

**GREGORIAN INSTITUTE OF TECHNOLOGY, KOTTAYAM**

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS  
ENGINEERING**

**ADD ON COURSE IN AUTO CAD**



## **COURSE INFORMATION**

- During the 40 hours duration of AUTOCAD course, a candidate is trained on Professional Skill, Professional Knowledge, and Employability Skill related to job role.
- This course covers Basic to Advanced topics of introduction to AutoCAD and Engineering Drawings, orthographic, isometric & Perspective views.

## **ADD-ON COURSE TITLE - Auto Cad**

**COURSE CODE: AC-03-01**

**PERIODS/SEMESTER-40**

**CREDITS – 3**

### **COURSE OBJECTIVES**

1. Analyze technical drawings using both **CAD** and basic manual tools.
2. Create mechanical parts for different applications.
3. Apply the stages of the **design** process from scratch using engineering graphics techniques such as sectional projections,
4. dimensioning
5. **computer**-generated drawings (2D).

### **LEARNING OUTCOME**

1. Can use interface of **Autocad**.
2. Can use command panel.
3. Can use menus.
4. Can use viewports.
5. Can use command icons.
6. Can create 2 dimensional drawings in **Autocad**.
7. Can create basic drawings with drawing commands in **Autocad**.
8. Can modify their drawings with modify commands in **Autocad**.

### **Employment Opportunities:**

1. Autocad Designer
2. Electrical CAD Engineer
3. Electrical Design Engineer
4. Electrical Schematic Engineer
5. Electrical Draft man

## **COURSE STRUCTURE**

<b>Particulars</b>	<b>Duration (hrs)</b>
1. Theory Sessions	12 hours
2. Practical Sessions	28 hours
Total	40 hours

## **DETAILED SYLLABUS**

<b>SINo.</b>	<b>DAY/DATE</b>	<b>Theory / Practical</b>	<b>Professional skills/Knowledge</b>	<b>Theory [hrs]</b>	<b>Practical [hrs]</b>
	DAY 1	Theory	Introduction to Engineering Drawings	1HR	0
	DAY 2	Practical	Projections (First &Third angle)	1hr	2hrs
	DAY 3	Practical	Views (orthographic, Isometric & Perspective)		2 hrs
	DAY 4	Practical & Theory	Introduction t AutoCAD  History	1hr	1 hr

	<b>DAY 5</b>	Practical	Exploring GUI Workspaces		2 hrS
	<b>DAY 6</b>	Practical	Co-ordinate systems		1hr
	<b>DAY 7</b>	Practical	File Management - New, Open, Save, Save as, Close, Exit, Quit		1 hrs
	<b>DAY 8</b>	Practical	Basic Drawing: Line, Circle  Function Keys		2 hrs
	<b>DAY 9</b>	Practical	Orthographic Views		1 hrs
	<b>DAY 10</b>	Practical	Drawing Tools: Arc, Ellipse, Polygon, Rectangle, Multiline, Pline, Xline		2 hrs
	<b>DAY 11</b>	Practical	Modify Tools: Erase, oops, Undo, Redo, Explode, Move, Copy, Rotate, Mirror, Array, Scale, Trim		1 hrs
	<b>DAY 12</b>	Practical	Display Control: Zoom, Pan, Redraw, Regen	1 hr	2 HRS
	<b>DAY 13</b>	Practical	Object Properties: Color, Linetype, Ltscale, Lineweight,	1 hr	1 HRS

			Properties, Matchprop		
<b>DAY 14</b>	Practical		Annotation Tools: Text, Style, Mtext, Table  Hatching utilities: Hatch, Hatchedit	1 hr	2 HRS
<b>DAY 15</b>	Practical		Isometric View Drawings  Perspective View Drawings: One Point & Two Point	1 hr	1 hrs
<b>DAY 16</b>	Practical		Dimension -Linear, Aligned, Radius, Diameter, Center Mark, Angle, Arc length, Continues, Baseline, Dimension Style, Leader, Qleader Layer Management- Adding/Removing Layers, Layer Status, New Property Filter, New Group Filter, Layer Status Manager, Plot Control	1 hr	2 hrs
<b>DAY 17</b>	Practical		Symbol & BOM Creation: Block, Insert, Attribute (Attdef, Eattedit,	1 hr	2 hrs

			Attext)  OLE -InsertOBJ		
	<b>DAY 18</b>	Practical & Theory	Introduction to plotting, Layout, Mview, Page setup, Plot.	1 hr	1 hrs
	<b>DAY 19</b>		Final project assessment	1 hr	2 hrs
	<b>DAY 20</b>		PROJECT WORK		
			TOTAL	12	28
			Grand Total	40 hrs	

## **REFERENCE BOOKS/VIDEOS**

1. [AutoCAD 2013 and AutoCAD LT 2013: No Experience Required \(Autodesk Official Training Guides\)](#) by Donnie Gladfelter
2. [Mastering AutoCAD 2013 and AutoCAD LT 2013](#) by George Omura and Brian C. Benton
3. [AutoCAD 2012 and AutoCAD LT 2012 Bible](#) by Ellen Finkelstein
4. [Digital Drawing for Designers: A Visual Guide to AutoCAD 2012](#) by Douglas R. Seidler
5. [Mastering AutoCAD 2012 and AutoCAD LT 2012 \(Autodesk Official Training Guides\)](#) by George Omura and Rick Graham <https://youtu.be/QuR-VKis3jU>
6. [AutoCAD 2012 and AutoCAD LT 2012: No Experience Required \(Autodesk Official Training Guide\)](#) by Donnie Gladfelter <https://youtu.be/cmR9cfWJRUU>
7. [AutoCAD 2013 and AutoCAD LT 2013 Essentials \(Autodesk Official Training Guide: Essential\)](#) by Scott Onstott [https://youtu.be/yruPUj\\_61bw](https://youtu.be/yruPUj_61bw)
8. [AutoCAD 2012 For Dummies \(For Dummies \(Computers\)\)](#) by David Byrnes

<https://youtu.be/tHrfxjgFOt8>

## **ASSESSMENT CRITERIA**

1. LECTURE CLASS
2. DEMONSTRATION
3. PRACTICE
4. GROUP DISCUSSION
5. DISCUSSION WITH PEER GROUP
6. RECORD BOOK / DIARY
7. VIVA-VOCE
8. ATTENDANCE AND PUNCTUALITY
9. ASSIGNMENTS
10. PROJECT WORK

## **BLOOM'S TAXONOMY**

<b>Bloom's Taxonomy Domain</b>	<b>Percentage Distribution</b>
<b>Remembering- R</b>	<b>4.45%</b>
<b>Understanding- U</b>	<b>18.18%</b>
<b>Applying-P</b>	<b>32.02%</b>
<b>Analysing- A</b>	<b>18.18%</b>
<b>Evaluating-E</b>	<b>4.45%</b>
<b>Creating - C</b>	<b>22.72%</b>

## **MARK DISTRIBUTION**

<b>Attendance</b>	<b>Exam</b>	<b>Report</b>	<b>Activity / Practical</b>	<b>Viva</b>	<b>Total</b>
<b>20</b>	<b>20</b>	<b>10</b>	<b>40</b>	<b>10</b>	<b>100</b>

## **GRADING SYSTEM**

<b>Grade</b>	<b>Grade Point</b>	<b>Mark Range</b>
<b>S</b>	<b>10</b>	<b>mark &gt; 90 %</b>
<b>A</b>	<b>9</b>	<b>80% &lt; mark &lt; 90%</b>
<b>B</b>	<b>8</b>	<b>70% &lt; mark &lt; 80%</b>
<b>C</b>	<b>7</b>	<b>60% &lt; mark &lt; 70%</b>
<b>D</b>	<b>6</b>	<b>50% &lt; mark &lt; 60%</b>
<b>E</b>	<b>5</b>	<b>40% &lt; mark &lt; 50%</b>
<b>F</b>	<b>0</b>	<b>mark &lt; 40%</b>

**Note :Students securing Grade point of 5 or more will be treated as qualified in this course.**