INSTITUTE	**DIPLOMA STUDIES**
PROGRAM	**DIPLOMA ENGINEERING (MECHANICAL ENGINEERING)**
SEMESTER	**2**
COURSE TITLE	**COMPUTER-AIDED MECHANICAL DRAFTING**
COURSE CODE	**09ME2104**
COURSE CREDITS	**2**

Objective:

1 The course objective is to teach the students the basic commands necessary for professional 2D CAD drawing, design, and drafting using a 2D drafting tool. Even students with no previous CAD experience can progress quickly through this course which is arranged in a sequence that is easy to understand.

Course Outcomes: After completion of this course, student will be able to:

1 Draw various types of drawing on AutoCAD.
2 Draw any 2D view of the object.
3 Draw any 3D view of the object.
4 Be able to render all type of drawings.
5 Be able to draw detail drawing.
6 Present drawings in a detailed and visually impressive manner.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	4	0	30	20	25	25

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**Fundamentals of CAD** CAD definition, concept & need, CAD process, Functional areas of CAD, Coordinate systems.	4

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Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
2	**Introduction to AutoCAD** CAD definition, concept & need, CAD process, Functional areas of CAD, Coordinate systems.	4
3	**Introduction to Basic 2D sketching** Basic 2D commands like Line, Circle, Ellipse, Multi Line, Construction Line, Polyline, Point, Donut, Ellipse, Polygon, Rectangle, Arc, Erase, Snap, Redraw, Regenerate, Zoom, Pan,spline,table,ray.	14
4	**Advanced 2D sketching** Modify Properties of Drawing Entity, Copy, Move, Rotate, Mirror,Offset,Array, Scale, Stretch, Lengthen, Trim, Extend, Break, Chamfer, Fillet, hatching, boundary, and region.	16
5	**Basic Dimensioning And Tolerance** Dimension command – linear, aligned, arc length, radius, Diameter, Centre, Leader, Baseline and Continuous Dimensioning, tolerance, override and Dimension updates Text and DTEXT commands with Text Style	6
6	**3D Commands of AutoCAD** Use 3D commands to generate 3d view from 2D drawing, prepare 3D Drawings using 3D Commands of AutoCAD.	12
Total Hours		**56**

Textbook :

1 NA, NA, NA, NA

References:

1 Engineering Drawing & Graphics Using Auto CAD, Engineering Drawing & Graphics Using Auto CAD, T Jeyapoovan, Vikas Publishing, 2010

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking**
28.00	35.00	37.00			

Instructional Method:

1 The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory.

2 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

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Supplementary Resources:

1 https://www.thesourcecad.com/autocad-tutorials/