

Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

Department of Computer Science

Teaching Plan (Semester-I)

(September -2021 to December-2021)

Name of the Teacher: Mr. Arun S Shinde

1. Details of Classes to be taught

Sr. No.	Class	Subject	Course code and title	Total Lectures
1	B Voc FY	Computer Technology	Introduction to IT (General Education) CT.GE.103	60
2	B Voc FY	Computer Technology	Office Automation Tool (Skill Component) CT.SC.102	60
3	B SC FY	Computer Science	Fundamentals of Computer CCCOS-1 Section –A	45
4	M SC CS FY	Computer Science	Object Oriented Programming using Python M. Sc. CS-CC-3	60

Course: Introduction to IT (General Education) (B. Voc. CT FY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit 1: Introduction to Computers Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Generations of Computer, Classification of Computers, Applications of Computer, Capabilities and limitations of computer.	15	21/09/2021 to 16/10/2021	Computer Generations Presentation Chart	--
2	Unit II: Basic Computer Organization Role of I/O devices in a computer system. Input Units: Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, Output Units: Monitors and its types. Printers: Impact Printers and its types. Non-Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.	15	18/10/2021 To 12/11/2021	Handling Hardware Components Of PC	Unit Test I

3	Unit III Storage Fundamentals Primary Vs Secondary Storage, Data storage & retrieval methods. Primary Storage: RAM ROM, PROM, EPROM, EEPROM. Secondary Storage: Magnetic Tapes, Magnetic Disks, hard disks, Floppy disks, Optical Disks, Compact Disks, Zip Drive, Flash Drives.	15	13/11/2021 To 07/12/2021	Collection Of All Storage Devices	--
4	Unit IV Computer Arithmetic and Basics of Internet Binary, Binary Arithmetic, Number System: Positional & Non-Positional, Binary, Octal, Decimal, Hexadecimal, Converting from one number system to another, Logic Gates: AND, OR, NOT, NAND, NOR, XOR, XNOR History of Internet, Applications of Internet, Web browsers, web Servers, creating email accounts, Managing emails, Search engines	15	10/12/2021 To 31/12/2021	Online Open Book Quiz in All Units I To IV	Activity Based Unit Test II

Course: Office Automation Tools (B. Voc-FY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit I: Word Processing Introduction, Features, Creating, Saving and Opening Documents in Word, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut, Editing, Previewing, Printing, formatting a Document, Find & Replace, Using Thesaurus, Using Auto- Multiple Functions, Mail Merge, Handling Graphics, Tables & Charts, Converting a word document into various formats like- HTML, PDF etc.	15	22/09/2021 To 15/10/2021	Presentation on Various Office Tools Like MS Office, Libre Office, WPS Office Google Docs, Sheets & Presentations	--
2	Unit II Spreadsheet Introduction, Worksheet basics, creating worksheet, heading information, data, text, dates, alphanumeric values, saving worksheet. Toolbars and Menus, Keyboard shortcuts, working with single and multiple workbooks, working with formula & cell referencing, Auto sum, Absolute & relative addressing, Worksheet with ranges, formatting of worksheet, Previewing & Printing worksheet, Graphs and charts, Creating and Using macros, Multiple worksheets- concepts, creating and using.	15	16/10/2021 To 11/11/2021	Assignment of creating a spreadsheet to calculate Internal Examination Merit List Using Various Excel Formulas	Unit Test I

3	Unit-III Presentation Creating slide show with animations. Auto-content Wizard, creating a blank presentation, auto-layout, Power point screen: screen layout and Views, insert a new slide, applying design template, changing slide layout, reordering and hiding slides, slide show and editing custom slide. Resizing a text box, Text box properties, delete a text box, Bulleted lists, Numbered lists, adding notes, Video and Audio, adding text Editing options, Formatting text, replace fonts, Line spacing, change case Spelling check, Color schemes, adding clip art, adding an image from a file Editing graphic, Auto Shapes, WordArt, Backgrounds, Action buttons Slide animation preview Slide transitions Slide show options Slide master Header and footer Slide numbers Date and time.	15	12/11/2021 To 08/12/2021	Assignment of Creating a Departmental Presentation Using PowerPoint	--
4	Unit IV: Database: Access basics, Database concepts and terminology Creating Databases, Using the table wizard, working in design view, Working with Fields and Records: Changing the Design of a table, Adding and deleting records, Closing a database and Access.	15	09/12/2021 To 31/12/2021	Database Application To Calculate Dues of Internal Examination	Activity Based Unit Test II

Course: Fundamentals of Computer (B. Sc. FY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT I: Introduction to Computers and Data Representation Introduction Basic structure, ALU, Memory, CPU, I/O devices Generations of computer, Evolution of computer Classification of computers: Notebook computers, personal computers, Workstation, micro, mini, mainframe, super computers, Computer Codes. Introduction to number system: Decimal, Binary, Octal, Hexadecimal. Conversions: Binary Arithmetic, Floating point numbers	13	22/09/2021 To 20/10/2021	Computer Generation Presentation	--
2	UNIT II: Input / Output Devices and Memory Input Devices: Keyboard, Point & Draw Devices, Data Scanning Devices, Digitizer, Electronic Card Reader, Voice Recognition Devices. Output Devices: Monitor, Printer, Plotter, Screen Image Projector, Voice Response System. Memory: RAM, ROM, PROM, EPROM, EBase Memory, Extended Memory, Expanded Memory, Cache Memory Storage Devices: Tape, FDD, HDD, CD ROM EPROM	10	25/10/2021 To 15/11/2021	Display Of All Hardware Components of PC	Unit Test I

3	Unit III Computer Software and Introduction to OOPs Definition of Software, Types of Software, Operating System Main function of operating system, Files and Directories, Types of OS Introduction to DOS, Introduction to Windows, Structured Programming, What is OOPs? Basics of OOPs	12	16/11/2021 To 13/12/2021	Presentation on Types of Software Development Techniques (POP, OOP) With Practical	--
4	UNIT IV: Computer Networks and Introduction to Internet Definition of computer network Network types: LAN, MAN and WAN, Network Topologies: Star, Ring, Hybrid Network, Wireless Networks, Different Search Tools, Web Browsers, Definition, Uses of Internet Basic Services: Electronic mail, File Transfer Protocol, Telnet	10	14/12/2021 To 29/12/2021	Presentation On Different Networking Devices	Activity Based Unit Test II


Course: Object Oriented Programming using Python (M. Sc. CS FY)


1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit I: Introduction to Python Installation and Working with Python, Understanding Python variables, Python basic Operators, Understanding python blocks, Declaring and using Numeric data types: int, float, complex, Using string data type and string operations, Defining list and list slicing, Use of Tuple data type, Conditional blocks using if, else and elif, Simple for loops in python, For loop using ranges, string, list and dictionaries, Use of while loops in python, Loop manipulation using pass, continue, break and else, Programming using Python conditional and loops block	15	27/09/2021 To 13/10/2021	Presentation on Python International Certification Path /Track	--
2	Unit II: Python Functions, Modules and Packages Organizing python codes using functions, organizing python projects into modules, Importing modules, Understanding Packages, Powerful Lamda function in python, Programming using functions, modules and external packages, Building blocks of python programs, Understanding string in build methods, List manipulation using in	15	14/10/2021 To 30/10/2021	Presentation On Python Functions, Modules, Packages	Unit test-I

	build methods, Dictionary manipulation, programming using string, list and dictionary in build functions.				
3	Unit III: Python File Operation and OOPs Reading config files in python, Writing log files in python, Understanding read functions, read(), readline() and readlines(), Understanding write functions, write() and writelines(), Manipulating file pointer using seek, Programming using file operations, Concept of class, object and instances, Constructor, class attributes and destructors, Real time use of class in live projects inheritance, overlapping and overloading operators, Adding and retrieving dynamic attributes of classes, Programming using OOPs support.	15	01/11/2021 To 16/11/2021		Seminar on Date:05/11/2021, 06/11/2021 Seminar on Date:12/11/2021, 13/11/2021
4	UNIT IV: Python Regular Expression, Exception Handling & Database Interaction Powerful pattern matching and searching, Power of pattern searching using regex in python, Real time parsing of networking or system data using regex, Password, email, url validation using regular expression, Pattern finding programs Avoiding code break using exception handling, Safe guarding file	15	25/11/2021 To 14/12/2021	Presentation on International Database Certifications	Seminar on Date:19/11/2021, 20/11/2021 Seminar on Date:26/11/2021, 27/11/2021 Activity based Unit Test- II

	operation using exception handling, Handling and helping developer with error code, Programming using Exception handling, SQL Database connection using python, Creating and searching tables, Reading and storing config information on database				
5	Revision On Unit I Revision On Unit II Revision On Unit III Revision On Unit IV		15/12/2021 To 18/12/2021 20/12/2021 To 23/12/2021 24/12/2021 To 28/12/2021 29/12/2021 To 31/12/2021		


Mr Arun S Shinde
Name of the Teacher
and Signature


Head of Department
- Head
Dept. of Computer Science
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Principal
PRINCIPAL
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(Autonomous), Latur

Rajarshi Shahu Mahavidyalaya (Autonomous), Latur
Department of Computer Science
Teaching Plan
(Semester-II/IV/VI)
(December-2021 to April-2022)

Name of the Teacher: Mr. Arun S Shinde

1. Details of Classes to be taught

Sr. No.	Class	Subject	Course code and title	Total Lectures
1	B. Sc. FY II Sem	Computer Science	U-COS-242 Programming in C	45
2	B. Sc. TY VI Sem	Computer Science	U-COS-642 Introduction to Python Programming –XII A	45
3	B. Voc. SY IV Sem	Computer Technology	CT.GE.402 Basics of Networking (General Education)	60
4	B. Voc. SY IV Sem	Computer Technology	CT.SC.402 Introduction to Python Programming (Skill Component)	60

Course: Programming in C (B. Sc. - FY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT- I Basics of C Language and Arrays Control Statements, Looping Statements, Introduction to Array Declaration and Initialization Of Arrays, Accessing Array Elements, Memory Representation of Array, Arrays and Its Types, String Handling Functions.	10	01/02/2022 To 16/02/2022	Presentation on & Revision of Semester I Syllabus	
2	UNIT- II Functions, Structure and Union Introduction, Types of functions, defining functions, Arguments Function prototype, calling function, Returning function results Call by value and call by reference, Recursion, Introduction to Structure Declaration of structure, Accessing Structure Elements, How structure elements are stored? , Array of Structure, Introduction to Union, Declaration of Union Accessing Union Elements, how union elements are stored.	12	21/02/2022 To 14/03/2022	Presentation on Algorithm & Flowchart	Unit Test I

3	UNIT- III Storage Classes and Pointers Automatic storage class, Register storage class, Static storage class External storage class, Introduction to Pointers, Pointer declaration, initialization Dereferencing pointers, Pointer arithmetic, Pointer to pointer, Arrays and pointers.	13	15/03/2022 To 12/04/2022	Open Book Quiz in All Units I To IV	
4	UNIT- IV File Management In C Defining and opening a file - closing file I/O operations on files Error handling during I/O operations Random access to files Command line arguments	10	13/04/2022 To 23/04/2022		Activity Based Unit Test II

Course: Introduction to Python Programming –XII A (B. Sc. - TY)

2. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT I: Beginning Python Introduction, History, important features, overview of python and installation, Lexical Matters: Lines, Comments, Names and Tokens, Doc Strings, Simple Program, Identifiers, Reserved Words, Multi-Line Statements, Operators, variables, assignment, Numbers (int, long, float and complex), Strings. Decision and Looping Statements, Introduction to decision statement, If Statement, if—else statement, if-elif-else statement. Introduction to Looping statement, while loop, for loop, nesting of loop, break, continue and pass statement.	15	20/12/2021 To 19/01/2022	Presentation on different Programming Paradigm like POP, OOP, Event Driven etc	
2	Unit II Sequence: String, List, Tuples and Error, exceptions: Strings, Lists, built-in method, Tuples, Dictionary, What are exceptions? exceptions in Python, Detecting and handling exceptions, Raising exception, Assertions, Standard exceptions, creating exceptions.	08	24/01/2022 To 08/02/2022	Presentation on Job Opportunities in Python Programming Language	Unit Test I

3	Unit III Functions, Class and OOPs: What are functions, calling functions, creating functions, passing functions, formal arguments, positional arguments, default arguments, variable length argument, recursion, Introduction to OOP, Classes, Class attributes, Instances, Instance attribute, building and Method of invocation, Sub classing and derivation, Inheritance, Built-in functions for classes, instances and other objects privacy.	13	09/02/2022 To 09/03/2022	Presentation On Python Programming Certification Path	
4	Unit IV Graphical Interfaces Graphical user interfaces, event-driven programming paradigm, tkinter module, creating simple GUI, button, labels, entry, dialogs, widget attribute – sizes, fonts, color layouts, nested frames.	09	14/03/2022 To 30/03/2022	Open Book Quiz on All Units I To IV	Activity Based Unit Test II
5	Revision On Unit I Revision On Unit II Revision On Unit II Revision On Unit II		04,05/Apr/2022 06,11/Apr/2022 12/Apr/2022 13/Apr/2022		

Course: Basics of Computer Networks (B. Voc. CT SY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit I Introduction to Communication and Networks Concept of communication system, Analog and Digital Communication, Data communication modes, Synchronous and Asynchronous transmission, Simplex, half-duplex, full-duplex communication, Networking Protocols and Standards, Layering, encapsulation, End-to-end argument. Protocol design issues, Network Applications. What is a computer Network? Components of a computer network, Use of Computer networks, network terminologies, Classification of networks, Network topologies: Switching; Circuit switching, Message switching, Packet switching, Multiplexing; FDM – Frequency division multiplexing, WDM – Wavelength division multiplexing, TDM – Time division multiplexing. The OSI Reference Model, The TCP/IP Reference Model, Comparison of the OSI & the TCP/IP Reference Models.	20	20/12/2022 To 13/01/2022	Presentation of Hardware Components Required For Networking	

2	Unit II Communication Mediums and Network devices Transmission medium; Guided & Unguided Transmission medium, Twisted pair, Coaxial cable, Optical fiber, Wireless transmission; Electromagnetic spectrum, Radio transmission, Microwave transmission. Networking devices: Repeaters, Hubs, Switches, Bridges, Routers, Gateways. Other Devices: Modems, Proxy Server, Wireless router.	10	17/01/2022 To 01/02/2022	Demonstration on Cables, RJ 45 Connector	Unit Test I
3	Unit III Physical and Data Link Layer Design issues of Physical layer and data link layer, Error detection & correction, CRC, Framing, Retransmission strategies, Multi-access communication, CSMA/CD, Ethernet, Addressing, ARP and RARP. Protocols for Physical and data link layer.	10	02/02/2022 To 17/02/2022	Demonstration on Devices Like Switch, Routers Etc	


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Course: Introduction to Python Programming (B. Voc. CT SY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit I: Introduction Introduction to Python Programming Language, Python Data, Variables, Expressions and Statements, Values and Data Types, Type Conversion Functions, Operators and Operands, Input Functions, Boolean Expressions, Logical operators, Conditional Execution, Unary Selection, Nested conditionals, Chained conditionals, Boolean Functions, Iteration, The for loop, The while Statement.	15	17/12/2021 To 10/01/2022	Presentation on Programming Language Paradigm	--
2	Unit II: Strings, Lists and Tuples in Python Strings, Operations on Strings, Index Operator, String Methods, Length, The Slice Operator, Lists, Accessing Elements, List Membership, Concatenation and Repetition, List Slices, List Deletion, List Methods, Tuples, Tuple operators and built-in functions, Tuples and Mutability, Tuple Assignment, Tuples as Return Values.	15	11/01/2022 To 05/02/2022	Presentation on Python International Certification Path /Track	Unit Test I

3	Unit III: Dictionary and File handling and OOP's Dictionaries, Dictionary Operations, Dictionary Methods, Dictionary Keys, Aliasing and Copying, Sparse Matrices, Working with Data Files, finding a File on your Disk, reading a File, Iterating over lines in a file, Writing Text Files. Object oriented Programming and Classes in Python: Creating Classes, Instance Objects Accessing Members, Constructor, Method Overloading, Inheritance	20	07/02/2022 To 12/03/2022	Presentation On Python Functions, Modules, Packages	--
4	Unit IV: Regular Expression and Exception Handling Regular Expressions, Exceptions, Standard Exceptions, Exceptions Syntax, the try/except/else Statement, the try/finally Statement, Unified try/except/finally, the raise Statement, the assert Statement, with/as Context Managers String-Based Exceptions, Class-Based Exceptions, General raise Statement Forms, Catch All Exceptions, Catch A Specific Exception, Catch Multiple Specific Exceptions, Clean-up After Exceptions.	10	14/03/2022 To 29/03/2022	--	Activity Based Unit Test II


 Mr Arun S Shinde
 Name of the Teacher
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 Head of Department
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 Principal
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