SARDAR PATEL UNIVERSITY
Bachelor of Vocation (Software Development)
Semester: VI
Syllabus with effect from: June 2023

Course Type	New Course Code	TITLE	T/P	Credit	Exam Duration in Hrs	Contact Hrs Per Week	Component of Marks			Evaluation Responsibility
							Internal	External	Total	
							Total/ Passing	Total/ Passing	Total/ Passing	
General Component	US06FBVS51	Fundamental concepts of Information Security	T	3	3	3	30/12	70/28	100/40	University/ College
	US06FBVS52	Application Development	T	3	3	3	30/12	70/28	100/40	University/ College
	US06FBVS53	Technology Trends in IT	T	3	3	3	30/12	70/28	100/40	University/ College
	US06FBVS54	Server Side Programming	T	3	3	3	30/12	70/28	100/40	University/ College
Skill Component	**Lab/Practical**									
	US06CBVS51	Server Side Programming Practical Lab	P	3	3	3	30/12	70/28	100/40	University/ College
	US06CBVS52	In house Project	P	3	3	3	30/12	70/28	100/40	University/ College
	On-Job-Training/Qualification Packs									
	US06CBVS53	Application Developer-Web & Mobile(SSC/Q8403)	T/P	12	-	400 hours in semester	-	100/40	100/40	University / College

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Paper Code: Code: US06FBVS51	Total Credits:3
Title Of Paper: Fundamental Concepts of Information Security	

Unit	Description in detail	Weightage (%)
1	**Introduction to Information Security** - An overview of information security: confidentiality, integrity, and availability - Security policies, security mechanisms, assurance	25%
2	**Cryptography concepts** - Introduction - Conventional encryption principles - Basic terms : plaintext, ciphertext, cryptography, cryptanalysis - Substitution ciphers vs. transposition ciphers - Types of attack on encrypted messages - Introduction to public key cryptography - Applications for public-key cryptosystems	25%
3	**: Concept of System Security** - Intruders - Viruses and related threats : trap doors, logic bombs, trojan horses, viruses, worms, bacteria - The nature of viruses - Types of viruses - Antivirus approaches : detection, identification and removal	25%
4	**Concept of Network Security** - Digital signatures - Firewalls : introduction, design principles, characteristics, types, configuration	25%
	Practical:	
	The students are required to do Dictation, Narration, Listening Comprehension, Note Making/Note Taking as given by concerned faculty	

MAIN REFERENCE BOOKS :

1. William Stallings: Network Security Essentials (Applications and Standards), Pearson Education India, 2001.
2. Tanenbaum A. S., Computer Networks, Prentice-Hall of India Pvt. Ltd., New Delhi, 1997.

Paper Code: US06FBVS52	Total Credits:3
Title Of Paper: Application Development	

Unit	Description in detail	Weightage (%)
1	**Introduction to Mobile Apps and Android** - Why we Need Mobile Apps - Different Kinds of Mobile Apps - Briefly about Android - History Behind Android Development - What is Android?, Pre-requisites to learn Android - Brief Discussion on Java Programming	25%
2	**Android Architecture and Deep Overview in Android Stack** - Overview of Android Stack - Android Features - Introduction to OS layers - Linux Kernel - Libraries - Android Runtime - Application Framework - Dalvik VM	25%
3	**Installing Android Machine and creating first Android Application** - Configuring Android Stack - Creating Eclipse Environment - Integrating Android with Eclipse IDE - Exploring Eclipse IDE - Creating Android Project - Debugging Application through DDMS - Setting up environment, AVD Creation - Executing Project on Android Screen	25%

4	**Android Components and Hello World App** - Android Components : Activities, Services, Broadcast Receivers, Content Providers - Creating your first project - The manifest file - Layout resource - Running your app on Emulator	**25%**
	Practical:	
	The students are required to do Dictation, Narration, Listening Comprehension, Note Making/Note Taking as given by concerned faculty	

Reference Books

1. "Hello, Android Introducing Google's Mobile Development Platform" by Ed Burnette
2. Meier Reto : Professional Android 2 Application Development, Wiley Publishing, Inc., 2010
3. Conder Shane, Darcey Lauren : Android Wireless Application Development, 2nd Edition, Addition Wesley, 2011

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Paper Code: US06FBVS53	Total Credits:3
Title Of Paper: Technology Trends in IT	

Unit	Description in detail	Weightage (%)
1	**Internet of Things (IoT) And Big Data Analytics:-** Definition of IoT, History of IoT, IoT vs. similar concepts, Application/Segment overview, Technology overview., Concepts, examples of big data analytics, benefits of big data analytics, Technologies, and Applications, requirements forbeing successful with big data analytics. Big data analytics tools.	25%
2	**Cloud Computing:-** Cloud Computing – Introduction, Why cloud servicesare popular, advantages, Characteristics, Service models, Deployment of cloud services, Potential privacy risks	25%
3	**Cyber Security:-**Cyber Security – Introduction, risks, Malicious code, Hacker, attacker or intruder, Cyber security Principles, Information Security (IS) within LifecycleManagement, Risks & Vulnerabilities, Incident Response, Future Implications& Evolving Technologies.	25%
4	**Wearable Technologies:-** Wearable Technologies – Introduction, Applications of Wearable Technology, Challenges to Wearable Technology, various Wearable devices.	25%

MAIN REFERENCE BOOKS:-

Name of Authors	Title of the Book	Publisher
A. Ravichandran	Computer Today	Khanna Publishing House
Reference Books		
Jeeva Jose	Internet of Things	Khanna Publishing House
V.K. Jain	Big Data and Hadoop	Khanna Publishing House
V.K. Jain	Data Sciences and Analytics	Khanna Publishing House

Paper Code: **US06FBVS54**	**Total Credits:3**
Title Of Paper: Server Side Programming	

Uni	Description in detail	Weightage (%)
1	**Introduction** – ASP.NET – Introduction, overview of ASP.NET framework – Understanding ASP.NET controls – Understanding ASP.NET pages – Advantages of ASP.NET – Web Servers – introduction and role – Internet Information Server (IIS) – introduction – ASP.NET application- introduction – Creating ASP.NET page, understanding the ASP.NET page execution – The Page class	25%
2	**ASP.NET Standard Controls and Validation Controls** – Using standard controls : Label, TextBox, CheckBox, Button, Radio Button, Link button, Image Button – Client side validations. server side validation – Overview of the validation controls – Using Required Field Validator control, Range Validator control, Compare Validator control, Regular Expression Validator control, Custom Validator control, Validation Summary control, Introduction to variouscontrols	25%
3	**State Management and Advanced Concepts** – Introduction – View State : example, making view state secure, retaining member variables, storing custom objects – Transferring information, custom cookies, session state, session state configuration, application state – The Global.asax Application file – Login Controls – Site Navigation and Site Maps	25%
4	**Database Processing and Security (using C#)** – ADO.NET Architecture - connected and disconnected – ADO.NET basics – data provider, connection, command, DataReader, DataSet, DataAdapter – Data Binding – Introduction to data controls – GridView, DetailsView, FormView, Repeater, DataList, Website Security	25%
	Practical	
	The students are required to do Dictation, Narration, Listening Comprehension, Note Making/Note Taking as given by concerned faculty	

MAIN REFERENCE BOOKS :

1. Matthew MacDonald : Beginning ASP.NET 2.0 in VB 2005 by Apress, First Indian Reprint 2006
2. Stephen Walther : ASP.NET 2.0 Unleashed by Sams Publication
3. Scott Mitchell : Teach Yourself ASP.NET 2.0 in 24 Hours by Sams Publication

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Paper Code: **Code: US06CBVS51**	Total Credits:3
Title Of Paper: Advanced Java Programming Lab	

Part	Description in detail	Weightage (%)
1	• Advanced Java Programming Lab	**100%**

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Paper Code: **Code: US06CBVS52**	Total Credits:3
Title Of Paper: In house Project	

Part	Description in detail	Weightage (%)
1	• In house Project	**100%**