M.L. Dahanukar College of Commerce

Teaching Plan: 2017 - 18

Department: I.T. **Class: S.Y.B.Sc.(I.T.)** **Semester:IV**

Subject: Core Java

Name of the Faculty:Sujata Patil

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Introduction: History, architecture and its components, Java ClassFile, Java Runtime Environment, The Java Virtual Machine, JVMComponents, The Java API, java platform, java development kit, Lambda Expressions, Methods References, Type Annotations, Method Parameter Reflection, setting the path environment variable, JavaCompiler And Interpreter, java programs, java applications, main(),public, static, void, string[] args, statements, white space, case sensitivity, identifiers, keywords, comments, braces and code blocks, variables, variable name		16
December	Data types: primitive data types, Object Reference Types, Strings, Auto boxing, operators and properties of operators, Arithmeticoperators, assignment operators, increment and decrement operator,relational operator, logical operator, bitwise operator, conditionaloperator II Control Flow Statements: The If…Else If…Else Statement, TheSwitch…Case StatementIterations: The While Loop, The Do … While Loop, The For Loop, The Foreach Loop, Labeled Statements, The Break And ContinueStatements, The Return Statement		20
January	Classes: Types of Classes, Scope Rules, Access Modifier, Instantiating Objects From A Class, Initializing The Class Object		32

	And Its Attributes,Class Methods, Accessing A Method, Method Returning A Value,Method's Arguments, Method Overloading, Variable Arguments [Varargs], Constructors, this Instance, super Instance, Characteristics Of Members Of A Class, constants, this instance, static fields of a class, static methods of a class, garbage collection. Enumerations, Arrays: Two Dimensional Arrays, Multi-Dimensional Arrays, Vectors, Adding Elements To A Vector, Accessing Vector Elements, Searching For Elements In A Vector, Working With The Size of The Vector.		
February	Multithreading: the thread control methods, thread life cycle, the main thread, creating a thread, extending the thread class.Exceptions: Catching Java Exceptions, Catching Run-Time Exceptions, Handling Multiple Exceptions, The finally Clause, Thethrows Clause Byte streams: reading console input, writing console output, reading file, writing file, writing binary data, reading binary data, getting started with character streams, writing file, reading file	Class Test	32
March	Event Handling: Delegation Event Model, Events, Event classes,Event listener interfaces, Using delegation event model, adapter classes and inner classes. Abstract Window Toolkit: Window Fundamentals, Component, Container, Panel, Window, Frame, Canvas. Components – Labels, Buttons, Check Boxes, Radio Buttons, Choice Menus, Text Fields, Text, Scrolling List, Scrollbars, Panels, Frames Layouts: Flow Layout, Grid Layout, Border Layout, Card Layout.		26

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M.L. Dahanukar College of Commerce

Teaching Plan: 2017 - 18

Department: I.T. Class: S.Y.B.Sc.(I.T.) Semester:IV

Subject: Introduction to Embedded Systems

Name of the Faculty:Ms.Shweta Shirsat

Month	**Topics to be Covered**	**Internal Assessment**	**Number of Lectures**
November	**Introduction**: Embedded Systems and general purpose computer systems, history, classifications, applications and purpose of embedded systems **Core of embedded systems**: microprocessors and microcontrollers, RISC and CISC controllers, Big endian and Little endian processors, Application specific ICs, Programmable logic devices, COTS, sensors and actuators, communication interface, embedded firmware, other system components. **Characteristics and quality attributes of embedded systems:** Characteristics, operational and non-operational quality attributes.		12
	Embedded Systems–Application and		14

December	**Domain Specific:** Application specific–washing machine, domain specific-automotive. **Embedded Hardware:** Memory map, i/o map, interrupt map, processor family, external peripherals, memory–RAM , ROM, types of RAM and ROM, memory testing, CRC ,Flash memory. **Peripherals:** Control and Status Registers, Device Driver, Timer Driver-Watchdog Timers.		
January	**The 8051 Microcontrollers:** Microcontrollers and Embedded processors, Overview of 8051 family. 8051 Microcontroller hardware, Input/output pins, Ports, and Circuits, External Memory. **8051 Programming in C:** Data Types and time delay in 8051 C, I/O Programming, Logic operations, Data conversion Programs.		12
February	**Designing Embedded System with 8051 Microcontroller:** Factors to be considered in selecting a controller, why 8051 Microcontroller,		15

	Designing with 8051. **Programming embedded systems**: structure of embedded program, infinite loop, compiling, linking and debugging. **Real Time Operating System (RTOS):** Operating system basics, types of operating systems, Real-Time Characteristics, Selection Process of an RTOS.		
March	**Design and Development**: Embedded system development Environment – IDE, types of file generated on cross compilation,disassembler/ de-compiler, simulator, emulator and debugging,embedded product development life-cycle, trends in embedded industry.	Class test	07

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M.L. Dahanukar College of Commerce

Teaching Plan: 2017 - 18

Department: I.T. **Class: S.Y.B.Sc.(I.T.)** **Semester:IV**

Subject: Computer Oriented Statistical Techniques

Name of the Faculty: Neha Joshi

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Measures of Central Tendency		10
December	Measures of Differentiation Moments Skewness Kurtosis		10
January	Probability Theory Sampling Theory	Class Test	10
February	Estimation Theory Small Sampling Theory		10
March	Curve Fitting and Correlation Analysis	Assignments/ Sums solving	10

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M.L.Dahanukar College of Commerce

Teaching Plan: 2017 – 18
Department: Information Technology

Class: S.Y.B.Sc.(I.T.) – Semester IV

Subject: Software Engineering

Name of the Faculty: Supritha Bhandary

Month	Topics to be Covered	Internal Assessment	Number of Lectures
Dec	Introduction, SDLC, software requirements, software processes, waterfall model, prototyping model, iterative model, RUP, RAD model, Agile software development		14
jan	Socio-Technical System: Characteristics, legacy systems, critical systems, security of software systems, Requirements engineering processes, feasibility study, systems models, context model, behavioural model, data model, object model	Class Test	17
Feb	Architectural design: modular decomposition styles, control styles, User Interface design: need of UI, Design issues, user analysis Project Management: project planning, project scheduling Quality Management: quality planning, quality control, software measurement and metrics		13
Mar	Verification and validation: software inspections, formal methods Software Testing: system testing, component testing, Software Measurement: Function point metrics, Software Cost Estimation: Estimation Techniques, project duration and staffing Process improvement, software reuse, distributed software engineering		16

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M.L. Dahanukar College of Commerce

Teaching Plan: 2017 - 18

Department: I.T. **Class: S.Y.B.Sc.(I.T.)** **Semester:IV**

Subject: Computer Graphics and Animation

Name of the Faculty: Sweta Chheda

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Unit 1 - Chap 1 - Introduction to Computer Graphics (half) + Practicals		22
December	Unit 1 - Chap 1 - (complete) Unit 1 - Chap 2 - Scan Conversion Unit 2 - Chap 3 - Two Dimensional Transformation (start) + Practicals		31
January	Unit 2 - Chap 3 - Two Dimensional Transformation (complete) Unit 2 - Chap 4 - Three Dimensional Transformation. Unit 3 - Chap 5 - Viewing in 3D Unit 3 - Chap 6 - Light Unit 3 - Chap 7 - Color + Practicals		25 (tentative)
February	Unit 4 - Chap 8 - Visible Surface Determination Unit 4 - Chap 9 - Plane Curves and Surfaces Unit 5 - Chap 10 - Computer Animation + Practicals	Internal test	20 (tentative)
March	Unit 5 - Chap 11 - Image Manipulation and Storage. **Project and Revision**		6 (tentative)

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