
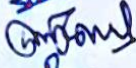


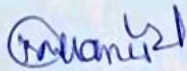


Date: 22/04/2021

All the faculty members of Department of Civil Engineering are hereby informed that the following faculty members are appointed as a coordinator in syllabus setting committee for design and development of curriculum for Add on course AUTOCAD.

1. Prof. M.D. Kokate - 
2. Prof. N.K. Khairnar 
3. Prof. P.R. Chandane 
4. Prof. C.S. Kadlag 



Dr. M.R. Wakchaure

Head, Department of Civil Engineering

Head of The Deptt. (Civil)
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Session	Topics
Session 1	Introduction to Engineering drawing
	Introduction to basic commands.
	Drawing Setting-Unit, Limit, dimension setting, option setting, osnap setting
	Drawing tool- line, circle, erase, arc, Geometric Constructions & Engineering Curves, Parabola, Ellipse & Hyperbola, polyline, rectangle etc.
Session 2	Drawing tool- Redo, undo, explode, trim, move, copy, rotate, mirror.
	Array, stretch, extend, trim, break, chamfer, fillet, Layer Management.
	Hatch, text, multitext, dimension, measurement of area, angle, dist. etc.
Session 3	Create Block, Insert block
Session 4	Line plan of building
	Preparation of Plan
Session 5	Preparation of elevation
Session 6	Preparation of section
Session 7	Preparation of submission drawing with schedule of opening, construction notes, layout, site plan etc.
Session 8	Centre line plan for different building (Residential and industrial building).
Session 9	Preparation of structural plan.
Session 10	Printing option, exporting to word document etc.

AUTOCAD SYLLABUS

DAY	CHAPTER	TOPICS	HOURS
DAY 1	INTERDICTION OF AUTOCAD	AutoCAD versions Interface	1
DAY 2	Control the Drawing CHANGE VIEWS	Function keys AutoCAD basics	1
DAY 3	Cartesian coordinate system	ABSOLUTE COORDINATE SYSTEM RELATIVE COORDINATE SYSTEM	1
DAY 4	Draw commands	Line command Poly line command Rectangle command	1
DAY 5	Modify commands	Move ,Rotate, Scale, copy, Mirror, erase, trim, extend	1
DAY 6	Annotate Dimension Style Manager	Linear, Aligned, Radius Angular, Arc length	1
DAY 7	Text command Layers blocks	Single line text Multiline text Layer properties Insert blocks	1
DAY 8	Parametric	Geometric, Dimensional Manage	1
DAY 9	Isometric views	Isometric top, left, right Isometric diagrams	1
DAY 10	Isometric drawings	Isometric diagrams exercise	1
DAY 11	2D Fundamentals	Drawing units Sheet settings	1
DAY 12	Mechanical diagrams	knuckle joint	1
DAY 13	2d drawings	Idler plate Hook drawing	1
DAY 14	2d diagram	fork	1
DAY 15	Create and Save AutoCAD	Save files Export pdf plot	1

DAY	CHAPTER	TOPICS	HOURS
DAY 16	Use the AutoCAD visual reference commands	Drawing Area Setup Visual reference	1
DAY 17	Interactive Input method	grid snap mode	1
DAY 18	Civil Building planning and drawing	introduction to building drawing	1
DAY 19	brief history of building drawing	different types of buildings	1
DAY 20	residential buildings	exercise – 1 planning house drawing rough sketch	1
DAY 21	Institutional buildings	floor plan	1
DAY 22	different types off residential buildings	detached house semi detached house	1
DAY 23	duplex type house	drawing ground floor 1 st floor 2 nd floor	1
DAY 24	principles of planning of building	residential house public buildings	1
DAY 25	elevations	1 st floor 2 nd floor elevation	1
DAY 26	door drawings windows	door elevation windows	1
DAY 27	partitions foundation sub substructure	Drawing partitions	1
DAY 28	electrical drawings	Circuit, transistor symbols	1
DAY 29	electrical plans	exercises	1
DAY 30	introduction to 3d interface	AutoCAD workspaces are sets of menus	1

SCHEDULE OF PROGRAM

Module wise Breakup of the Syllabus

Module 1

Fundamentals of Engineering Drawings

1. *Construction of plane and complex geometrical figures*
2. *Construction of Curves and Helix*
3. *Principles of Projections*
4. *Projections of Straight Lines and Solids*
5. *Section of Solids*
6. *Mechanical Parts Drawing*

Module 2

Fundamentals of Computers

1. *Introduction*
2. *Computer Hardware and Software Concepts*
3. *Introduction of Personal Computer and Operating Systems WINDOWS-XP, Windows-7, File Management*

Module 3

Drawing using AutoCAD

1. *Setting up a drawing starting from scratch*
2. *Setting up a drawing using a Wizard*
3. *Using and creating a template file*
4. *Opening an existing drawing*
5. *Screen layout*
6. *Pull-down menus*
7. *Screen icons*
8. *Command line*
9. *status bar*
10. *Dialogue boxes*
11. *Drawing Commands*
12. *Lines, Ray, Construction Line*
13. *Multiline and polylines*

INTRODUCTION TO AUTO CAD

Course Objectives:

- Appreciation of drawing/ planning Engineering in Students
- Familiarity for the use of AUTOCAD for Building Design

Course Outcomes

- Students shall be able to use to the software efficiently (Level – Intermediate)
- Students shall be able to imagine and create building drawing in AUTOCAD
- Students shall be able to prepare plan and building views in AUTOCAD

Basic Requirement for Course

- Knowledge of Building drawing, materials, Architectural Planning and Design of Buildings.
- Knowledge of building components, materials
- Course certificate to students shall be arranged by college

Prerequisite

Minimum Qualification: 10th Class pass with little Engineering drawing and computer operating knowledge.

Preferable Qualification: ITI Draftsmanship OR Diploma/B.Tech in Mechanical/Civil Engineering.

Students shall carry following

- Building byelaws
- Note Book
- Calculator
- Stationary

Course Details / Structure

- Course Duration: 60 hours
- Contact Hours at College: 60 hours (Theory hours = 30 Practical Hours = 30)
- Long term design problem at the end of course
- Design and planning of one residential building problem with detail components
- Online counseling

14. Rectangles
15. Arc, Circle and Ellipse
16. Polygon, Spline
17. Co-ordinate input methods (directive, absolute, relative and polar)
18. Starting a New Drawing/Opening an existing drawing
19. Drawing Commands
20. Hatching Command Text (multi-line & single line) and Formatting Text Styles
21. View Commands & Drawing Settings and Aids
22. Modify Command – 1) Hatching 2) Text (multi-line & single line) and Formatting Text Styles
23. Dimension Command Formatting Dimension Style and Multi-leader Style
24. Drawing Settings and Aids
25. Saving and Plotting

Module 4

Isometric Drawing

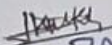
Module 5

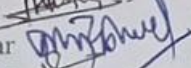
Individual Project


Module 6


Team Project

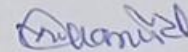
Prepared by:

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Checked by:

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