

Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

Department of Computer Science

Teaching Plan (Semester-I)

(Sept-2021 to Dec-2021)

Name of the Teacher: Ms. Jadhav Sunita M.

1. Details of Classes to be taught

Sr. No.	Class	Subject	Course code and title	Total Lectures
1	B. Voc. FY	Computer Technology	U-STM-207 Statistical Methods (General Education)	60
2	B. Voc. FY	Computer Technology	U-BCP-216 Basics of Computer Programming (Skill Component)	60
3	M. Sc. FY	Computer Science	P-CSA-127 Computer System Architecture	60

Course: Statistical Methods (B. Voc. - FY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit-I Elementary statistic: Introduction , classification of data, presentation of statistical data, values of variable and frequency, Cumulative frequency distribution, Diagrammatic presentation of statistical data, type of graphs, charts and diagrams, Histogram Bar chart, pie chart, frequency polygon, OGIVE	04 04 07	21/09/2021 to 27/09/2021 28/09/2021 to 01/10/2021 04/10/2021 to 13/10/2021	PPT representation on Introduction PPT representation on Histogram, Bar chart Assignment	
2	Unit-II Measures of central Tendency: Introduction, central tendency of data, mean, properties of arithmetic mean, Short cut method of calculating A.M for	07	14/10/2021 To 26/10/2021	PPT representation on Central tendency of data Use of white board for problem	

	<p>discrete series,</p> <p>Calculation of arithmetic mean for grouped frequency,</p> <p>Distribution: continuous series,</p> <p>calculation of arithmetic mean from grouped frequency distribution with open end class,</p> <p>geometric mean, Harmonic mean,</p> <p>advantages and disadvantages of A.M, G.M and H.M. median quartiles deciles and percentiles, mode</p>	08	<p>27/10/2021</p> <p>to</p> <p>11/11/2021</p>	<p>solving</p> <p>Assignment</p> <p>PPT representation on advantages and disadvantages</p>	Unit Test-I
3	<p>Unit-III Measures of Dispersion:</p> <p>Introduction, Dispersion, Range, Mean deviation, standard Deviation, Relative measure of Dispersion,</p> <p>moments and measures of skewness and Kurtosis: Introduction, moments, skewness, Kurtosis</p>	<p>07</p> <p>08</p>	<p>15/11/2021</p> <p>to</p> <p>23/11/2021</p> <p>24/11/2021</p> <p>to</p> <p>05/12/2021</p>	<p>PPT presentation on deviation</p> <p>Use of white board for problem solving</p> <p>PPT presentation on skewness and kurtosis</p>	
4	Unit-IV Correlation and Regression:			PPT Presentation	

	Introduction, correlation, determination of correlation by Two-way frequency table, scatter diagram, co-variance method or Karl Pearson's method, Rank method, concurrent deviation method,	07	06/12/2021 to 14/12/2021	on correlation Assignment	Unit test-II
	properties of correlation, coefficient, regression equation of X on Y, Regression coefficients, properties of linear regression	08	15/12/2021 To 28/12/2021		

Course: Basics of Computer Programming(B. Voc.-FY)

2.Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT I: Algorithm, Flowchart & Programming Basic: Algorithm and flowcharts Definition and properties Developing well known algorithms Principles of flowcharting Flow charting symbols Converting algorithm to flowchart Programming Basic What is Programming? Tokens Data Type Variables Constants Operators	05 10	21/09/2021 To 28/09/2021 01/10/2021 to 19/10/2021	PPT presentation on Algorithm and flowchart. Use of E-White Board for explaining algorithms and flowchart PPT presentation on Programming Basic	
2	UNIT II: C Language Basic Introduction to C Introduction and History of C Formatted input and output Structure of C program Hello World	03	22/10/2021 To 25/10/2021	Use of E-White Board for explaining Structure of C program Use of white board for	

	<p>Program</p> <p>Decision Making and Looping</p> <p>Decision making Statements: - simple if, if else, nested if else</p> <p>Switch Statement, Looping Statements: - for, while and do while break, continue</p> <p>Nested Loop Programs on above statements</p>	12	<p>26/10/2021</p> <p>to</p> <p>15/11/2021</p>	<p>programming</p> <p>PPT presentation on if statement, switch statement, looping statements and Use of White Board for explaining programs</p>	Unit-I
3	<p>UNIT III : Array, String and Function</p> <p>Array and String</p> <p>Difference between Variable and Array</p> <p>Array Memory Structure</p> <p>One Dimensional Array</p> <p>Multi-Dimensional Array</p> <p>String</p> <p>Introduction to function</p> <p>What is Function? Function Signature No Arguments and no return values, Arguments but no return values Arguments with return values</p>	<p>06</p> <p>09</p>	<p>16/11/2021</p> <p>to</p> <p>23/11/2021</p> <p>26/11/2021</p> <p>to</p> <p>06/12/2021</p>	<p>PPT presentation on Array and Use of E-White Board for explaining programs</p> <p>PPT presentation on Function and Use of E-White Board for explaining programs</p>	
4	<p>UNIT IV : Pointer and Structure : Pointers</p> <p>Understanding pointers</p> <p>Declaring and initializing pointers</p> <p>Accessing a variable through pointers.</p>	05	<p>07/12/2021</p> <p>to</p> <p>13/12/2021</p>	<p>PPT Presentation on Pointers and structure. Use of E-White Board for explaining programs</p>	Unit test-II


	Introduction to Structure Difference between Array and Structure : Structure Member Structure Variable Union Programs on Pointers Structure and Union	10	14/12/2021 to 28/12/2021		Quiz Competition on C programming
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Course: Computer System Architecture (M. Sc CS-FY)

2.Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT I : DESIGN METHODOLOGY AND PROCESSORS DESIGN Introduction to system modeling, Combinational and Sequential circuit design, Register level design, Processor level components, Queuing models, Simulation, Processor organization, Information representation, Instruction sets, Instruction format & types, RISC, CISC processor concepts.	03 06 06	27/09/2021 to 29/09/2021 30/09/2021 To 07/10/2021 08/10/2021 to 14/10/2021	PPT presentation on RISC,CISC	

4	UNIT - IV INTRODUCTION TO OTHER MICROPROCESSOR Features of Intel 8086, Architecture of Intel 8086, Functional Pin Diagram of Intel 8086, Addressing Modes of Intel 8086, Instruction set of Intel 8086, Assembly Language Programming of 8086, Introduction to 80386 microprocessor, Features of 80836, Architecture of 80836.	07	02/12/2021 to 11/12/2021		Seminar on dated 06/12/2021 07/12/2021 13/12/2021 14/12/2021 20/12/2021 21/12/2021 27/12/2021 28/12/2021 Unit test-II
		08	15/12/2021 to 29/12/2021	PPT presentation on architecture of Intel 8086	


Name of the Teacher
and Signature

S. M. Jadhav


Head of Department
- Head
Dept. of Computer Science
Rajarshi Shahu Mahavidyalaya, Latur


Principal
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Department of Computer Science

Teaching Plan (Semester-I)

(Dec-2021 to April-2022)

Name of the Teacher: Ms. Jadhav Sunita M.

2. Details of Classes to be taught

Sr. No.	Class	Subject	Course code and title	Total Lectures
1	B. Sc. SY	Computer Science	U-COS-444 Digital Electronics and Microprocessor 8086	45
2	B. Voc. SY	Computer Technology	U-DSA-429 Data Structure and Algorithms	60
3	B. Voc. FY	Computer Technology	CT.SC. 201 Programming for the Web	60
4	M.Sc. FY	Computer Science	P-COD-226 Compiler Design	60

Course: Digital Electronics and Microprocessor 8086 (B. Sc.-SY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	<p>UNIT – I Boolean Algebra And Gate Network</p> <p>Introduction with definitions of Logic gate, Truth table, Boolean Equation, Logic symbol. Digital Signals</p> <p>Basic Gates and Derived Gates: AND, OR, NOT, NAND, NOR, Ex-OR, Ex- NOR</p> <p>Basic laws and rules of Boolean algebra, De-Morgan's theorem I & II, Universal property of NAND gate & NOR gate,</p> <p>Formats of logical equation SOP,POS, K-map examples for SOP and POS format</p>	<p>03</p> <p>03</p> <p>05</p> <p>04</p>	<p>17/12/2021 to 23/12/2021 24/12/2021</p> <p>To 30/12/2021 01/01/2022 to 13/01/2022 15/01/2022</p> <p>to 22/01/2022</p>	<p>Use of Black Board , Book, Notes</p> <p>Use of Black Board, Book, Notes</p>	
2	<p>UNIT – II Logic Circuit</p> <p>Combinational Logic Circuit : Adder and Subtractor -half Adder, full adder, half subtractor, full</p>	<p>05</p>	<p>27/01/2022 to 04/02/2022</p>	<p>Use of Black Board, Book, Notes</p>	

	<p>subtractor, Multiplexer and De-multiplexer with its application, Difference between mux and De-mux , Encoder and decoder with types. Sequential Logic Circuit : Basics of Clock signal, Triggering methods Flip Flop with types SR flip-flop, D flip-flop, T flip-flop, JK flip flop , Shift Register with its types (SISO,SIPO,PISO,PIPO) Counter with types Asynchronous, Synchronous, Up, Down , Difference between synchronous and Asynchronous counter</p>	05	<p>05/02/2022 to 17/02/2022</p>		Unit Test-I
3	<p>UNIT – III Control Unit And Memory</p> <p>General model of control unit, Hardwired control unit, Micro-programmed control unit</p> <p>Memory Characteristics, Memory Hierarchies, Classification of memory, Primary and Secondary memories, Virtual and Cache memory, High speed Memories: Interleaved and Associative memory</p>	<p>03</p> <p>07</p>	<p>18/02/2022 to 25/02/2022</p> <p>26/02/2022 To 12/03/2022</p>	Use of Black Board, Book, Notes	

4	Unit – IV Introduction To Microprocessor 8086 General Block Diagram of Microprocessor, History of microprocessor Features of Intel 8086, Architecture of Intel 8086, Functional Pin Diagram of Intel 8086 Pin description, Buses, Format of instruction, Addressing Modes of Intel 8086 Instruction set of Intel 8086, Assembly Language Programming of 8086	04 04 02	17/03/2022 to 24/03/2022 25/03/2022 to 01/04/2022 07/04/2022 to 08/04/2022	Use of Black Board, Book, Notes	Unit test-II
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Course: Data Structure and Algorithms (B. Voc.-SY)

2.Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit I – Introduction to Algorithms and Data Structures Analysis of Algorithms Mathematical Background, Process of Analysis, Calculation of Storage Complexity, Calculation of Run Time Complexity Arrays Arrays and Pointers, Sparse Matrices, Polynomials, Representation of Arrays, Row Major Representation, Column Major Representation, Applications, Array operations.	07 08	20/12/2021 to 29/12/2021 30/12/2021 to 12/01/2022	Use of White Board and black board for explaining algorithms	
2	Unit II – Link List, Stack and Queue Lists Abstract Data Type-List, Array Implementation of Lists, Linked Lists-Implementation, Doubly Linked Lists-Implementation, Circularly Linked Lists-Implementation, Applications Stacks Abstract Data Type-Stack, Implementation of Stack, Implementation of Stack using Arrays,	04	13/01/2022 To 19/01/2022	Use of White Board for explaining data Structures	Unit Test-I

	<p>Implementation of Stack using Linked Lists, Algorithmic Implementation of Multiple Stacks, Applications</p> <p>Queues Abstract Data Type-Queue, Implementation of Queue, Array Implementation, Linked List Implementation, Implementation of Multiple Queues, Implementation of Circular Queues, Array Implementation, Linked List Implementation of a circular queue, Implementation of Deque, Array Implementation of a Deque</p>	<p>04</p> <p>07</p>	<p>20/01/2022</p> <p>to</p> <p>27/01/2022</p> <p>31/01/2022</p> <p>to</p> <p>09/02/2022</p>		
3	<p>Unit III – Trees and Graph</p> <p>Trees Abstract Data Type-Tree, Implementation of Tree, Tree Traversals, Binary Trees, Implementation of Binary Tree, Binary Tree Traversals, Recursive Implementation of Binary Tree Traversals, Non-Recursive Implementations of Binary Tree Traversals, Applications</p> <p>Graphs Definitions, Shortest Path Algorithms, Dijkstra's Algorithm, Graphs with Negative Edge costs, Acyclic Graphs, All Pairs Shortest Paths Algorithm, Minimum cost Spanning Trees, Kruskal's Algorithm, Prim's</p>	<p>10</p> <p>10</p>	<p>10/02/2022</p> <p>To</p> <p>28/02/2022</p> <p>02/03/2022</p> <p>to</p> <p>17/03/2022</p>	Use of White Board for explaining data Structures	

	Algorithm, Applications, Breadth First Search, Depth First Search, Finding Strongly Connected Components				
4	Unit IV – Searching and Sorting Searching Linear Search, Binary Search, Applications Sorting Selection Sort, Insertion Sort, Bubble Sort, Quick Sort, 2-way Merge Sort, Heap Sort	03 07	21/03/2022 To 24/03/2022 28/03/2022 to 06/04/2022	Use of White Board for explaining data Structures	Unit test-II

Course: Programming for the Web (B.Voc.-FY)

2. Summary of Lesson Plan

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	video, Audio and video in HTML5, HTML multimedia basics, embedding video clips, incorporating audio on web page, Image Mapping				
2	Unit – 2 CSS 3 Introduction to CSS, how does CSS work? Syntax, identification and grouping of elements, selectors, colors, background, fonts, text, links, lists, tables. CSS Box model, Margin, Padding, Border, height and width, floating elements, positioning of elements, align, dropdowns, navigation bar, counters, Image gallery.	08 07	05/03/2022 to 18/03/2022 19/03/2022 to 01/04/2022	Use of Black-board, Books, Notes	Unit Test-I
3	Unit – 3 Java Script Introduction to Client -Side Scripting, Introduction to Java Script, Javascript Types, Variables in JS, Operators in JS, Conditional statements, Java Script Loops, JS Popup Boxes, JS Events, JS Arrays, Working with Arrays, JS Objects, JS Functions, Document and its associated objects, Document, Link, Area, Anchor, Image, Applet, Layer Events and Event	05 10	04/04/2022 to 11/04/2022 12/04/2022 to 22/04/2022	Use of Black-board, Books, Notes	

	Handlers, Using Java Script in Realtime, Validation of Forms.	05	23/04/2022 to 25/04/2022		
4	<p>Unit -4 Web Hosting</p> <p>Web Hosting - What is Domain? Introduction to DNS, how to register a Domain? What is web hosting? How to get a web hosting? Host your website on web Server.</p> <p>FTP - FTP Introduction, FTP Commands Viewing Files and Directories, FTP Commands Transfer and Rename files, FTP with WS FTP/ CuteFTP, Filezilla on Windows.</p>	05 05	26/04/2022 to 28/04/2022 28/04/2022 to 30/04/2022	Use of Black-board, Books, Notes	Unit test-II


Course: Compiler Design (M.Sc.-FY)

2.Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	UNIT I: Introduction to Compilers and Programming Languages Compilers and translators, The structure of compiler, Compiler writing tools, Definition of P.L., High level Programming Languages., Lexical and syntactic structure of a language, Data structures, Operators, Statements, Lexical Analysis: Introduction to Lexical analysis, Role of a Lexical analyzer, A simple approach to the design of lexical analyzer, Regular expressions	03 07 05	03/02/2022 to 05/02/2022 07/02/2022 to 14/02/2022 15/02/2022 to 21/02/2022	Use of Black-board, Books, Notes	
2	UNIT II: Syntax Analysis and Basic Parsing Techniques Finite automata,	08	22/02/2022 to 03/03/2022	Use of Black-board, Books, Notes	

	<p>minimizing number of states of a DFA, Implementation of a lexical analyzer Context free grammars,</p> <p>Introduction to parsers, Shift reduce parsing, Top-down parsing, Operator Precedence parsing, Predictive parsers.</p>	07	<p>04/03/2022 to 11/03/2022</p>		Unit Test-I
3	<p>UNIT III: Syntax Directed Translation and symbol table</p> <p>Introduction to Syntax directed Schemes, Implementation of Syntax directed translators, Intermediate code,</p> <p>Postfix notation and evaluation of postfix expressions, Parse trees and syntax trees, the contents of a symbol table, Data structures for a symbol table.</p>	<p>05</p> <p>10</p>	<p>12/03/2022 to 17/03/2022</p> <p>18/03/2022 to 30/03/2022</p>	Use of Black-board, Books, Notes	

4	UNIT IV: Error detection and recovery, Introduction to Code Optimization Introduction to Errors, Lexical phase errors, Syntactic phase errors, Semantic errors, Sources of optimization, Loop optimization.	10	31/03/2022 to 13/04/2022		
		05	15/04/2022 to 20/04/2022	Use of Black-board, Books, Notes	Unit test-II
	Revision of all units	15	21/04/2022 to 10/05/2022		


Name of the Teacher and Signature
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