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	Internal Total/ Passing	External Total/ Passing	Total Total/ Passing	Evaluation Responsibility
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
Lab/Practical										
Skill Component	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
	US06CBVS53	Practical Training-III	P	12	-	-	-	-	-	University / College

SARDAR PATEL UNIVERSITY
B. Voc (Software Development)
Semester: VI
Syllabus with effect from: June 2023

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, securitymechanisms, assurance	**25%**
2	**Cryptography concepts** - Introduction - Conventional encryption principles - Basic terms : plaintext, ciphertext, cryptography, cryptanalysis - Substitution ciphers vs. transpositionciphers - Types of attack on encrypted messages - Introduction to public key cryptography - Applicationsfor 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**	25%
	- Android Components : Activities, Services, Broadcast Receivers, Content Providers - Creating your first project - The manifest file - Layout resource - Running your app on Emulator	
	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

SARDAR PATEL UNIVERSITY
B. Voc (Software Development)
Semester: VI
Syllabus with effect from: June 2023

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, benefitsof big data analytics, Technologies, and Applications, requirements for being successful withbig data analytics. Big data analytics tools.	25%
2	**Cloud Computing:-** Cloud Computing – Introduction, Why cloud services arepopular, 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

SARDAR PATEL UNIVERSITY
B. Voc (Software Development)
Semester: VI
Syllabus with effect from: June 2023

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, RadioButton, Linkbutton, ImageButton – Client side validation vs. server side validation – Overview of the validation controls – Using RequiredFieldValidator control, RangeValidator control, CompareValidator control, RegularExpressionValidator control, CustomValidator control, ValidationSummary control, Introduction to various controls	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

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%

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

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

SARDAR PATEL UNIVERSITY
B.Voc (Software development)
Semester: III
Syllabus with effect from: June 2023

Paper Code: US06CBVS53	Total Credits:12
Title Of Paper: Practical Training-III	

Part	Description in detail	Weightage (%)
1	- Practical Training on VB.NET - Practical Training on ASP.NET - Practical Training on Java - Practical Training on Python - Practical Training on Framework(react native/ flutter/Angular) ➢ **The students have to undergone for internship/ on the job training under any Concerned Organization in the areas of QP/NOS** ➢ **A presentation as well as report has to prepared and presented for the viva-voce and submit it to the concerned faculty.**	**100%**