



GOVERNMENT OF TAMILNADU
DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI-25
STATE PROJECT COORDINATION UNIT
(Established under Canada India Institutional Cooperation Project)

CURRICULUM

Course Name	INTRODUCTION TO METHODOLOGICAL CADD IN ARCHITECTURE
Course Code	AA/2020/001
Course Duration	40 Hours
Minimum Eligibility Criteria and Pre-requisites (if any)	10 TH STD & Above
Course Objectives	<ul style="list-style-type: none"> The objective of the AutoCAD Fundamentals Course is to enable students to create a basic 2D drawing in the AutoCAD software.
Course Outcomes	<p>At the end of training, the participants will be able to</p> <ul style="list-style-type: none"> Use AutoCAD for daily working process. Understand the concept and techniques to draw. Create multiple designs using several tools. Create layers to control the objects' visibility. Explain drawing using annotations. Plot or print the drawing by scale. To use constraint for certain design
Expected Job Roles	Drafting Assistant in various Architecture Firms

TEACHING AND SCHEME OF EXAMINATION						
Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
AA/2020/001	INTRODUCTION TO METHODOLOGICAL CADD IN ARCHITECTURE	Theory	16	10	20	3 Hours
		Practical	24	40	80	
		Total	40	50	100	

AA/2020/001- INTRODUCTION TO METHODOLOGICAL CADD IN ARCHITECTURE

DETAILED SYLLABUS

Unit No	Modules	No. of Hours	
		Theory	Practical
I	Setting up the Work Space & Basic Draw Commands	7 Hours	
1.1	Introduction	3	4
1.2	Creating new file and saving		
1.3	Menus, Scroll, Zoom, Pan, Ortho, Object snap, Object tracking, Tool bars		
1.4	Units, Dimensioning, Editing		
1.5	<u>Lab exercise:</u> Using the above commands the dimension style manager can be explore and new dimension styles can be created. The primary setting up process can involve to create a new file.		
1.6	Basic shapes – Line, Poly line, Multi line, Ray, Spline, Circle, Arc, Ellipse, Polygon, Rectangle – Boundary hatch – Origin – View Resolution – Redraw		
	<u>Lab exercise:</u> Using the above commands the multi-dimensional lines, and Planes along with rendering the planes with different hatch modules can be created		
II	Editing Commands	7 Hours	
2.1	Grip Editing - Scale, Mirror, Move, Copy, Stretch, Rotate,	3	4
2.2	Trim - Fillet - Chamfer - Fence		
2.3	Offset		
2.4	Erase - Break		
2.5	Block – Insert – Explode - Properties		
2.6	Array		
	<u>Lab exercise:</u> Using the above effective editing commands modules can be recreated or modified to achieve the required drawings.		
III	Working with Architecture 2D drawings	17 Hours	
3.1	Creating layers	6	11
3.2	UCS icon – Align – Import		
3.3	Drawings-Plans – Elevations – Sections		
3.4	Working drawings		
3.5	<u>Lab exercise:</u> Using the above commands single room module and multi room module can be drawn in detail.		
IV	Presentation Techniques & 3D	9 Hours	
4.1	Composing the sheets – Exporting — Plot techniques – Test	4	5
4.2	Introduction to 3D drawings – Extrude		
4.3	<u>Lab exercise:</u> Using the above commands the drawings can be composed and assign them for printing		
Total Theory and Practical Hours		16	24
Total hours		40	

HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1	Computer/Laptop for each student
2	LCD Projector

SOFTWARE REQUIREMENT

AUTOCAD (CAD SOFTWARE)

REFERENCES

S.NO	Particulars	Author	Publisher
1	Tutorial Guide to AutoCAD 2019 2D Drawing, 3D Modeling	-	SDC PUBLICATIONS
2	AutoCAD 2015: Complete Guide to What's New	-	AUTODESK
3	Introduction to AutoCAD	-	AUTODESK
4	Introduction to AutoCAD	-	Academic Resource Center
5	AutoCAD 2019 Training Guide	Linkan Sagar/ Nisha Gupta	Cloudtail India
6	AutoCAD 2018 Training Guide	Linkan Sagar	Cloudtail India
7	AutoCAD 2018: A Power Guide for Beginners and Intermediate Users	CADArtifex	Kindle Edition
8	AutoCAD - Complete Tutorial for Beginners - Part 1	-	CAD in black
9	How to draw a Floor Plan in AutoCAD	-	CIVIL Engineering Tutorials
10	AutoCAD 2d Tamil Tutorials	-	Tamil Tutorials
11	Learn AutoCAD in 1-hour Full Tutorial - Tamil	-	WESTERN LIVE

ASSESSMENT AND CERTIFICATION

S.No	Criteria for assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The passing criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training certificate will be issued by Directorate of Technical Education through the project polytechnic.

END EXAMINATION

ALLOCATION OF MARKS

S.No	Description	Max. Marks
1.	Theory Examination	20
2.	Practical Examination	
	a) Aim and Procedure	20
	b) Demonstration / Execution	25
	c) Result & Viva Voce	15
	d) Record	20
Total Marks		100

THEORY MODEL QUESTION PAPER

AA/2020/001- INTRODUCTION TO METHODOLOGICAL CADD IN ARCHITECTURE

(Maximum Marks: 20)

(N.B: Answer any **Twenty** questions)

20x1= 20 Marks

1. How do you set the units?
2. How do you save the file in cadd?
3. How do you create a file in cadd?
4. Mention any two commands in menus
5. Write the short cut for ortho , object snap
6. Write the command in grip editing
7. Write any two commands for dimensioning
8. Write the short cut for copy, offset
9. How do you block the object?
10. How do you explode the object?
11. What are the types of array?
12. How do you create layers?
13. How do you chamfer the object?
14. How do you import a file to cadd?
15. How do you change the line type in drawing?
16. How do you edit the line weight?
17. How do you change the color of a line?
18. Name any four commands that we use to draw a plan
19. How do you export a file to another software?
20. Write the names of styles in plot style table
21. How do you fix the scale which you take the print out?
22. Which key do you press to cycle through the available snap points?
23. What is extrude command?
24. You can set viewport scale factor by _____.
25. Which setting can be made for polar tracking?