

M.L.Dahanukar College of Commerce

Teaching Plan: 2017 - 18

Department: I.T.

Class:S.Y.B.Sc.(I.T.)

Semester:III

Subject:Python Programming

Name of the Faculty:

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	Introduction: The Python Programming Language, History, features, Installing Python, Running Python program, Debugging : Syntax Errors, Runtime Errors, Semantic Errors, Experimental Debugging, Formal and Natural Languages, The Difference Between Brackets, Braces, and Parentheses, Variables and Expressions Values and Types, Variables, Variable Names and Keywords, Type conversion, Operators and Operands, Expressions, Interactive Mode and Script Mode, Order of Operations. Conditional Statements: if, if-else, nested if –else Looping: for, while, nested loops Control statements: Terminating loops, skipping specific conditions		12
July	Functions: Function Calls, Type Conversion Functions, Math Functions, Composition, Adding New Functions, Definitions and Uses, Flow of Execution, Parameters and Arguments, Variables and Parameters Are Local, Stack Diagrams, Fruitful Functions and Void Functions, Why Functions? Importing with from, Return Values, Incremental Development, Composition, Boolean Functions, More Recursion, Leap of Faith, Checking Types Strings: A String Is a Sequence, Traversal with a for Loop, String Slices, Strings Are Immutable, Searching, Looping and Counting, String Methods, The in Operator, String Comparison, String Operations.		12

August	<p>Lists: Values and Accessing Elements, Lists are mutable, traversing a List, Deleting elements from List, Built-in List Operators, Concatenation, Repetition, In Operator, Built-in List functions and methods Tuples and Dictionaries: Tuples, Accessing values in Tuples, Tuple Assignment, Tuples as return values, Variable-length argument tuples, Basic tuples operations, Concatenation, Repetition, in Operator, Iteration, Built-in Tuple Functions Creating a Dictionary, Accessing Values in a dictionary, Updating Dictionary, Deleting Elements from Dictionary, Properties of Dictionary keys, Operations in Dictionary, Built-In Dictionary Functions, Built-in Dictionary Methods Files: Text Files, The File Object Attributes, Directories Exceptions: Built-in Exceptions, Handling Exceptions, Exception with Arguments, User-defined Exceptions</p>		12
September	<p>Regular Expressions – Concept of regular expression, various types of regular expressions, using match function. Classes and Objects: Overview of OOP (Object Oriented Programming), Class Definition, Creating Objects, Instances as Arguments, Instances as return values, Built-in Class Attributes, Inheritance, Method Overriding, Data Encapsulation, Data Hiding Multithreaded Programming: Thread Module, creating a thread, synchronizing threads, multithreaded priority queue Modules: Importing module, Creating and exploring modules, Math module, Random module, Time module Creating the GUI Form and Adding Widgets: Widgets: Button, Canvas, Checkbutton, Entry, Frame, Label, Listbox, Menubutton, Menu, Message, Radiobutton, Scale, Scrollbar, text, Toplevel, Spinbox, PanedWindow, LabelFrame, tkMessageBox.</p>	1 class test	16
October	<p>Handling Standard attributes and Properties of Widgets. Layout Management: Designing GUI applications with proper Layout Management features. Look and Feel Customization: Enhancing</p>		8

	Look and Feel of GUI using different appearances of widgets. Storing Data in Our MySQL Database via Our GUI : Connecting to a MySQL database from Python, Configuring the MySQL connection, Designing the Python GUI database, Using the INSERT command, Using the UPDATE command, Using the DELETE command, Storing and retrieving data from MySQL database.		
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Teaching Plan: 2017 - 18

Department: I.T.

Class:S.Y.B.Sc.(I.T.)

Semester:III

Subject:Data Structure

Name of the Faculty:Prof. Aruta A. Jayswal

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	Unit 1- Introduction and Array	Test on algorithms	12
July	Unit 2- Linked List	Test on algorithms	22
August	Unit 3- Stack & Queue	Test on algorithms	10
September	Unit 4- Sorting & Searching techniques Tree Advanced Tree Structure		12
October	Unit 5- Hashing techniques & Graph		12

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Department: I.T.

Class:S.Y.B.Sc.(I.T.)

Semester: III

Subject: Computer Networks

Name of the Faculty: Amit Bane

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	1.Data communications, networks, network types, Internet history,standards and administration. 2.Protocol layering, TCP/IP protocol suite, The OSI model. 3.Data and signals, periodic analog signals, digital signals, transmission impairment, data rate limits, performance. 4.Digital-to-digital conversion, analog-to-digital conversion, transmission modes, digital-to-analog conversion, analog-to-analog conversion.		12
July	1.Multiplexing, Spread Spectrum 2.Guided Media, Unguided Media 3.Introduction, circuit switched networks, packet switching, structure of a switch. 4.Link layer addressing, Data Link Layer Design Issues, Error detection and correction, block coding, cyclic codes, checksum, forward error correction, error correcting codes, error detecting codes.		12
August	1.DLC services, data link layer protocols, HDLC, Point-to-point protocol. 2.Random access, controlled access, channelization, Wired LANs – Ethernet Protocol, standard ethernet, fast ethernet, gigabit ethernet, 10 gigabit ethernet, 3.Introduction, IEEE 802.11 project,		12

	Bluetooth, WiMAX, Cellular telephony, Satellite networks.		
September	<p>1. Network layer services, packet switching, network layer performance, IPv4 addressing, forwarding of IP packets, Internet Protocol, ICMPv4, Mobile IP</p> <p>2. Introduction, routing algorithms, unicast routing protocols.</p> <p>3. IPv6 addressing, IPv6 protocol, ICMPv6 protocol, transition from IPv4 to IPv6.</p> <p>4. Introduction, Transport layer protocols (Simple protocol, Stop-and-wait protocol, Go-Back-n protocol, Selective repeat protocol, Bidirectional protocols)</p>	Internal test (20)	12
October	<p>1. Transport layer services, User datagram protocol, Transmission control protocol.</p> <p>2. World wide-web and HTTP, FTP, Electronic mail, Telnet, Secured Shell, Domain name system.</p>		4

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Teaching Plan: 2017 - 18

Department: I.T.

Class:S.Y.B.Sc.(I.T.)

Semester:III

Subject:DATABASE MANAGEMENT SYSTEM

Name of the Faculty: SUPRITHA BHANDARY

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	Introduction to database and transactions What is database system, purpose, view of data, relational databases, database architecture Data models: importance, business rules, degree of data abstraction. Database design and ER model: overview, ER model, issues, weak entity sets, codd's rule		15
July	Relational data model Logical view of data, keys, integrity rules, relational database design, atomic domain and normalization Relational Algebra and calculus Introduction, selection and projection, set operations, joins, tuple relational calculus		15
August	Constraints and views: types of constraints, data independence, security, aggregate functions, NULL values, triggers. Transaction Management and concurrency: ACID properties, serializability and concurrency control, 2PL, time stamping methods, database recoverymgt	Class Test	18
September	PL-SQL: Identifiers and keywords, sequences, control structures, cursors, collections and composite data types, exception handling, procedures, functions, packages		12

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Department: I.T.

Class: S.Y.B.Sc.(I.T.)

Semester:III

Subject: Applied Mathematics

Name of the Faculty: Neha Joshi

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	Matrices Complex Numbers		10
July	Differential Equations Differentiation Under The Integral sign		10
August	Laplace Transformations Inverse Laplace Tranformations	Class Test	10
September	Multiple Integrals Applications of Integrals		10
October	Beta Gamma Functions Error Functions	Assignments/ Sums solving	10

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