

GOVERNMENT POLYTECHNIC, GAJAPATI

Department of Mathematics&Science

Academic Lesson Plan for 1st Year - 2026-27

Subject: COMPUTING & ARTIFICIAL INTELLIGENCE LAB (PR-4)(Credit-2)

Name of the teaching faculty- Dr. Sisira Kumar Kapat, Lecturer-II(CSE)

Semester from
date: 17/08/2026

No. of periods per week: 2
No. of weeks: 32
Total periods: 64

Internal Exam. : 25 Marks
End Semester Exam.: 25 Marks
Total Marks: 50 Marks

Academic session:
2026-27

Classes up to:
17/04/2027

Duration of End Exam.: 2 Hours
Credit: 2

WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1ST	1ST	Computer Start-Up and Shutdown Operations – Procedure for switching on a computer; observation of the booting process.
	2ND	Computer Start-Up and Shutdown Operations – Proper shutdown procedure; restarting a computer.
2ND	1ST	Identification of Different Components of a Computer – Input devices and Output devices.
	2ND	Identification of Different Components of a Computer – CPU, Memory devices and peripherals.
3RD	1ST	Identification of Various Motherboard Components – CPU socket, RAM slots and BIOS chip.
	2ND	Identification of Various Motherboard Components – Expansion slots, storage/power connectors and I/O ports.
4TH	1ST	Installation of Operating Systems – Installation of Windows operating system on laboratory computers.
	2ND	Installation of Operating Systems – Installation of Linux operating system on laboratory computers.
5TH	1ST	Web Browser and Internet Usage – Browsing different websites and navigating web pages.
	2ND	Web Browser and Internet Usage – Using various search engines for information retrieval.
6TH	1ST	Word Processing using MS Word – Creating and editing documents.
	2ND	Word Processing using MS Word – Formatting text, paragraphs and pages.
7TH	1ST	Word Processing using MS Word – Inserting tables and images; document formatting practice.
	2ND	Word Processing using MS Word – Saving, opening and printing documents.
8TH	1ST	Word Processing using MS Word – Using Print Preview and document viewing options; practical exercise.
	2ND	Word Processing using MS Word – Comprehensive document creation, editing and formatting practice.
9TH	1ST	Word Processing using MS Word – Practical assignment: create and format a professional document.
	2ND	Word Processing using MS Word – Practical assignment: save, preview and print the document.
10TH	1ST	Electronic Spreadsheet using MS Excel – Creating and editing spreadsheets.
	2ND	Electronic Spreadsheet using MS Excel – Entering and formatting data.
11TH	1ST	Electronic Spreadsheet using MS Excel – Performing basic calculations and using simple formulas.
	2ND	Electronic Spreadsheet using MS Excel – Saving, opening and printing worksheets.
12TH	1ST	Electronic Spreadsheet using MS Excel – Using Print Preview and worksheet viewing options.
	2ND	Electronic Spreadsheet using MS Excel – Practical exercise on data entry, formatting and calculations.
13TH	1ST	Electronic Spreadsheet using MS Excel – Practical assignment: prepare a formatted worksheet.
	2ND	Electronic Spreadsheet using MS Excel – Practical assignment: formulas, preview and printing.
14TH	1ST	Presentation Package using MS PowerPoint – Creating and editing presentations.
	2ND	Presentation Package using MS PowerPoint – Formatting slides and applying themes.
15TH	1ST	Presentation Package using MS PowerPoint – Inserting text and images.
	2ND	Presentation Package using MS PowerPoint – Inserting charts and multimedia elements.
16TH	1ST	Presentation Package using MS PowerPoint – Saving, opening and printing presentations.
	2ND	Presentation Package using MS PowerPoint – Using Slide Show and presentation viewing options.
17TH	1ST	Presentation Package using MS PowerPoint – Practical exercise on slide design and multimedia.
	2ND	Presentation Package using MS PowerPoint – Practical assignment: prepare and present a short presentation.
18TH	1ST	Programming using Python – Write a program to determine sum and average of 5 numbers.
	2ND	Programming using Python – Write a program to perform all arithmetic operations: addition, subtraction, multiplication and division.

WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
19TH	1ST	Programming using Python – Write a program to find the greatest number among two numbers.
	2ND	Programming using Python – Write a program to check whether the input number is even or odd.
20TH	1ST	Programming using Python – Write a program to check whether the input year is a leap year or not.
	2ND	Programming using Python – Write a program to find the greatest number among three numbers.
21ST	1ST	Programming using Python – Write a program to find the average of n numbers by using for loop.
	2ND	Programming using Python – Write a program to determine whether a number is prime or not.
22ND	1ST	Programming using Python – Write a program to find the factorial of a number.
	2ND	Programming using Python – Write a program to display even numbers from 1 to 50.
23RD	1ST	Programming using Python – Practice of input, output, variables and arithmetic operations through simple programs.
	2ND	Programming using Python – Practice of conditional statements using greatest-number and even/odd programs.
24TH	1ST	Programming using Python – Practice of conditional statements using leap-year and greatest-of-three programs.
	2ND	Programming using Python – Practice of for loop using average-of-n-numbers program.
25TH	1ST	Programming using Python – Practice of prime-number and factorial programs.
	2ND	Programming using Python – Practice of loop-based program to display even numbers from 1 to 50.
26TH	1ST	Programming using Python – Integrated practice: arithmetic, conditional statements and loops.
	2ND	Programming using Python – Debugging, testing and execution of basic Python programs.
27TH	1ST	Programming using Python – Practical assignment involving variables, operators and conditional statements.
	2ND	Programming using Python – Practical assignment involving for/while loop-based problem solving.
28TH	1ST	Programming using Python – Comprehensive practice and correction of basic programs.
	2ND	Programming using Python – Practical record completion and program execution practice.
29TH	1ST	Getting Started with Generative AI Tools – Use ChatGPT for information generation.
	2ND	Getting Started with Generative AI Tools – Use Google Gemini for information generation.
30TH	1ST	Getting Started with Generative AI Tools – Use Microsoft Copilot for information generation.
	2ND	Getting Started with Generative AI Tools – Comparative practical exercise using ChatGPT, Google Gemini and Microsoft Copilot.
31ST	1ST	Comprehensive Practical Revision – Computer components, motherboard, operating systems, web browser and Internet usage.
	2ND	Comprehensive Practical Revision – MS Word, MS Excel and MS PowerPoint.
32ND	1ST	Comprehensive Practical Revision – Python programming and debugging practice.
	2ND	Final Practical Revision/Assessment – Generative AI tools and selected practical exercises.

Course structure: The lesson plan follows the PR-4 practical syllabus. Total allotted time is 64 hours, distributed across the 10 prescribed practical topics.