# Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

#### Department of Computer Science

#### Teaching Plan (Semester-I, III, V)

(July - 2021 to Dec - 2021)

#### 1. Details of Classes to be taught

Sr.	Class	Name of Asst. Prof.	Subject	Paper	Total
No.					Lectures:
	B. Voc.	Suchitra K. Kasbe	Computer	U-00P-431	60
1	(CT)SY		Technology	Object Oriented Programming	
				through C++	
	B. Voc.		Computer	U-FOSS-660	60
2	(CT) TY	Suchitra K. Kasbe	Technology	Free and Open Source Software	
	B. Voc.	Suchitra K. Kasbe	Computer	U-MAP-663	60
3	(CT) TY		Technology	Mobile Application Development	
4	MSc.	Mrs. S. K. Kasbe	Computer	P-LIA-329	60
4	(CS) SY		Science	Linux Administration	

# Course Title: Object Oriented Programming through C++

Sr.	Unit and Chapter to be covered	Expected	Date	Academic	No. of Test /
No.		No. of		activities to	Assignment
		Lectures		beorganized	with topic
					and
					date
1	Unit-I: Introduction to OOPs				
	andBasics of C++				
	Need object-oriented programming				
	comparison of procedural and object-			PPT	
	oriented approach object classes			presentation for basic	
	polymorphism inheritance reusability	10	07.07.2021 To	concepts	
	data hiding and abstraction		23 .07.2021	of OOP	
	applications of OOPs Character Set,			OI OUP	
	identifiers and keywords, data types,		0405004		
	constants, variables and arrays,	10	24.07.2021		
	Operators and Expressions,		То		
	Conditional Statements		11.08.2021		
	and Loops, Switch Statement				

2	Unit-II: Functions, Classes				
	andObjects				
	defining a function accessing a				
	function Passing arguments to a		12.08.2021		
	function specifying argument data	10	To To		
	types functionprototypes recursion		28.08.2021		
	Class declaration constructors			Program Assignment	
	constructor initialization lists access			Assignment	
	functions private member functions				Unit Test-I
	the copy constructor the class				
	destructor pointers to object static				
	datamembers static function members	10	01.08.2021 To		
	friend function Operator Overloading		17.09.2021		
	overloading the assignment operator				
	the this pointer overloading				
	arithmetic operators overloading the				
	arithmetic assignment operators				
	overloading the relational operators				
	overloading the increment and				
	decrement operators				
	overloading the subscript operator				
3	Unit-III: Inheritance and			PPT Presentation	
	FileHandling			on	
	Introduction, inheritance protected class			Inheritance	
	members overriding, Private		18.09.2021		
	access verses protected	05	To 30.09.2021		
	access virtual functions and		55.55.2521		
	polymorphism virtual				
	destructors abstract base				
	classes File Handling				
				<u> </u>	

	Classes for file stream operations opening and closing a file detecting end of file file modes file pointers and their manipulations sequential input and output operations random access file operations error handling command line arguments	05	01.10.2021 To 13.10.2021		
4	Unit-IV: Templates and Exception Handling function templates class templates container classes subclass templates passing template classes to template parameters Exception Handling Introduction Exception Handling Mechanism Concept of throw & catch with example	05	14.10.2021 To 23.10.2021 To 02.11.2021	Class test	Unit Test II

# Course Title: Free and Open Source Software

Sr.	Unit and Chapter to be	Expected	Date	Academic	No. of Test
No.	covered	No. of		activities	/ Assignment with topic
		Lectures		to be	and date
				organized	
1	Unit-I				
	Notion of Community-		09.07.2021		
	Guidelines for effectively	08	To		
	working with FOSS community-		20.07.2021		
	, Benefits				
	of Community based Software				
	Development –Requirements				
	for being open, free software,				
	open source software –Four				
	degrees of freedom – FOSS			ррт	
	Licensing Models – FOSS		23.07.2021	PPT	
	Licenses –	07	To	Presentation	
	GPL- AGPL- LGPL – FDL –			on on Software	
	Implications – FOSS examples.		30.07.2021	Licensing	
	FOSS Operating System:			Models	
	Introduction to O.S, examples of				
	FOSS operating system.				

2	Unit- II				Unit Test-I
	Linux Basic History of Linux,				
	Comparison of Linux with		06.08.2021 To		
	Windows, Linux as Layered	08	17.08.2021		
	structure. Linux commands ls,				
	rm, cp,cd, mkdir, mv, more,			Assignment	
	head, tail, pwd, chmod, tar, gzip,			for Shell	
	echo, date, cal, bc, cut, paste,			programs	
	sort command. grep with all				
	options, man, info, ps, kill, fg,bg,				
	redirection and pipe	<b>~</b>	20.08.2021		
	command. Linux Tree Structure, Creating user and	07	To 31.08.2021		
	assigning password, creating user defined command. Linux				
	shell scripts vi Editor Basic				
	Concepts, Shell Programming,				
	Types of Shell, Environment				
	Variables, Programming				
	Construct: loops, conditions,				
	logical operators, case constructs, if statement				

3	UNIT- III Google Drive: Introduction, create an Google Docs: Document, Formatting	07	03.09.2021 To 20.09.2021		
	, Usinga Dictionary, Thesaurus, or Encyclopedia, Taking Your Docs to the Next Level: Lists, Tables, Editing Images, Creating a Table of Contents, , Choose Sharers and Set Permissions	04	21.09.2021 To 28.09.2021	Create Google account and use Google Products	
	Google Sheets: Google Forms: , Multiple Choice, Checkboxes, Dropdown, File Upload, Linear Scale, Multiple Choice Grid, Checkbox Grid, Date and Time.		01.10.2021		
1	Form and Question Setting, Response Validation Changing Color and Backgrounds, Viewing Responces	04	To 5.10.2021		IInit Toct II
4	Unit: IV Google Scholar:	08	08.10.2021 To		Unit Test II
	Google sites:		23.10.2021	To create own video and update	
	Google Slides:  Introduction to OBS: Introduction, OBS Interface,		24.10.2021 To	using OBS studio	
	OBS Setting, Creating a video.	07	02.11.2021		

## Course Title: Mobile Application Development

Sr.	Unit and Chapter to be covered	Expected	Date	Academic	No. of Test /
No.		No. of		activities to	Assignment
		Lectures		be	with topic
				organized	and date
1	Unit I: Introduction Introduction to Mobile				
	Programming,	07	05.07.2021		
	Overview of the Operating		To	Identify the	
	Systems used on different mobile		15.07.2021	versions of	
	devices,		1007201	android	<b></b>
	Introduction to Android	08	19.07.2021 To	studio	
	Android History		03.08.2021	Studio	
	Android Features and Versions,				
	Various IDE for Android,				
2	<b>Unit II: Android Architecture</b> Linux Kernal, Dalvik Virtual				
	Machine,	00	04.00.2021		IImit Toot I
	Android Stack,	08	04.08.2021 To	Create the	Unit Test-I
	Android applications structure,		18.08.2021	project and observe the	
	Creating a project, Working with		22.00.2021	working of	
	the	0.7	23.08.2021 To 02.09.2021	Androidma- nifest.xml file	
	AndroidManifest.xml, Using the log system, Activities.	0 /			
3	Unit III: User Interface(UI) Architecture				
	Application context,	07	07.09.2021 To		
	Intents,Activity life cycle,		20.09.2021		
	Supporting multiple screen sizes,			<b>–</b> –	
	Android Components,				
	Android Application Structure,call Back Methods	08	21.09.2021 To 05.10.2021		

4	Unit IV User Interface Widgets				Unit Test II
	Text controls, Button controls,				
	Toggle buttons, Images,	07	06402024	Create a simple	
	Notification and Toast-			application	
	Parameters on Intents, Pending			using different controls	
	intents,	08	20.10.2021		
	Status bar notifications, Toast notifications		To 02.11.2021		

#### Course Title: Linux Administration

Sr.	Unit and Chapter to be covered	Expect	Date	Academic	No. of Test /
No.		ed No. of		activities to be	Assignment with topic
		Lectur		organized	and date
		es			
1	Unit-I Introduction to Linux and				
	Linux Files and Directories				
	Introducing Linux, Installing Red Hat	07	05.07.2021 To		
	Linux, Features of Linux, Basic		15.07.2021		
	Architecture of Linux system, features of				
	Kernel and Shell. Linux File System -				
	Boot block, Super block and Data blocks,				
	how Unix/Linux kernel access files.				
	The shell Scripts, Linux standard file			PPT	
	system, Structure of file system,			presentation	
	Essential Linux commands			on directory	
	Listing, Displaying, and Printing Files			structure and	
	Displaying Files: cat, less and more,		16.07.2021	commands	
	Printing Files: lpr, lpq, and lprm	08	To.07.2021		
	Managing Directories: mkdir, rmdir, ls,		31.07.2021		
	cd, and pwd				
	File and Directory Operations: find, cp,				
	mv, rm,andln Archiving and				
	compressing files				
	Filters and pipes: head, tail, wc, pr, cut,				
	paste, sort, uniq, grep, egrep, fgrep, tee				

2	Unit-II: Managing Users and File				Unit Test-I
	system			DDT	
	User Accounts, Managing Groups,			PPT presentation	
	Managing Users, Managing Passwords,		02.08.2021	on File	
	Getting System Administrator Privileges	08	To	System and managing	
	to Regular Users , The User Login		14.08.2021	Users	
	Process, Creating Users with the				
	GUItools, Disk Quotas, Communicating				
	withusers, The chroot command.				
	File System Hierarchy standard: Root				
	Directory, System Directories, Program		16.08.2021		
	Directories, Mounting File Systems	07	To 28.08.2021		
	automatically: /etc/fstab				
	Mounting File Systems Manually: mount				
	and unmount Converting an existing				
	ext2 Filesystem to ext3				
	Creating a File systems: mkfs, mke2fs, mkswap, parted and fdisk, Relocating a File System				
	Unit-III: Backing Up, Recovery and				
3	Printing with Linux				
	Choosing a Backup Strategy, Choosing a	07	30.08.2021 To		
	Backup Hardware and Media, Using		14.09.2021		
	Backup Software, Copying Files, deleting				
	Files, System Recovery				
	Overview of Linux Printing, Configuring		15.09.2021		
	and Managing Print Services, Creating	08	То		
	and Configuring Local Printers,		27.09.2021		
	Creating Network Printers, Console				
	Print Control, Using the Common UNIX				
	Printing System (CUPS) GUI				

4	UNIT IV: Network Connectivity and				Unit Test II
	Managing DNS				
	Networking with TCP/IP, Network		28.09.2021	PPT	
	Organization, Hardware Devices for	07	To	presentation	
	Networking , Using Network		18.10.2021	on Network connectivity	
	Configuration Tools , Dynamic Host				
	Configuration Protocol , Using the				
	Network File System, Putting Samba to		20 10 2021		
	work Managing DNS Configuring DNS,		20.10.2021		
	Essential DNS concept	08	To		
	Overview of DNS Tools, Configuring Name servers with BIND, providing DNS for Real Domain.		02.11.2021		

Suchitra K. Kasbe

Name & Signature of Teacher

HoD

Dept. of Computer Science

PRINCIPAL Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)

# Rajarshi Shahu Mahavidyalaya (Autonomous), Latur Department of Computer Science

#### Teaching Plan (Semester-II, IV, VI)

(Dec - 2021 to April -2022)

#### 1. Details of Classes to be taught

Sr.	Class	Name of Asst.	Subject	Paper	Total Lectures:
No.		Prof.			
1	M. Sc.	Suchitra K.	Computer	P-SFC-428	60
1	(C.S)SY	Kasbe	Science	Soft Computing	
	B. Sc.	Suchitra K.	Computer	U-COS-443	45
2	SY	Kasbe	Science	Programming in Java	
	B. Voc.	Suchitra K.	Computer	U_PRJ_527	60
3	(CT) SY	Kasbe	Technology	Java Programming	

#### **Course Title: Soft Computing**

Sr.	Unit and Chapter to be	ExpectedNo.	Date	Academic	No. of Test /
No.	covered	of Lectures		activities to be	Assignment
				organized	with topic
					and
					date
1	Crisp Sets: An Overview, Fuzzy Sets: Basic Types, Fuzzy Sets: Basic Concepts, Fuzzy Sets Vs Crisp Sets, Additional Properties of alpha cuts, Presentation of fuzzy sets, Extension principle for fuzzy sets. Operations on fuzzy sets Fuzzy complements, Fuzzy Union, Fuzzy Intersections, Crisp & Fuzzy Relation, Binary Fuzzy Relation,	10	17.12.2021 To 28.12.2021 To	PPT representationfor Operations of Fuzzy Sets	
	Binary Relation on single set, Fuzzy Equivalence		03.01.2022		

	IINIT II Inducada da esta esta esta esta esta esta esta est				
2	UNIT II Introduction to				
	Neural Networks				
	Inducation to Mountai		04.04.2022		
	Introduction to Neural	1.0	04.01.2022		
	Networks Biological	10	To		
	Neuron and their Artificial		15.01.2022		
	Neuron,				
	McCulloch-Pits Neuron			Assignment	
	Model,				
	Perceptron Classification,				
	Linearly Seperatability,				
	NOR Problem, O		17.01.2022		
	verview of Neural Network		То		Unit Test-I
	Architecture,	05	22.01.2022		
	Learning Rules-Supervised				
	Learning Unsupervised				
	Learning				
	- Perceptron Learning-				
	Reinforcement Learning				
	-Delta Learning Rule				
3	UNIT III: Multilayer Feed		24.01.2022	DDM	
	forward Network	10	To	PPT	
			05.02.2022	Presentation	
	Generalized DeltaLearning,			Back	
	Back propagations training			Propagation	
	algorithm and derivation of			algorithm	
	weight, Variant in Back		07.02.2022		
	propagations, Radial Basis	05	То		
	Function(RBF), Application		12.02.2022		
	of BP and RBFN/W				
1	UNIT IV: Recurrent				
4	Network and Neuro Fuzzy				
	System	4.0	14.02.2022		
		10	То		
	Hopfield Network,		25.02.2022		
	Counter propagation				
	networks,				Unit Test II
	Boltzmann Machine,				
	Adaptive Resonance theory				
	(ART).	05	26.02.2022		
	Fuzzy System,	UJ	To		
	Neuro Fuzzy System and		05.03.2022		
	Applications Fuzzy				
	neurons,				
	Fuzzy Neural Network,				
	Fuzzy associative memory,				
	Application in Pattern				

Recognition, Character, Face, Finger,		Class test	
Palm, Iris Recognitions,	07.03.2022		
Application in Expert System	То		
	30.03.2022		
Revision			
	01.04.2022		
	To 16.04.2022		
seminar			

# Course Title: Programming in Java

Sr.	Unit and Chapter to be	Expected	Date	Academic	No. of Test /
No.	covered	No. of		activities to be	Assignment
		Lectures		organized	with topic and
					date
	UNIT- I: An Introduction to Java  Introduction to Object Oriented Programming, Basic concepts of OOPs, A Short History of Java, Features of Java, Difference between Java and C++, Java virtual machine (JVM), Java program structure, Java statement, Command Line Arguments.	06	20.12.2021 To 29.12.2021 To 12.01.2022	PPT Presentation on Features of Java	
2	Unit – II: Decision Making, Branching, Looping and Classes, Object and Methods Decision making statement, Simple if statement, ifelse statement, Nesting of ifelse, Switch statement, while statement, do statement, for statement. Introduction, defining a class,	06	17.01.2022 To 31.01.2022 To 21.02.2022	Program Assignments	Unit Test-I

3	Unit -III: Arrays. Strings,				
	Vectors and Creating				
	and Using Packages				
	Introduction, One-		22.02.2022		
	dimensional Arrays:	05	To		
	Creating an one		02.03.222		
	dimensional array, Two-				
	dimensional Arrays:				
	Creating an two		07.03.2022		
	dimensional array, String	05	To	Assignment on	
	Arrays, String Method		15.03.2022	packages	
4	Unit – IV: Exception				Unit Test II
	Handling and Applet				
	Programming	05	16.03.2022		
	Dealing Errors,		То		
	Catching exception and		30.03.2022		
	exception handling, create			Accionment	
	user defined exception.			Assignment on Exception	
	Applet Life Cycle, Applet		31.03.2022	handling	
	HTML Tags, Passing	05	To		
	parameters to Applet,		13.04.2022		
	repaint() and				
	update()				

## Course Title: Java Programming

Sr.	Unit and Chapter to be	Expected	Date	Academic	No. of Test /
No.	covered	No. of		activities to be	Assignment
		Lectures		organized	with topic and
					date
1	Unit 1: Introduction to Java				
	<b>programming</b> History of Java,			Drogram	
	Features ofJava, Java	07	17.12.2021 To	Program	
	Development Kit(JDK),		29.12.2021	Assignments on	
	Keywords, Comments, Data			control	
	Types in Java, Primitive Data			statements and	
	Types;Variables in Java; The			looping	
	main() Method of java, Arrays	08	30.12.2021 To 12.01.2022	statements	
	and Strings Arrays; Strings,				
	String Operations, String				
	Buffer.				
	Unit 2: Object Oriented				Unit Test-I
2	Concepts				
	Class and Objects Class				
	Fundamentals, Creating		13.01.2022		
	objects, Assigning object	08	To		
	reference variables,		27.01.2022		
	Introducing Methods, Static			Program Assignments on	
	methods, Garbage Collection,			Polymorphism	
	The Finalize() Method			and inheritance	
	Inheritance and		28.01.2022		
	Polymorphism: Inheritance	07	To 10.02.2022		
	Basics, Method Overriding,				
	Abstract Classes,				
	Polymorphism, Final Keyword				

3	Unit 3: Package, Interface				
	and Exception Handling	07	11.02.2022 To		
	Packages Packages,				
	Defining and using a		24.02.2022		
	Package ,Interface				
	Interface,Exception		25 02 2022		
	Handling Definition of an		25.02.2022	Assignments on packages	
	Exception, Exception	08	То		
	Classes, Common		11.03.2022		
	Exceptions, Exception				
	Handling Techniques				
4	Unit 4: Applets, Event				Unit Test II
	Handling, Swing,		400000		
	JDBCApplets What are	7	12.03.2022 To		
	Applets? The Applet Class,		25.03.2022	Assignments on	
	Life Cycle of an Applet			Swing programs	
	Event Handling		26.02.2022	Programs	
	Components of an Event,	8	26.03.2022 To		
	Event Classes, Event				
			16.04.2022		

Suchitra K. Kasbe

Name & Signature of Teacher

Head

Dept. of Computer Science

PRINCIPAL Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)