Devi Ahilya Vishwavidyalaya, Indore, India Institute of Engineering & Technology						III Year B.Tech. (Civil Engineering)
Course Code & Name	**Instructions Hours per Semester and Credits**					
5RVPC4 **Design Skills**	**Classroom Instruction (CI)**		**Lab Instruction (LI)**	**Term Work (TW) and Self Learning (SL)**	**Total no. of Hours Per semester**	**Total Credits (Total Hours/30)**
	L	**T**	**P**	**TW+SL**	**60**	**2**
	00	**00**	**40**	**20**		

Course Learning Objectives:

1. To study about planning of houses.
2. To understand the fundamentals of contract and tender in construction.
3. To understand about concrete mix design.
4. To studyabout major civil engineering projects

Prerequisites: Construction Technology, Reading,

List of Experiment:

1) Planning of a Small House
2) Role of Labour in Civil Engineering
3) Contract & Tender
4) Concrete Mix Design (Ready mix concrete)
5) Case Studies on design and construction of monuments & structures.
6) Industrial Visit (PAN India)

Course Outcomes:

CO. No.	CO	PO
CO1	Understand difficulties in the Lay out part of the house	PO-2, PO-3, PO-4
CO2	Understand about the process of tendering and types of contract	PO-1, PO-4
CO3	Understand how to calculate the quantity of concrete	PO-4, PO-7
CO4	Understand how to role of labours in construction	PO-2, PO-3, PO-4

Books recommended:

1. B. N. Dutta, “Estimating and Costing in Civil Engineering” UBS Publishers' Distributors Pvt Ltd. 2016.
2. S.P. Arora and S.P. Bindra, “Building Construction, Planning Techniques and Method of Construction”, Dhanpat Rai Publications, 2010.
3. V.K. Kumawat, “Construction Materials and techniques”, Tech-Max publications, pune. First Editon.

CO-PO Relationship

CO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	
5RVPC4 CO1		2	3	3								
5RVPC4 CO2	2			3								
5RVPC4 CO3				3			2					
5RVPC4 CO4		2	3	3								