GANPAT UNIVERSITY

FACULTY OF DIPLOMA ENGINEERING

Programme	Diploma Engineering in Mechatronics/Automobile/Chemical/Petrochemical Technology/Civil/ Computer/Information Technology/Biomedical/Electronics & Communication		
Semester	I & II	Version	1.0.0.0
Effective from Academic Year	2025-26	Effective for the batch Admitted in	JULY 2025
Course Code	1ES1106	Course Name	Computer Fundamentals and Applications

I.TEACHING-LEARNING AND ASSESSMENT SCHEME

Course Type	Course Code	Learning Scheme						Assessment Scheme										
		Actual Contact Hrs./Week			SLH	NLH	Credits	Theory				Practical				Based on SL		Total Marks
		CL	TL	LL				FA-TH	SA-TH	TOTAL		FA-PR	SA-PR	TOTAL		SLA		
								MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MIN	
AEC	1ES1106	-	-	2	0	2	1	-	-	-	-	30	20	50	20	20	8	70

Abbreviation:			
	CL- Classroom Learning	**TL-** Tutorial Learning	**LL-**Laboratory Learning
	SLH-Self Learning Hours	**NLH**-Notional Learning Hours	**SLA**-Self Learning Assessment
	FA - Formative Assessment (Term work +Mid Sem Exam +Attendance)		**SA**-Summative Assessment

II. PRE-REQUISITES

Basic computer literacy and familiarity with internet usage.

III. INDUSTRY / EMPLOYER EXPECTED OUTCOMES

Apply skills in computer fundamentals, open-source software, cloud-based collaboration platforms, and AI-driven applications to enhance workplace efficiency and automation.

IV. COURSE LEARNING OUTCOMES

At the end of the course, students will be able to achieve the following course learning outcomes:

CO1: Demonstrate the role of computers in office automation through practical tasks.

CO2: Identify and utilize computer hardware and software components for office tasks.

CO3: Create professional documents, spreadsheets, and presentations using LibreOffice.

CO4: Collaborate on documents, spreadsheets, presentations, and file management using cloud-based collaboration tools.

CO5: Apply free AI tools for writing, design, and task automation in office settings.

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL

SR. NO	PRACTICAL/LABORATORY LEARNING OUTCOME (LLO)	PRACTICAL TITLES	RELEVANT COs
1	**LLO 1.1**: Demonstrate the role of computers in office tasks.	**Office Automation Impact Analysis** Preparatory Activity: Case study: Analyse the impact of the evolution of computers and the internet on office automation.	CO1
2	**LLO 2.1**: Identify hardware and software components.	**Hardware and Software Installation** Lab: Examine computer hardware (CPU, RAM) and install open-source productivity software.	CO2

3	**LLO 3.1**: Create professional documents using word processing software.	**Word Processing Document Creation** Lab: Create a formatted business document in word processing software.	CO3
4	**LLO 3.2**: Design a spreadsheet using spreadsheet software.	**Spreadsheet Design and Formulas** Lab: Develop a spreadsheet with formulas in spreadsheet software.	CO3
5	**LLO 3.3**: Create a presentation using presentation software.	**Presentation Design** Design a 5-slide presentation in presentation software.	CO3
6	**LLO 4.1**: Create documents and spreadsheets using cloud-based productivity tools.	**Cloud-based Document and Spreadsheet Management** Lab: Create documents and a project in cloud-based document and spreadsheet tools with functions.	CO4
7	**LLO 4.2**: Design a presentation using cloud-based presentation tools.	**Cloud-based Presentation Development** Lab: Develop a 5-slide presentation in cloud-based presentation tools.	CO4
8	**LLO 4.3**: Manage cloud storage using cloud storage platforms.	**Cloud Storage File Management** Lab: Organize and share files in cloud storage platforms.	CO4
9	**LLO 5.1**: Use AI-driven tools for office tasks.	**AI Tools for Office Productivity** Lab: Refine an email using an AI-driven writing tool; design a poster in an AI-assisted design tool; efficiently use free AI tools.	CO5

VI. SUGGESTED MICRO PROJECT/ASSIGNMENTS/ACTIVITIES FOR SELF LEARNING/SKILL DEVELOPMENT (SELF LEARNING)

- Document the evolution of office automation tools (e.g., from typewriters to cloud computing).
- Compare presentation software for design and functionality.
- Create a tutorial on using spreadsheet software for data analysis.
- Explore and document the use of AI-driven tools in an office setting.

Mini Projects:

- Design a workflow using office productivity software (word processing, spreadsheet, presentation) and cloud-based collaboration tools for a small office.
- Create an AI-assisted task automation (e.g., email drafting with an AI-driven writing tool)

VII. LIST OF INSTRUMENTS / EQUIPMENT / TRAINER BOARD

1	Desktop or laptop computers equipped with high-speed internet access for hands-on practical sessions.
2	Latest version of open-source office productivity software installed on all computers, including tools for word processing, spreadsheets, and presentations.
3	Free-tier accounts for cloud-based collaboration platforms to enable document creation, sharing, storage, and email management.
4	Access to free AI-driven tools for writing assistance and graphic design via web interfaces.
5	Multimedia projector or large display screen for presenting outputs from presentation software during lab demonstrations.
6	Demonstration kits including sample computer hardware components (e.g., CPU, RAM modules, storage devices, peripherals) for examination and configuration exercises.
7	Basic computer assembly and maintenance toolkit (e.g., screwdrivers, anti-static wristbands) to facilitate safe hardware handling and troubleshooting.

VIII. LIST OF REFERENCE BOOKS			
Sr.No.	**Title**	**Author**	**Publication**
1	Computer Fundamentals	P.K. Sinha	BPB Publications
2	Office Productivity Software Getting Started	Documentation Team	Friends of OpenDocument
3	Cloud-Based Collaboration Tools: The Missing Manual	Nancy Conner	O'Reilly Media
4	Artificial Intelligence: A Guide for Thinking Humans	Melanie Mitchell	Farrar, Straus and Giroux

IX. LINK OF LEARNING WEB RESOURCE	
1	https://www.geeksforgeeks.org/computer-fundamentals-tutorial/
2	https://edu.gcfglobal.org/en/computerbasics/
3	https://support.microsoft.com/en-us/training
4	https://cloud.google.com/learn/training
5	https://learn.microsoft.com/en-us/ai/
6	https://onlinecourses.swayam2.ac.in/cec19_cs06/preview

X. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE							
Sr. No	**Practical title**	**Aligned COs**	**Learning hours**	**R level**	**U level**	**A level**	**Total marks**
1	Office Automation Impact Analysis	CO1	2	2	1	0	3
2	Hardware and Software Installation	CO2	3	2	1	1	4
3	Word Processing Document Creation	CO3	4	1	1	2	4
4	Spreadsheet Design and Formulas	CO3	5	0	1	3	4
5	Presentation Design	CO3	3	0	1	2	3
6	Cloud-based Document and Spreadsheet Management	CO4	4	0	1	2	3
7	Cloud-based Presentation Development	CO4	3	0	1	2	3
8	Cloud Storage File Management	CO4	3	0	1	2	3
9	AI Tools for Office Productivity	CO5	3	0	1	2	3
		Grand Total:	**30**	**5**	**9**	**16**	**30**

XI. COs AND POs AND PSOs MAPPING										
Course Outcome (Cos)	**Programme Outcomes (POs)**							**Programme Specific Outcomes (PSOs)**		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
CO1	3	2	1	2	1	1	0	3	2	2
CO2	3	3	2	2	1	1	0	3	3	2
CO3	3	3	3	3	2	2	1	3	2	2
CO4	2	2	3	3	3	2	2	2	2	3
CO5	2	2	3	3	2	3	3	3	2	3
Legends: - *3-High; 2-Moderate/Medium; 1-Slight/Low; 0-None*										