Dept. of Information Technology

U.C.P. Engineering School, Berhampur

Lesson Plans for Academic Session2025-26(W)

5th semester:

TH1-Enterpreneurship & Management & Smart Technology
TH2-Internet and Web Technology
TH3-Software Engineering
TH4-Computer Graphics and Multimedia
TH5-Mobile Computing

3rd semester:

TH1-Programming in C
TH2-Programming with Python
TH3-Data Structure and Algorithm
TH4-Digital Electronics and Computer Organisation
TH5- Computer Graphics and Multimedia

Lesson Plan for TH1-Programming in C
Academic Session2025-26(W)
Department of Information Technology.
U.C.P. Engineering school, Berhampur

Discipline: IT	**Semester: 3rd**	**Name of the Faculty: Smt. Swagatika Malik, Lecturer Stage-I(IT)**
Subject: Prog. With Python Code: TH2	No of Days/per week class allotted: 3 P/W	Semester from date: 14/07/2025 To Date: 15/11/2025 No of weeks: 15
WEEK	**PERIOD**	**TOPIC**
1st	1st	**Introduction to Python:** Overview of Python: Features and Applications
	2nd	Setting Up the Python Environment (Python Installation, IDEs)
	3rd	Setting Up the Python Environment (Python Installation, IDEs)
2nd	1st	Python Syntax: Variables
	2nd	Python Syntax: Data Types
	3rd	Operators Writing, Executing
3rd	1st	Debugging Python Scripts
	2nd	**Control Structures and Functions:** Conditional Statements: if, else, elif
	3rd	**Control Structures and Functions:** Conditional Statements: if, else, elif
4th	1st	Loops: for, while
	2nd	Loops: for, while
	3rd	Nested Loops
5th	1st	Functions: Defining, Calling
	2nd	Functions: Defining, Calling
	3rd	Scope of Variables
6th	1st	Introduction to Lambda Functions
	2nd	Recursion
	3rd	**Data Structures in Python:** Lists, Tuples, Sets
7th	1st	Dictionaries: Operations and Applications
	2nd	Doubt Clearing Class
	3rd	List Comprehensions and Dictionary
8th	1st	**Monthly Class Test**
	2nd	List Comprehensions and Dictionary
	3rd	Comprehensions Working with Strings
9th	1st	Methods and Manipulation
	2nd	Introduction to Python's Collections Module
	3rd	**File Handling and Modules:** File Operations, Reading

10th	1st	Writing, and Appending Files
	2nd	**1st Internal Assessment**
	3rd	Working with CSV and JSON Files
11th	1st	Python Modules: Built-In Modules (e.g., math, os, datetime)
	2nd	Creating and Using Custom Modules
	3rd	Creating and Using Custom Modules
12th	1st	**Object-Oriented Programming (OOP) in Python:** Understanding Classes and Objects
	2nd	**Object-Oriented Programming (OOP) in Python:** Understanding Classes and Objects
	3rd	Concepts of Encapsulation
13th	1st	Inheritance
	2nd	Polymorphism
	3rd	W o r k i n g w i t h M a g i c M ethods a n d Operator Overloading, Exception Handling in Python
	4th	**Advanced Python and Applications:** Introduction to Libraries: NumPy, Pandas, Matplotlib
14th	1st	Basics of Web Scraping: Using requests and Beautiful Soup
	2nd	**2nd Internal Assessment**
	3rd	Scripting for Automation: Working with OS and shutil Modules,
15th	1st	Previous Year Question Discussion
	2nd	Mini-Project: Developing a Python Script for a Real-World Problem
	3rd	Mini-Project: Developing a Python Script for a Real-World Problem

Lesson Plan for TH1-Programming in C
Academic Session2025-26(W)
Department of Information Technology.
U.C.P. Engineering school, Berhampur

Discipline: IT	**Semester: 5th**	**Name of the Faculty: Smt. Swagatika Malik, Lecturer Stage-I(IT)**
Subject: Internet & Web Technology Code: TH2	No of Days/per week class allotted: 4 P/W	Semester from date: 14/07/2025 To Date: 15/11/2025 No of weeks: 15
WEEK	**PERIOD**	**TOPIC**
1st	1st	**Internet Basics** Computer network
	2nd	Concept of Internet, Intranet
	3rd	Modem
	4th	IP Address, Internet Domains
2nd	1st	CIDR Notation, ISP
	2nd	TCP/IP
	3rd	**Internet Connectivity & WWW** Introduction to connectivity
	4th	Medium and methods of connectivity, ISDN, VSAT, RF Link
3rd	1st	Working of Internet
	2nd	Introduction to WWW
	3rd	Application Level Protocol
	4th	Web Browser, URL, Hyper text
4th	1st	Hyperlinks, Hypermedia
	2nd	Search Engine, Proxy sever
	3rd	CGI, URI, Dreamweaver
	4th	**Internet Security** Introduction to security
5th	1st	**Internal Assessment**
	2nd	Types of security, Authentication & Authorization
	3rd	Firewalls
	4th	Encryption & Decryption
6th	1st	SSL
	2nd	**Internet Application** E-Mail, Email protocols
	3rd	Telnet, FTP
	4th	Newsgroup
7th	1st	Chartroom Internet Relay Chat

	2nd	Video Conferencing
	3rd	E-Commerce
	4th	**Website Classifications** Static Websites
8th	1st	Dynamic websites Web portals
	2nd	Social Networking Sites RSS Feed, Blog, Netiquette
	3rd	**Development of Portals Using HTML** Design a webpage, Good Web Design
	4th	HTML Introduction
9th	1st	HTML Tags, Anchor Tag, Table Tag
	2nd	Doubt Clearing Class
	3rd	HTML Frames
	4th	Forms
10th	1st	Disadvantages of HTML
	2nd	Separating style from structure with style sheets
	3rd	CSS Rules, Types of CSS
	4th	**Client side Scripting with JavaScript** Introduction to script, Client side Scripting, Types of Scripting
11th	1st	Variables in JavaScript, Built-in Function Arrays in JavaScript, Conditional statements, Loops
	2nd	Document Object Model Creating Functions, objects in JavaScript
	3rd	Working with Cookies
	4th	Connecting database using JavaScript in HTML Page
12th	1st	Working with Browser, validating and submitting Forms
	2nd	**Server Side Scripting** Introduction to server side Scripting
	3rd	Components of SSS Difference between CSS and SSS
	4th	Server side Scripting method
13th	1st	JavaScript on server
	2nd	SQL
	3rd	**Server Side Programming using PHP** Introduction to PHP
	4th	Variables, string
14th `	1st	operator types
	2nd	Quiz Test
	3rd	Conditional statement
	4th	Loops
15th	1st	Array
	2nd	GET and POST Method
	3rd	Previous Year Question Discussion
	4th	Sessions

Lesson Plan for TH1-Programming in C
Academic Session2025-26(W)
Department of Information Technology.
U.C.P. Engineering school, Berhampur

Discipline: IT	**Semester: 3rd**	**Name of the Faculty: Smt. Swagatika Malik, Lecturer Stage-I(IT)**
Subject: Prog. in C Code: TH1	No of Days/per week class allotted: 3 P/W	Semester from date: 14/07/2025 To Date: 15/11/2025 No of weeks: 15
WEEK	**PERIOD**	**TOPIC**
1st	1st	**Introduction to C**: Types of Programming Languages and overview of C-language
	2nd	**C Fundamentals** The "C" character Set
	3rd	Identifiers and Keywords
2nd	1st	Data Types
	2nd	Constants, Variables and Arrays
	3rd	Declarations and Expressions
3rd	1st	Statements and Symbolic Constants
	2nd	**Operators and Expressions** Arithmetic Operators
	3rd	Unary operators
4th	1st	Relational and Logical Operators
	2nd	Assignment Operators
	3rd	The Conditional Operator
5th	1st	Library Functions
	2nd	**Data Input and Output** Preliminaries, Single Character Input-The getchar Function
	3rd	Single Character Output-The putchar Function
6th	1st	Entering Input data–The scanf function
	2nd	Writing Output Data–The printf function
	3rd	gets and puts Function
7th	1st	**Preparing and running a complete C Program:** Planning a C Program
	2nd	Writing a C Program, Entering the Program into the Computer
	3rd	Compiling and Executing the Program, Error Diagnostics, Debugging Techniques
8th	1st	**Monthly Class Test**
	2nd	**Control Statements** Preliminaries, Branching: The if statement, if-else statement, elseif ladder

	3rd	Looping: while, do-while & for statements, Nested Control Structures
9th	1st	The switch statement, The break statement, The continue statement
	2nd	The Comma operator and The goto statement
	3rd	**User Defined Functions** Concepts of a Function Accessing a Function
10th	1st	Function Prototypes, Passing parameters in Functions
	2nd	**1st Internal Assessment**
	3rd	**Arrays:** Defining an Array, Processing an Array
11th	1st	Multidimensional Arrays
	2nd	Arrays and Strings & its Library functions
	3rd	**Pointers:** Fundamentals of Pointers, Pointer Declaration
12th	1st	Operation on pointers
	2nd	Passing pointer to a function
	3rd	Pointers and one–dimensional array
13th	1st	Pointers and two -dimensional array
	2nd	**Structures and Unions:** Defining a Structure, Defining a Structure
	3rd	Quiz Test
	4th	Doubt Clearing Class
14th	1st	Processing a Structure
	2nd	**2nd Internal Assessment**
	3rd	Structure and Pointers
15th	1st	Arrays of Structure
	2nd	Previous Year Question Discussion
	3rd	Unions

Lesson plan for TH-1 EMST
Academic Session 2025-26 (W)
Department of Information Technology,
UCP Engineering School, Berhampur

DISCIPLINE: IT	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: GF1
SUBJECT:	NO.OF DAYS/PER WEEK CLASS ALLOTTED : 4	SEMESTER FROM DATE: 14/07/2025 TO DATE: 15/11/2025
Entrepreneurship & Management & Smart Technology		NO.OF WEEKS:15
WEEK	**CLASS DAY**	**THEORY/PRACTICAL TOPICS**
1ST	1ST	**Entrepreneurship**
		Concept /Meaning of Entrepreneurship
	2ND	Need of Entrepreneurship
	3RD	Characteristics, Qualities and Types of entrepreneur, Functions
	4TH	Barriers in entrepreneurship
2ND	1ST	Entrepreneurs vrs. Manager
	2ND	Forms of Business Ownership: Sole proprietorship, partnership forms and others
	3RD	Types of Industries, Concept of Start-ups
	4TH	Entrepreneurial support agencies at National,
		State, District Level(Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial Banks, KVIC etc.
3RD	1ST	Entrepreneurial support agencies at National,
		State, District Level(Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial Banks, KVIC etc.
	2ND	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks
	3RD	**Market Survey and Opportunity Identification (Business Planning)**
		Business Planning
	4TH	SSI, Ancillary Units
4TH	1ST	Tiny Units, Service sector Units
	2ND	Time schedule Plan
	3RD	Agencies to be contacted for Project Implementation
	4TH	Assessment of Demand and supply and Potential areas of Growth
5TH	1ST	Identifying Business Opportunity
	2ND	Final Product selection
	3RD	**Project report Preparation**
		Preliminary project report
	4TH	Detailed project report
6TH	1ST	Techno economic Feasibility
	2ND	Project Viability

	3RD	**Management Principles**
		Definitions of management
	4TH	Principles of management
7TH	1ST	Functions of management (planning, 2rganizing, staffing, directing and controlling etc.)
	2ND	Functions of management (planning, 2rganizing, staffing, directing and controlling etc.)
	3RD	Level of Management in an Organisation
	4TH	**Functional Areas of Management**
		W. Production management Functions, Activities
8TH	1ST	**1st Monthly Class Test**
	2ND	Productivity Quality control
		Production Planning and control
		b) Inventory Management
		Need for Inventory management
	3RD	Models/Techniques of Inventory management
	4TH	c) Financial Management
		Functions of Financial management Management of Working capital Costing (only concept)
9TH	1ST	Break even Analysis
		Brief idea about Accounting Terminologies: Book
		Keeping, Journal entry, Petty Cash book, P&L Accounts, Balance Sheets(only Concepts)
	2ND	d) Marketing Management
		Concept of Marketing and Marketing Management
	3RD	Marketing Techniques (only concepts)
		Concept of 4P s (Price, Place, Product, Promotion)
	4TH	e) Human Resource Management
		Functions of Personnel Management Manpower Planning, Recruitment, Sources of manpower, Selection process, Method of Testing, Methods of Training & Development, Payment of Wages
10TH	1ST	**1st Internal Assessment**
	2ND	**Leadership and Motivation**
		W. Leadership
		Definition and Need/Importance
	3RD	Qualities and functions of a leader Manager Vs Leader
	4TH	Style of Leadership (Autocratic, Democratic, Participative)
11TH	1ST	b) Motivation
		Definition and characteristics Importance of motivation
	2ND	Factors affecting motivation
		Theories of motivation (Maslow) Methods of Improving Motivation
	3RD	Importance of Communication in Business Types and Barriers of Communication
	4TH	**Work Culture, TQM & Safety**
		Human relationship and Performance in Organization
12TH	1ST	Relations with Peers, Superiors and Subordinates
	2ND	TQM concepts: Quality Policy, Quality Management, Quality system
	3RD	Accidents and Safety, Cause, preventive measures
	4TH	General Safety Rules , Personal Protection Equipment(PPE)
13TH	1ST	**Legislation**

		a) Intellectual Property Rights(IPR),
	2ND	Patents, Trademarks, Copyrights
	3RD	b) Features of Factories Act 1948 with Amendment (only salient points)
	4TH	b) Features of Factories Act 1948 with Amendment (only salient points)
14TH	1ST	c) Features of Payment of Wages Act 1936 (only salient points)
	2ND	c) Features of Payment of Wages Act 1936 (only salient points)
`	3RD	. **Smart Technology**
		Concept of IOT, How IOT works
	4TH	Components of IOT, Characteristics of IOT
15TH	1ST	Categories of IOT
	2ND	Applications of IOT- Smart Cities, Smart Transportation,
	3RD	Smart Home, Smart Healthcare, Smart Industry,
	4TH	Smart Agriculture, Smart Energy Management etc.

Lesson plan for TH-1Computer Graphics & Multimedia
Academic Session 2025-26 (W)
Department of Information Technology,
UCP Engineering School, Berhampur

DISCIPLINE: IT	SEMESTER:5TH	NAME OF THE TEACHING FACULTY: GF1
SUBJECT:CGM	NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4	SEMESTER FROM DATE: 14/07/2025 TO DATE: 15/11/2025
		NO.OF WEEKS:15
WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1ST	1ST	**Applications of Computer Graphics & Multimedia**
		Computer graphics in CAD Presentation Graphics Computer Art Entertainment
		Education & Training
	2ND	Visualization Image Processing
		Graphic User Interface Multimedia Concepts.
	3RD	**Overview of Graphics Systems**
		Graphics System
	4TH	Raster Scan Display
2ND	1ST	Random Scan Display
	2ND	Graphics Input Devices
	3RD	Graphics Software
	4TH	**Graphics Output primitive**
		Points & Lines
		DDA Line Drawing Algorithm
3RD	1ST	Bresenham's Line drawing Algorithm
	2ND	Mid Point Circle algorithm
	3RD	Filled Area Primitives
	4TH	Boundary fill algorithm, Flood fill algorithm
4TH	1ST	**Two Dimensional Geometric Transformations**
		Translation
		Rotation Scaling
	2ND	Reflection Shear
	3RD	Matrix representation and Homogenous coordinate system
		Composite transformation
	4TH	**Two Dimensional Viewing**
		Viewing pipeline
		Viewing coordinate reference frame
5TH	1ST	Window to view port coordinate transformation
	2ND	Line clipping concept
	3RD	Polygon clipping concept
	4TH	**Three Dimensional Object Representations**
		Polygon surface
6TH	1ST	Polygon table
	2ND	Plane equation
	3RD	Plane equation
	4TH	Polygon mesh
7TH	1ST	Quadric surfaces

	2ND	Sphere, Ellipsoid
	3RD	Spline representation
	4TH	Bezier curves & Surfaces, B-Spline curves & surfaces.
8TH	1ST	**Monthly Class Test**
	2ND	**Three Dimensional Geometric & Modeling Transformations**
		Translation
		Rotation Scaling
	3RD	Reflection Shear
	4TH	Composite transformation
9TH	1ST	Modeling & Coordinate transformation
	2ND	**Three Dimensional Viewing**
		Viewing pipeline
	3RD	Viewing coordinates
	4TH	Viewing coordinates, Parallel projection
10TH	1ST	**Internal Assessment**
	2ND	Perspective projection
	3RD	Concept of 3D clipping
	4TH	**Illumination Model & Surface Rendering Methods**
		Different light sources used in 3D modeling
11TH	1ST	Basic Illumination model
	2ND	Ambient light Diffuse reflection
	3RD	Specular reflection
	4TH	**Introduction to Digital Audio**
		Basics of Acoustics, Psychoacoustics
12TH	1ST	Musical sound and noise
	2ND	Elementary sound system
	3RD	Microphones, Amplifiers
	4TH	Digital audio formats
13TH	1ST	Audio compression (LPC, Sub Band Encoding)
	2ND	**Introduction to Digital Image**
		Vector and raster Graphics
	3RD	Digital representation of image, colour, 16 bit, 24 bit colour depth
		Colour Characteristics-Hue, saturation, Luminance
	4TH	Colour Palette
		Image formats-JPEG, BMP, TIFF, GIFF
14TH	1ST	Image evaluation
		Layers
	2ND	Filters
`	3RD	Image manipulation-scaling, cropping, rotation
	4TH	**Introduction to Video**
		Video in Multimedia
15TH	1ST	Basics of Motion-Video
		Sources of Motion-Video
	2ND	Video formats, lines, frames, fields
	3RD	TV Broadcast standards-PAL, NTSC, SECAM
	4TH	MPEG Compression

Lesson plan for TH-1Computer Graphics & Multimedia
Academic Session 2025-26 (W)
Department of Information Technology,
UCP Engineering School, Berhampur

DISCIPLINE:IT	SEMESTER:3RD	NAME OF THE TEACHING FACULTY: GF2
SUBJECT: COMPUTER GRAPHICS & MULTIMEDIA	NO.OF DAYS/PER WEEK	SEMESTER FROM DATE: 14/07/2025TO DATE: 15/11/2025
	CLASS ALLOTTED:3	NO.OF WEEKS:15

WEEK	CLASS DAY	THEORY/PRACTICAL TOPICS
1st	1st	Introduction to Computer Graphics:
	2nd	Image Processing
	3rd	Picture analysis
2nd	1st	Conceptual frame work for interactive graphics
	2nd	Classification
	3rd	Hardware: Various display devices,
3rd	1st	Video controller, Random-scan display processor
	2nd	Image scanners
	3rd	Interaction hardware
4th	1ST	Raster Graphics Techniques: Interaction handling
	2nd	Raster graphics features
	3rd	Line drawing algorithms,
5th	1st	Circle drawing algorithms
	2nd	Scan conversion
	3rd	Polygon filling
6h	1st	Pattern filling,Halftoning
	2nd	Clipping techniques
	3rd	**Geometric Transformation and Viewing: 2D and 3D transformation**
7th	1st	Representation and composition
	2nd	3D viewing
	3rd	User Interfacing, Interaction handling models,
8th	1st	**Monthly Class Test**
	2nd	Window management
	3rd	Input/Output handling
9th	1st	Tool kits
	2nd	Curves & Surfaces and Solid Modelling
	3rd	Polygon meshes, Parametric cubic curves,
10th	1st	**1st Internal Assessment**
	2nd	Quadric surfaces,

	3rd	Bezier and B-spline curves
11th	1st	Representing solids: sweep representation,
	2nd	boundary representation, Spatial partitioning
	3rd	Visibility
12th	1st	Hidden line and Hidden surfaces
	2nd	Floating horizon algorithm
	3rd	Robert's algorithm
13th	1st	Z-buffer List priority algorithms
	2nd	Rendering
	3rd	Illumination models,Shadows Shading
14th	1st	**2nd Internal Assessment**
	2nd	Transparency
	3rd	Animation
15th	1st	Conversion
	2nd	Computer Aided animation
	3rd	Rules & Technology

Lesson plan for TH-1Computer Graphics & Multimedia
Academic Session 2025-26 (W)
Department of Information Technology,
UCP Engineering School, Berhampur

DISCIPLINE:IT	SEMESTER: 5TH	NAME OF THE TEACHING FACULTY: GF1
SUBJECT: CGM Lab	NO.OF DAYS/PER WEEK CLASS ALLOTTED:4	SEMESTER FROM DATE: 14/07/2025 TO DATE:15.11.2025
WEEK	**CLASS DAY**	**THEORY/PRACTICAL TOPICS**
1ST	1ST	Program to implement a line using slope intercept formula.
	2ND	Program to implement a line using slope intercept formula.
	3RD	Program to implement line using DDA algorithm.
	4TH	Program to implement line using DDA algorithm.
2ND	1ST	Program to implement line using Bresenham's algorithm
	2ND	Program to implement line using Bresenham's algorithm
	3RD	Program to implement circle using mid-point algorithm
	4TH	Program to implement circle using mid-point algorithm
3RD	1ST	Program to implement translation of a line and triangle.
	2ND	Program to implement translation of a line and triangle.
	3RD	Program to implement rotation of a line and triangle
	4TH	Program to implement rotation of a line and triangle
4TH	1ST	Program to implement scaling transformation
	2ND	Program to implement scaling transformation
	3RD	Write a program using function & Fill the Circle with Red color
	4TH	The concept of Photoshop
5TH	1ST	How to open a document. How to save the documents.
	2ND	How to open a document. How to save the documents.
	3RD	How to create a new document with the needed resolution.
	4TH	How to create a new document with the needed resolution.
6TH	1ST	How to select an area, copy and paste the selection.
	2ND	How to select an area, copy and paste the selection.
	3RD	How to save images for the web and their formats.
	4TH	How to save images for the web and their formats.
7TH	1ST	The use of layers and the history palette. How to print our document.
	2ND	The use of layers and the history palette. How to print our document.
	3RD	How to use the text editor. How to Crop Image in
		Photoshop & Sharpen Image
	4TH	How to use the text editor. How to Crop Image in Photoshop & Sharpen Image
8TH	1ST	Procedure to Removing & Adding Backgrounds images. Procedure to Convert Color Photos to Black & White.
	2ND	Procedure to Removing & Adding Backgrounds

		images. Procedure to Convert Color Photos to Black & White.
	3RD	Procedure to Removing & Adding Backgrounds images. Procedure to Convert Color Photos to Black & White.
	4TH	How to Create a Passport size images? How to
		Change Eye Color & Hair Color
9TH	1ST	How to Create a Passport size images? How to Change Eye Color & Hair Color
	2ND	How to Add Rain in Photoshop? How to make a GIFs File?
	3RD	How to Add Rain in Photoshop? How to make a GIFs File?
	4TH	Procedure to create an animation to represent the growing moon
10TH	1ST	Procedure to create an animation to represent the growing moon
	2ND	Procedure to create an animation to indicate a ball bouncing on steps.
	3RD	Procedure to create an animation to indicate a ball bouncing on steps
	4TH	Procedure to create an animation to indicate a ball bouncing on steps
11TH	1ST	Procedure to simulate movement of a cloud. Procedure to draw the fan blades and to give proper animation. Procedure to display the background
		given (filename: tulip.jpg) through your name.
	2ND	Procedure to simulate movement of a cloud. Procedure to draw the fan blades and to give proper
		animation. Procedure to display the background given (filename: tulip.jpg) through your name.
	3RD	Procedure to create an animation
	4TH	Procedure to create an animation
12TH	1ST	Procedure to design a visiting card containing at least one graphic and text information
	2ND	Procedure to design a visiting card containing at least one graphic and text information
	3RD	Procedure to design a visiting card containing at least one graphic and text information
	4TH	Procedure to design a visiting card containing at least one graphic and text information
13TH	1ST	Procedure to prepare a cover page for the book in your subject area. Plan your own design. Procedure to adjust the brightness and contrast of the picture so that it gives an elegant look
	2ND	Procedure to prepare a cover page for the book in your subject area. Plan your own design. Procedure to adjust the brightness and contrast of the picture so that it gives an elegant look
	3RD	Procedure to prepare a cover page for the book in your subject area. Plan your own design. Procedure
		to adjust the brightness and contrast of the picture so that it gives an elegant look
	4TH	Procedure to prepare a cover page for the book in your subject area. Plan your own design. Procedure to adjust the brightness and contrast of the picture so that it gives an elegant look.

14TH	1ST	Procedure to prepare a cover page for the book in your subject area. Plan your own design. Procedure to adjust the brightness and contrast of the picture so that it gives an elegant look.
	2ND	Procedure to prepare a cover page for the book in your subject area. Plan your own design. Procedure
		to adjust the brightness and contrast of the picture so that it gives an elegant look.
	3RD	Procedure to position the picture preferably on a
		plain background of a colour of your choice - positioning includes rotation and scaling
	4TH	Procedure to position the picture preferably on a plain background of a colour of your choice -
		positioning includes rotation and scaling
15TH	1ST	Procedure to position the picture preferably on a
		plain background of a colour of your choice - positioning includes rotation and scaling
	2ND	Procedure to type a word and apply the effects shadow embosses
	3RD	Procedure to type a word and apply the effects shadow embosses
	4TH	Procedure to type a word and apply the effects shadow embosses

Lesson plan for PR-2 Programming with Python Lab
Academic Session 2025-26 (W)
Department of Information Technology,
UCP Engineering School, Berhampur

DISCIPLINE:IT	SEMESTER:3RD	NAME OF THE TEACHING FACULTY: GF1
SUBJECT: PR:2 Programming with Python Lab	NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4	SEMESTER FROM DATE:14/07/25 TO DATE: 15/11/25
		NO.OF WEEKS:15
WEEK	**CLASS DAY**	**PRACTICAL TOPICS**
1ST	1ST	**Introduction to Python:**
		Install Python and set up an IDE (e.g., PyCharm, VS Code, Jupyter, Spyder)
	2ND	Install Python and set up an IDE (e.g., PyCharm, VS Code, Jupyter, Spyder)
	3RD	Install Python and set up an IDE (e.g., PyCharm, VS Code, Jupyter, Spyder)
	4TH	Install Python and set up an IDE (e.g., PyCharm, VS Code, Jupyter, Spyder)
2ND	1ST	Data types, and operators
	2ND	Data types, and operators
	3RD	Data types, and operators
	4TH	Debug Python scripts to identify and fix errors
3RD	1ST	Debug Python scripts to identify and fix errors
	2ND	Debug Python scripts to identify and fix errors
	3RD	**Control Structures and Functions:** Implement conditional statements (if, else, elif) in real-life scenarios
	4TH	Implement conditional statements (if, else, elif) in real-life scenarios
4TH	1ST	Implement conditional statements (if, else, elif) in real-life scenarios
	2ND	Write programs using loops (for, while, and nested loops) to solve repetitive tasks
	3RD	Write programs using loops (for, while, and nested loops) to solve repetitive tasks
	4TH	Write programs using loops (for, while, and nested loops) to solve repetitive tasks
5TH	1ST	Define custom functions, including examples of recursion, use lambda functions for inline operations.
	2ND	Define custom functions, including examples of recursion, use lambda functions for inline operations.
	3RD	Define custom functions, including examples of recursion, use lambda functions for inline operations.
	4TH	Define custom functions, including examples of recursion, use lambda functions for inline operations.

6TH	1ST	**Data Structures in Python:**
		Perform CRUD operations on lists, tuples, sets, and dictionaries, use list comprehensions to filter and transform data
	2ND	Perform CRUD operations on lists, tuples, sets, and dictionaries, use list comprehensions to filter and transform data
	3RD	Perform CRUD operations on lists, tuples, sets, and dictionaries, use list comprehensions to filter and transform data
	4TH	Perform CRUD operations on lists, tuples, sets, and dictionaries, use list comprehensions to filter and transform data
7TH	1ST	Perform string manipulations using built-in methods
	2ND	Perform string manipulations using built-in methods
	3RD	Introduce Python's collections module with practical examples.
	4TH	Introduce Python's collections module with practical examples.
8TH	1ST	Introduce Python's collections module with practical examples.
	2ND	Introduce Python's collections module with practical examples.
	3RD	**File Handling and Modules:**
		Write programs to read, write, and append text files
	4TH	Write programs to read, write, and append text files
9TH	1ST	Work with CSV files using Python's csv module
	2ND	Work with CSV files using Python's csv module
	3RD	Work with CSV files using Python's csv module
	4TH	Read and write JSON files to store structured data
10TH	1ST	Read and write JSON files to store structured data
	2ND	Read and write JSON files to store structured data
	3RD	Explore built-in modules like os, math, and datetime, create and import custom modules.
	4TH	Explore built-in modules like os, math, and datetime, create and import custom modules.
11TH	1ST	**Object-Oriented Programming (OOP) in Python:**
		Define classes and create objects with attributes and methods
	2ND	Define classes and create objects with attributes and methods
	3RD	Implement encapsulation, inheritance, and polymorphism
	4TH	Implement encapsulation, inheritance, and polymorphism
12TH	1ST	Work with magic methods (e.g., init , str) and operator overloading
	2ND	Work with magic methods (e.g., init , str) and operator overloading
	3RD	Work with magic methods (e.g., init , str) and operator overloading
	4TH	Write programs to handle exceptions using try, except, and finally.

13TH	1ST	Write programs to handle exceptions using try, except, and finally.
	2ND	Write programs to handle exceptions using try, except, and finally.
	3RD	Use NumPy for numerical operations and Pandas for data analysis
	4TH	Use NumPy for numerical operations and Pandas for data analysis
14TH	1ST	Use NumPy for numerical operations and Pandas for data analysis
	2ND	Use NumPy for numerical operations and Pandas for data analysis
	3RD	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).
	4TH	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).
15TH	1ST	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).
	2ND	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).
	3RD	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).
	4TH	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).

Lesson plan for Pr1 (b) Introduction to IT System Lab
Academic Session 2025-26 (W)
Department of Information Technology,
UCP Engineering School, Berhampur

DISCIPLINE: SEC. C	SEMESTER: 1ST	NAME OF THE TEACHING FACULTY: GF1
SUBJECT: INTRODUCTION TO IT SYSTEM LAB	NO.OF DAYS/PER WEEK CLASS ALLOTTED : 4	SEMESTER FROM DATE: 06/08/2025 TO DATE: 04/12/2025
		NO.OF WEEKS:15
WEEK	**CLASS DAY**	**THEORY/PRACTICAL TOPICS**
1ST	1ST	Browser features, browsing, using various search engines, writing search queries
	2ND	Browser features, browsing, using various search engines, writing search queries
	3RD	Browser features, browsing, using various search engines, writing search queries
	4TH	Browser features, browsing, using various search engines, writing search queries
2ND	1ST	Browser features, browsing, using various search engines, writing search queries
	2ND	Browser features, browsing, using various search engines, writing search queries
	3RD	Browser features, browsing, using various search engines, writing search queries
	4TH	Visit various e-governance/Digital India portals, understand their features, services offered
3RD	1ST	Visit various e-governance/Digital India portals, understand their features, services offered
	2ND	Visit various e-governance/Digital India portals, understand their features, services offered
	3RD	Visit various e-governance/Digital India portals, understand their features, services offered
	4TH	Visit various e-governance/Digital India portals, understand their features, services offered
4TH	1ST	Visit various e-governance/Digital India portals, understand their features, services offered
	2ND	Visit various e-governance/Digital India portals, understand their features, services offered
	3RD	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.

	4TH	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
5TH	1ST	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	2ND	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	3RD	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	4TH	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
6TH	1ST	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	2ND	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	3RD	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	4TH	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
7TH	1ST	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	2ND	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	3RD	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	4TH	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
8TH	1ST	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
	2ND	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
	3RD	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.

	4TH	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
9TH	1ST	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
	2ND	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
	3RD	Connect various peripherals(printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
	4TH	Practice HTML commands, try them with various values, make your own Webpage
10TH	1ST	Practice HTML commands, try them with various values, make your own Webpage
	2ND	Practice HTML commands, try them with various values, make your own Webpage
	3RD	Practice HTML commands, try them with various values, make your own Webpage
	4TH	Practice HTML commands, try them with various values, make your own Webpage
11TH	1ST	Practice HTML commands, try them with various values, make your own Webpage
	2ND	Practice HTML commands, try them with various values, make your own Webpage
	3RD	Explore features of Open Office tools, create documents using these features, do it multiple times.
	4TH	Explore features of Open Office tools, create documents using these features, do it multiple times.
12TH	1ST	Explore features of Open Office tools, create documents using these features, do it multiple times.
	2ND	Explore features of Open Office tools, create documents using these features, do it multiple times.
	3RD	Explore features of Open Office tools, create documents using these features, do it multiple times.
	4TH	Explore features of Open Office tools, create documents using these features, do it multiple times.
13TH	1ST	Explore features of Open Office tools, create documents using these features, do it multiple times.
	2ND	Explore features of Open Office tools, create documents using these features, do it multiple times.
	3RD	Explore features of Open Office tools, create documents using these features, do it multiple times.
	4TH	Explore features of Open Office tools, create documents using these features, do it multiple times.
14TH	1ST	Explore security features of Operating Systems and Tools, try using them and see what happens.
	2ND	Explore security features of Operating Systems and Tools, try using them and see what happens.
`	3RD	Explore security features of Operating Systems and Tools, try using them and see what happens.
	4TH	Explore security features of Operating Systems and Tools, try using them and see what happens.

15TH	1ST	Explore security features of Operating Systems and Tools, try using them and see what happens.
	2ND	Explore security features of Operating Systems and Tools, try using them and see what happens.
	3RD	Explore security features of Operating Systems and Tools, try using them and see what happens.
	4TH	Explore security features of Operating Systems and Tools, try using them and see what happens.