Curriculum
Subject – Computer Science (Code -083)
Class – XI
Session 2024-2025

Month	April/May	June	July	August
Contents	**Computer System Overview**	**Data Representation**	**Society, Law and Ethics/ Introduction to Problem Solving**	**Introduction to Problem Solving**
Learning Outcomes	Students will be able to: ● Develop basic understanding of computer systems architecture. ● Understand components of computer systems. ● Comprehend memory structure of computer. ● Understand software and its types. ● Comprehend operating system.	Students will be able to: ● Comprehend encoding schemes used in computers. ● Define various number systems. ● Convert data from one number system to other number systems.	Students will be able to: ● Explain cyber ethics, cyber safety and cybercrime. ● Understand impacts of technology on society. ● Comprehend the terms digital footprint, IPR, malware etc. ● Explain IT Act and e-waste management. ● Understand the steps for Problem solving.	Students will be able to: ● Develop algorithms and flowcharts. ● Create basic python programs. ● Comprehend python data types. ● Define operators. ● Evaluate expressions.
Skills	Knowledge and Understanding	Knowledge, Understanding and Application	Knowledge, Understanding, Application and Analysis	Knowledge, Understanding, Application and Analysis
Software	Power Point	Acrobat Reader	Power Point	Power Point
Competency skills based activity / Experiential learning	Group discussion on types of software, Operating systems.	Conversions: Binary, Decimal, Octal and Hexadecimal	Group discussion on IPR.	Python programs.
Art Integration	English, Math			

Assessment: Class Response, Homework, Class Test and Practical Work.
Book: Computer Science with Python (Sumitra Arora)
Publisher: Dhanpat Rai & Co.

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Month	September	October	November	November/ December
Content	**Flow Control / String Manipulation**	**String Manipulation / List Manipulation**	**Tuples and Dictionaries/ Project**	**Project**
Learning Outcomes	Students will be able to : ● Implement conditional statements and loops. ● Apply string functions on strings. ● Create python programs based on flow control and strings.	Students will be able to : ● Apply string functions on strings. ● Create python programs based on flow control and strings. ● Comprehend list operations. ● Use inbuilt list functions. ● Apply list functions in python programs.	Students will be able to : ● Define Tuple and its operations. ● Explain dictionaries and their operations. ● Create python programs based on Tuples and dictionaries.	Students will be able to : ● Apply python concepts to create project.
Skills	Knowledge, Understanding, Application and Analysis	Knowledge, Understanding, Application and Analysis	Knowledge, Understanding, Application and Analysis	Knowledge, Understanding, Application and Analysis
Software	Python	Python	Python	Python
Competency skills based activity / Experiential learning	Python programs.	Python programs.	Project work: Identify requirements, analyze and design blueprint.	Create a minor project based on python.
Art Integration	English, Math			

Assessment: Class Response, Homework, Class Test and Practical Work.
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Publisher: Dhanpat Rai & Co.