



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Design Syllabus

Subject Code : 1120007

Subject Name : Geometry & Construction - II

WEF Academic Year :	2023-24
Semester :	II
Category of the Course :	Core

Prerequisite :	
Rationale :	The course provides knowledge and skills of basic concepts and principles followed in engineering drawing as an essential communication and visualization interface between design development and production of new products and their components to ensure that intended design concepts are effectively interpreted in their technical specifications. It also forms the basis to effectively use any CAD software requiring clarity of planer and solid construct with precision in dimensions and configuration..

Course Scheme :

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Practical		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
1	2	2	4	0	30	50	20	100

Course Content:

Sr. No.	Course Content	No. of Hours	% of Weightage
1	Unit I: Constructing basic solids: Simple platonic solids-prisms, regular pyramids, tetrahedron, octahedron, cone, spheres and their combinations placed in different positions.	5	20
2	Unit II: Corner and edge manipulation: Filets, Chamfers and creation of complex solids.	5	20
3	Unit III: Geometry, Objects and Space: Creating objects and spaces using the unique advantages and aesthetics provided by geometrical shapes and forms.	5	20
4	Unit IV: Constructing simple objects using Isometric Projection - Learning how to use the isometric grid to be able to construct objects and their details.	5	20



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5	Unit V: Exploded Views - Drawing of components of a simple object like pen, iron, tap, with all its components in the sequence of assembly as visual representation of their configuration.	5	20
Total		25	100

Reference Book:

1. N. D. Bhatt, Elementary Engineering Drawing, 53rd edition, Charotar, 2014.
2. K.Venugopal, Engineering Drawing and Graphics, New Age Publishers, 2004.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes
1	Enable application of universal standards of engineering drafting.
2	Develop visualization and competencies in graphic construction of geometrical solids and 3 dimensional objects through orthographic projections.
3	Enable capability to visualize and draw sections of various solids or hollow forms.
4	Develop ability to construct orthographic views and draw projections of lines, planes, solids and isometric representations including sections.
5	Provide the basis for transition to use of CAD software.

Suggested Course Practical List:

List of Laboratory/Learning Resources Required:

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