond of a brick masonry walls by ensuring the wall is in a straight line, plumb and at right angle.	CO3
4	**LLO 4.1** Explain the procedure for all types of finishing work on site.	**Finishing WorksPractices.** Showing the finishing work in live.	CO3
5	**LLO 5.1** Shown construction materials such as sand, cement, stone, aggregate etc. **LLO 5.2** Explain importance of different equipments used in relevant construction activities.	**Construction Materials &Equipment's.** Prepare a report on different equipment and materials involved in construction activities.	CO4
6	**LLO 6.1** Drawing and detailing its use during construction.	**Construction Drawings** Prepare and draw a layout drawing list needed in a project site. and make some basic plan.	CO5

VII. SUGGESTED MICRO PROJECT / ASSIGNMENTS / ACTIVITIES FOR SELF LEARNING / SKILL DEVELOPMENT (SELF LEARNING)

- Undertake a market survey of local dealers for procurement of civil engineering materials, plumbing materials and finishing items.
- Organize a visit to Construction sites of different types such as simple residential buildings, malls, and multi storied buildings. Observe the course/topic-based practices on the field.
- Course library internet based mini-projects.
- Develop Power point presentation or animation for activities seen during field visit.
- Concerned faculty members may add the assignments.

Mini projects

- Visit any one ongoing construction site execution work. Refer project drawings, equipment, stage wise different execution activity of ongoing work and then prepare a list visited site report.

VIII. LIST OF INSTRUMENTS / EQUIPMENT / TRAINER BOARD	
1	Fire extinguisher (Type A,B,C and ABC), Fire buckets of standard size.
2	Raw material such as bricks, cement, sand etc.
3	String Level/Water tube, Plumb bob. Right Angle, the mason's level to establish "plumb" and "level" lines.
4	Portable Hammer, Spade, Pans, Thread, lime, Levels and mason's line, brushes.
5	Construction drawings, layout.

IX. LIST OF REFERENCE BOOKS			
Sr.No.	**Title**	**Author**	**Publication**
1	Civil Engineering Workshop	S.D Ghatol ,S.M. Solanki, Anand Kharache	Nirali prakashan
2	District Schedule of rates, (DSR)	PWD	PWD, Government of Maharashtra, Mumbai.
3	A To Z Of Practical Building Construction & its Management	Mantri Sandeep	Satya Prakashan, New Delhi
4	PWD- Standard Data Book for Building Work	PWD	PWD, Government of Maharashtra, Mumbai.
5	CPWD Specifications (Vol.-1 and IT)	CPWD	CPWD, Govt. of India, New Delhi.

X. LINK OF LEARNING WEB RESOURCE	
1	https://dailycivil.com/types-of-joints-in-plumbing/
2	https://theconstructor.org/building/types-bonds-brick-masonry-flemish-english-wall/11616/
3	http://nptel.iitm.ac.in/courses/112101002/
4	cpwd.gov.in/
5	http://www.asnu.com.au
6	https://niralibooks.com/

XI. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE							
Unit	**Unit Title**	**Aligned COs**	**Learning Hours**	**R-Level**	**U-Level**	**A-Level**	**Total Marks**
1	Safety Practices & Precautions	CO1	4	2	2	4	8
2	Construction Activities	CO2	10	3	3	5	11
3	Masonry Work	CO3	12	3	4	5	12
4	Finishing works	CO3	10	2	2	4	8
5	Construction materials &equipment's	CO4	10	2	3	4	9
6	Construction drawing	CO5	14	3	4	5	12
		Grand Total	60	15	18	27	60

XII. COs AND POs AND PSOs MAPPING										
Course outcome (Cos)	**Programme Outcomes (POs)**							**Programme Specific Outcomes (PSOs)**		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	1	2	1	2	3	2	3	2	2	3
CO2	2	1	2	3	2	1	2	2	1	2
CO3	3	3	2	3	2	1	2	3	2	3
CO4	3	2	1	3	2	2	3	3	2	3
CO5	2	2	1	3	2	1	3	2	2	3
Legends: -*3- High* *2-Moderate/Medium* *1-Slight/Low* *0-None*										