GANPAT UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

Programme	Diploma Engineering				Branch	Mechatronics Engineering		
Semester	III				Version	1.0.0.0		
Effective from Academic Year		2019-20			Effective for the batch Admitted in			June 2018
Subject code	1ME2306		Subject Name		Drafting Application			
Teaching scheme					Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	0	0	2	0	2	Theory	0	0	0
Hours	0	0	4	0	4	Practical	60	40	100

Pre-requisites:
Basic Knowledge of Engineering Drawingand General Operating of Computer

Course Learning Outcomes:
The course content should be taught and implemented with an aim to develop different skills leading to the achievement of the following competencies and course learning outcomes:
CO1. Understand the importance of engineering drawing in various industries.
CO2. Use of basic drawing tools and their application in different situations
CO3. Use of Modifying tools in drawings and their application under the given situations.
CO4. Understand and apply various dimensions to given drawing with layer managements.
CO5. Understand how to plot drawing on standard paper sheet with scale.

Name Unit	Unit Content	Unit learning outcomes	Marks	Hrs
Unit–1 Introductionto AutoCAD, workspace and drawing fundamentals	1a. Get aquatinted with AutoCAD interface. 1b. Use Navigation commands. 1c. Use different drawing methods to draw 2d drawings.	1.1 Introduction to AutoCAD and itsinterface. 1.2 Pan&zoomcommandpracticewithkey board shortcuts. 1.3 DifferentdrawingmethodsinAutoCAD		08
Unit – 2 **Drawing & Modifying commands**	2a. Use various 2d drawing & modifying commands.	2.1 Use ofdrawingcommandsi.e.line,circle, rectangle, ellipse, arc, polyline, 2.2 Use of Modifying commands- move, copy, rotate, mirror, fillet, chamfer, trim, extend, offset, explode, scale, stretch, erase, array.		14
Unit-3 Orthographic drawing	3a. Prepare orthographic views using draw and modifying commands.	3.1 Concept of orthographicviews. 3.2 DrawingorthoviewsinAutoCADusingadvanced Draw & Modify commands like x-ray and constructionline.		08
Unit-4 Annotation	4a. Annotate given drawing.	4.1 Creating text (single line,multiline) 4.2 Dimensioning thedrawing 4.3 Creating table & linking fromexcel		08
Unit-5 Layer management, blocks & attributes	5a. Create layers, block & attributes	5.1 Concept and use oflayer for managing drawing 5.2Create, modify and deleting alayer and assign a layer to existing object 5.3 Concept ofBlock and Creating block withattributes		06
Unit-6Plotting	6a. Plot a drawingfrom model and viewport with pagesetup 6b. Make title block with template	6.1Plotting drawing from model space andlayout 6.2Create pagesetup and Creatingviewport 6.3Plotting drawing with annotativestyle 6.4Creation of title block withtemplate		08
Unit-7 Properties Palette	7a. Apply tool palettes to find properties of	7.1 Importanceofpropertypalette&design center 7.2 Find length, area and perimeter from properties of object 7.3 Learn use commands like inquiry, purge,		04
Unit-8 Isometric drawing	8a. Draw isometric view	8.1 Use of Iso-Grid,Iso-Circle 8.2 Changing cursor shape for TV, FV &SV 8.3 Drawisometricviewsfromgivenorthographic views and Dimension it		04

List of Practical

No.	Unit No.	Name of Practical	Hours
1	1	Draw given 2d sketches using basic drawing methods and commands.	08
2	2	Prepare drawings of given parts using various drawing and modifying commands. (at least 5)	14
3	3	Draw orthographic drawings of given parts. (at least 2)	08
4	4	Draw and provide dimensions for given part drawing. (at least 2)	08
5	5	Prepare drawing of given part using layers and blocks. (at least 2)	06
6	6	Plot drawings on standard sheet drawn in Previous Practical (at Least 2)	08
7	7	Make a drawing of given part and dimension it using design center.	04
8	8	Create isometric drawing of given parts. (at least 2)	04

List of Instruments / Equipment / Trainer Board	
1	CAD Workstations
2	AutoCAD Education software
3	LCD Projector
4	

Link of Learning Web Resource	
1	https://www.youtube.com/user/caddsoftsolutions
2	https://thesourcecad.com/autocad-tutorials/
3	https://www.linkedin.com/learning/topics/autocad

List of Reference books

Sr.No	Author	Title	Publication
1	Prof. Sham Tickoo	AutoCAD2018: A problem solving approach	CADCIM technologies
2	Randy H. Shih	AutoCAD2018 Tutorials	SDC Publication
3	David Frey	AutoCAD no experience required	Autodesk
4	James D Bethune	Engineering Graphics with AutoCAD	PHI Learning Pvt. Ltd.
5	Prof. Sham Tickoo	AutoCAD2018: For Engineers and Designers	CADCIM technologies
6	Kelvin Chang	AutoCAD 2013 Tutor for EngineeringGraphics	Cengage
7	P. Nageswara Rao	AutoCADFor Engineering Drawing MadeEasy	Tata McGraw Hill
8	Scott Onstott	AutoCAD 2018 and AutoCAD LT 2018 Essentials	Sybex