

Branch Name:	Civil Engineering
Program Code:	ET401
Course Name:	Computer Application and Graphics
Course Code:	2ET4010203
Pre-requisite Course:	--

Course Objectives:

1. The objective of developing a computerization system is to reduce the paper.
2. Use MS- word software for word processing applications.
3. Use of Excel to enhance the concept and efficiency of structural analysis and design.
4. Create slide presentations that include text, graphics, animation, and transitions.
5. Use AutoCAD software for drafting and editing applications.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total (T+P)
				University Assessment	Continuous Assessment	University Assessment	Continuous assessment	
-	-	2	1	-	-	-	50	50

DETAILS OF COURSE CONTENTS:

S. NO.	TOPIC	Total Hrs.	WEIGHTAGE
1	MS -Word : 1.1 Overview of Word processor. 1.2 Basics of Font type, size, colour and font effects. 1.3 Inserting, deleting, undo and redo, Copy and Moving text. 1.4 Formatting Paragraphs and Lists. 1.5 Setting line spacing. 1.6 Page settings and margins including header and footer. 1.7 Spelling and Grammatical checks. 1.8 Table and its options, Inserting rows or columns, merging and splitting cells, Arithmetic Calculations in a Table.	06	22
2	MS -Excel : 2.1 Introduction to spread sheets Office and Excel overview. 2.2 Basic text, Special paste, format painter. 2.3 Use of Formulas, Use of Functions Creating different Charts. 2.4 Sort and filter. 2.5 Formatting worksheet, formatting rows and columns saving Worksheet. 2.6 Page layout and printing criteria.	06	22

3	MS –Power point: 3.1 Examine slide show presentation concepts and explore the Microsoft Office PowerPoint environment. 3.2 Create, Modify, Add and edit slides a new presentation. 3.3 Insert clipart images and shapes to slides. 3.4 Insert and modify tables and charts. 3.5 Add sound and video to a slide presentation. 3.6 Insert and edit animations and slide transitions.	06	22
4	Introduction to AutoCAD: 4.1 System requirement and installing process. 4.2 Introduction of Title bar, standard tool bar, menu bar, object properties tool bar, draw tool bar, modify toolbar, status bar, drawing area, UCS icon. 4.3 File features: New file, saving the file, Opening an existing drawing file, Quit. 4.4 Setting up new drawing and print setup. 4.5 Using basic command like SNAP, GRID, LINE, PLINE, ARC, CIRCLE, Ellipse, DONUT, Polygon, Region, RECTANGLE.	06	22
5	Google Suite : 5.1 Introduction 5.2 Internet, Browsers, Websites, URLŨs, Search Engine 5.3 E-Mail, Google Drive 5.4 Google Translate, Calendar, Google Meet 5.5 Google Forms, Working with Spreadsheets, Working with google site.	04	12
	TOTAL HOUR	28	

Course Outcome:

After learning the course the students should be able to:

1. Brief Knowledge about computer hardware and software.
2. Detail uses of Ms Word, Excel and Power point in routine engineering life.
3. Knowledge about drawing software and its application.
4. Apply basic CAD command to develop 2D drawings of residential & commercial building using AutoCAD.

Suggested Lists Of Practical:

The practical should be properly designed and implemented with an attempt to develop different types of skills leading to the achievement of the competency. Following is the list of practical for guidance.

Sr.No.	Practical Exercises
1	Entering and editing text in document file.
2	Apply formatting features on Text like Bold, Italics, Underline, font type, colour, size, bullet, numbering.
3	Create Documents, insert images, drawing shapes, use Word Header & Footer to insert a header.
4	Create and manipulate tables.
5	Create worksheet , Format text by changing size, colour, style, font type etc.
6	Practice in creating formulas and functions.
7	Create and manipulate EXCEL charts.
8	Basic operations of Power point, Create PPT and insert and delete slides
9	Create Project presentations, Lecture presentations
10	Draw different geometrical shapes in AutoCAD software using Lines, Polylines, Polygon, Circles, Arcs, Ellipse AutoCAD commands.
11	Creating a new folder in the computer for saving your practical work and containing some 2D entities on suitable size of paper (A4).
12	Creating E-mail id, google form, spreadsheet, web browsing, google meet.

Reference Books:

1. Microsoft Office : A Beginner's Guide to Microsoft Office
2. Civil Engineering Drawing, Sharma & Gurucharan Singh, Standard Publishers
3. A Course in Civil Engineering Drawing, Sikka, S.K. Kataria & Sons
4. Engineering Drawing, Dhanarajay A Jolhe, Tata McGraw Hill

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Brief Knowledge about computer hardware and software.	2 Understanding 1 Remembering
CLO2	Detail uses of MS Word, Excel and Power point in routine engineering life.	4 Analyzing 1 Remembering
CLO3	Knowledge about drawing software and its application.	2 Understanding 3 Applying
CLO4	Apply basic CAD command to develop 2D drawings of residential & commercial building using AutoCAD.	3 Applying 2 Understanding

Course Learning Outcomes	Program Outcomes(Pos)											
	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012
CLO1	H										M	L
CLO2					H		M					L
CLO3	H						M				L	
CLO4			H		M						L	

H:High, M:Medium, L:Low