

COURSE CURRICULUM FRAMEWORK UNDER AUTONOMY

Program: BVoc

Department: Software Development

Semester I		
Course code	Course Title	Credits
SBSD101	Communication Skills and Social Aptitude Basics of Communication Personality Development Soft skills Socio-Cultural Sensitization	4
SBSD102	Basics of French Language Basic Greetings & Basic Grammar Translations Communication & Culture Tourist Places and Essential Travel Information	4
SBSD103	Office Automation Introduction to MS Office Typewriting skills Word PowerPoint Outlook Excel Advanced excel	4
SBSD104	Web Designing & Programming HTML5 CSS XML JavaScript jQuery	3
SBSD104PR	Web Designing & Programming Practical	1.5
SBSD105	Logics & Algorithm Number System Set Theory The Logic of Compound Statements Relations, diagraphs and lattices Functions Graphs and Trees Counting and Probability	3
SBSD105PR	Logics & Algorithm Practical	1.5
SBSD106	Database Management System Introduction to database system, purpose of database system Data models and Data Integrity Introduction to Relational Algebra and Calculus, Simple SQL Queries Constraints, Views and Subqueries Transaction management and Concurrency control	3

SBSD106PR	Database Management System Practical	1.5
SBSD107	Object Oriented Programming with C++ Programming Introduction, Functions, Pointers, Introduction to OOP Operator Overloading Inheritance File Handling Exception Handling Introduction to data structures and arrays	3
SBSD107PR	Object Oriented Programming with C++ Practical	1.5

Semester II		
Course code	Course Title	Credits
SBSD201	Organizational Behavior, Cultural & Health Psychology Organizational Behavior& Cultural Psychology, Meaning and Scope Individual Behavior& Personality Values and Attitudes Learning Motivation Introduction to Health Psychology Cross cultural management	4
SBSD202	Principles of Marketing & Customer Service Management Marketing Overview Marketing Environment Customer Relationship Management Service Quality	4
SBSD203	Introduction to computer networks Knowing computer Computer hardware What is a network Cabling Networking hardware Topology Networking models Addresses Software Applications of network	4
SBSD204	Modern Operating Systems Introduction to Operating Systems Processes and Process Synchronization Threads Deadlocks Memory Management I/O Systems	3

	File Systems Virtualization and Cloud	
SBSD204PR	Modern Operating Systems Practical	1.5
SBSD205	Advanced Web Designing & Programming Vue.js Bootstrap Php5 WordPress	3
SBSD205PR	Advanced Web Designing & Programming Practical	1.5
SBSD206	Core Java Introduction to Java Inheritance, Packages and Interface Collections Framework Thread Programming Exception and File Handling Swing Event Handling JDBC	3
SBSD206PR	Core Java Practical	1.5
SBSD207	Software Engineering Introduction to Software processes Agile software development Requirements engineering Process and System Modeling User Interface Design Verification & Validation Project management and Planning Quality management Process improvement	3
SBSD207PR	Software Engineering Practical	1.5

Semester III		
Course code	Course Title	Credits
SBSD301	Computational Mathematics The Mean, Median, Mode, and Other Measures of Central Tendency Random Variable and Distribution Function Statistical Decision and Small Sampling Theory Curve Fitting and the Method of Least Squares Linear Programming Roots of non-linear equations Interpolation	4
SBSD302	Green Computing Occupational Safety & Health Management Fire Safety Minimizing Power Usage	4

	Cooling Going Paperless Datacenter Design and Redesign Virtualization Recycling Staying Green	
SBSD303	Digital Marketing Digital Marketing Concept and Scope Search Engine Optimization (SEO) Pay-per-click advertising (PPC) Content marketing Social Media Platforms Affiliate marketing Email marketing Display advertising Manage your Online Reputation Mobile commerce and E commerce Business Marketing	4
SBSD304	Advanced Java Introduction to servlets JSP EJB Persistence, Object/Relational Mapping and JPA Introduction to Hibernate	3
SBSD304PR	Advanced Java Practical	1.5
SBSD305	Python Programming and Data Structures Introduction to Python Python DataTypes, Python File Input-Output, Exception handling GUI and Database connectivity in Python Flask Data Structures: Stack, Queue, Linked List, Trees	3
SBSD305PR	Python Programming and Data Structures Practical	1.5
SBSD306	Data Communications and Network Security Introduction to Physical layer Introduction to the Data Link Layer Introduction to the Network Layer Introduction to the Transport Layer Introduction to Application Layer Introduction to the concepts of Security Cryptography Techniques	3
SBSD306PR	Data Communications and Network Security Practical	1.5
SBSD307	Software Testing Fundamentals of Testing Testing throughout the software life cycle Static techniques Test design techniques Test management Standards and Test Process Improvement Software Quality Assurance(SQA)	3

	Tool support for testing	
SBSD307PR	Software Testing Practical	1.5

Semester IV		
Course code	Course Title	Credits
SBSD401	Financial Literacy Introduction to Book keeping Basics of Direct Tax-Individual & Company Basics of Indirect Tax Basics of Financial Services and Insurance	4
SBSD402	Research Methodology Introduction to Research Types and Methods of Research Review of Literature Planning of Research and Identifying the Problem Report writing	4
SBSD403	Human Resource Management Introduction to HRM Training, Performance and Compensation Management Managing Conflict & Industrial Relations Current Issues and Challenges in HR	4
SBSD404	Android App Development Android Introduction Android Activity UI Layout and Widget Android Intents & Fragments Android Advanced UI Widgets Android SQLite XML and JSON Graphics and animation, Multimedia Android Service Google Map Firebase	3
SBSD404PR	Android App Development Practical	1.5
SBSD405	C# and ASP.Net MVC C# Language Web Forms MVC ASP.NET MVC & LINQ Web API	3
SBSD405PR	C# and ASP.Net MVC Practical	1.5
SBSD406	Computer and Network Security Information Security Overview Risk Analysis Secure Design Principles	3

	Asymmetric and Symmetric Key Algorithms Digital Signatures Key Distribution and Key Agreement Authentication Applications Firewalls Storage and Database Security Wireless Network Security Intrusion Detection and Prevention Systems	
SBSD406PR	Computer and Network Security Practical	1.5
SBSD407	Advance SQL with Oracle Introduction to PL/SQL Control structure Cursors and Exception Handling and Collections Procedures, Functions and Parameters Packages Triggers Bulk Collect Dynamic SQL Index	3
SBSD407PR	Advance SQL with Oracle Practical	1.5

Semester V		
Course code	Course Title	Credits
SBSD501	Strategic Management Introduction to Strategic Management Environment Scanning and Analysis Strategic Formulation and Management Models Strategy Implementation, Ethics and Change Management	4
SBSD502	Entrepreneurship Introduction: The Entrepreneur Idea Generation, Feasibility Analysis and Role of Innovation in Business Entrepreneurial Venture and Marketing Entrepreneurships in Tourism	4
SBSD503	Multimedia-I Photoshop CorelDraw Adobe Flash Sony Sound Forge	4
SBSD504	Cyber Forensics and Investigation Introduction to IT laws & Cyber Crimes Incident response Computer Forensics Windows Forensics Network Forensics Mobile Forensics	3

	Cloud Storage Forensics E-mail investigations Report writing	
SBSD504PR	Cyber Forensics and Investigation Practical	1.5
SBSD505	Artificial Intelligence Introduction to AI Solving Problems by Searching Game Playing Understanding and Knowledge Representation Natural Language Processing Introduction to Prolog Fuzzy Systems Neural Networks	3
SBSD505PR	Artificial Intelligence Practical	1.5
SBSD506	Internet of Things with SDN Introduction and system Architecture Introduction to Raspberry Pi Programming Raspberry Pi Raspberry Pi and Linux IoT Data Link Layer and Network Layer Protocols Prototyping Embedded Devices Cloud Computing - Internet of Things - Types of Network and In Traffic – Demand Network Requirements	3
SBSD506PR	Internet of Things with SDN Practical	1.5
SBSD507	Theory of Computation FINITE AUTOMATA REGULAR EXPRESSIONS REGULAR GRAMMARS CONTEXT FREE GRAMMAR PUSHDOWN AUTOMATA TURING MACHINES RECURSIVE AND RECURSIVELY ENUMERABLE LANGUAGES	3
SBSD507PR	Project Viva & Voce	1.5

Semester VI		
Course code	Course Title	Credits
SBSD601	Multimedia-II Canva , Adobe Image Ready & Photoshop Advance Adobe Illustrator Adobe Spark & Adobe Premier XARA 3D Ulead GIF Animator Flash Action Script	4
SBSD602	Reasoning Aptitude and Placement Orientation Reasoning	4

	Data Interpretation Problem Solving and Comprehension Placement Orientation	
SBSD603	Data Analytics Statistics and Presentation of Data Measures of Central Tendency and Dispersion Bivariate Analysis and Forecasting Technique Decision Theory	4
SBSD604	Machine Learning Introduction to Machine Learning Supervised Learning and Linear Regression Classification and Logistic Regression Decision Tree and Random Forest Naïve Bayes and Support Vector Machine Unsupervised Learning Dimensionality reduction	3
SBSD604PR	Machine Learning Practical	1.5
SBSD605	Big Data with NoSQL Introduction to Big Data and Hadoop MAPREDUCE Programming Hive Pig NoSQL MongoDB Column and Graph Database Introduction to Cassandra	3
SBSD605PR	Big Data with NoSQL Practical	1.5
SBSD606	Cloud Computing Computing Paradigms Cloud Computing Fundamentals Cloud Computing Architecture and Management Cloud Deployment Models Cloud Service Models Open Source Software available for the Cloud Deployment Technological Drivers for Cloud Computing Cloud Security Enterprise Cloud-Based High Performance Computing Advanced Concepts in Cloud Computing	3
SBSD606PR	Cloud Computing Practical	1.5
SBSD607	Optimization Technique SOLVING LP The Transportation and Assignment Problems Network Models SEQUENCING PROBLEM Replacement model Queuing Theory of games Simulation	3
SBSD607PR	Project Viva & Voce	1.5

