

**Syllabus of S. Y. B. Com (Vocational) Semester-III**

**Computer Applications (Paper – III)**

**Vocational Subject Name: Computer Applications -III**

**Subject Code: 235 (A)**

**Objectives:**

1. To get introduced with the Database concepts.
2. To enable the students to develop small, real life business applications.
3. To get acquainted with software concepts and real life applications used in businesses.

**Vocational Paper III: Relational Data Base Management Systems**

<b>Unit No.</b>	<b>Unit Title</b>	<b>Contents</b>	<b>Purpose Skills to be developed</b>
<b>1</b>	<b>Introduction Database Systems</b>	1.1 Basic of Data Arrangement and access 1.2 Data Hierarchy Bit, Byte (Character), Field, Record, File and Database 1.3 Storing and Accessing Records 1.4 Traditional File Environment and Problems with the File Approach 1.4 Concepts of Database 1.5 Benefits of Database in Business 1.6 Database systems- components 1.7 Hierarchical, Network and Relational Database Models 1.8 Concept of RDBMS, Advantages of RDBMS	To understand the concept of Databases
<b>2.</b>	<b>Developing Database Applications Seven Steps for Database development</b>	2.1 Study the Problem 2.2 Determine the Requirement 2.3 Design the Database 2.3.1 E.R Modeling 2.3.2 Data Dictionary 2.3.3 Normalization 2.4 Create the Database 2.5 Design the application 2.6 Create the Application 2.7 Test the application	To understand how to develop database application using different steps
<b>3.</b>	<b>RDBMS using</b>	3.1 Features	To study various data

	<b>any popular Software Package</b>	3.2 Data Types 3.3 Keys Primary Key, Foreign Key, Candidate Key, Super Key	types and keys
4.	<b>SQL</b>	4.1 Concept of SQL 4.2 Features and Types 4.3 Sub-divisions of SQL 4.3.1 DDL 4.3.2 DML 4.3.3 DCL 4.3.4 DQL	To understand SQL and its sub-division

### Teaching Methodology:

Topic No	Total Lectures	Innovative methods to be used	Film shows and AV Applications	Expected Outcome
1	8	Power Point Presentation	Video Presentations	To understand the concept of Databases
2	8	Use ICT or Presentation	Youtube video on developing database applications	To get familiar with database development
3	4	Demo Lectures	Demonstration of Data types and keys	To learn the data types
4	4	Hands on Practical	Presentations / Computer Based Lectures	To get acquainted with the queries based on the database

### Method of Evaluation:

Subject	Internal Evaluation	External Evaluation
Unit – I	05	Theory Exam : 50 Marks Practical Exam: 20 Marks (Total 70 Marks)
Unit – II	10	
Unit – III	05	
Unit – IV	10	

**References:**

1. Understanding DBMS S. Parthasarathy & Khalkar Master Education
2. An Introduction to Database Systems- C.J. Date Addis OTI Wesley
3. Database Systems- Hansen & Hansen 8. Database Systems- Korth
4. Understanding SQL – Martin Gruber BPB

## Syllabus of S. Y. B. Com (Vocational) Semester-III

### Computer Applications (Paper – IV)

#### Vocational Subject Name: Computer Applications –IV

Subject Code: 236 (A)

#### Objectives:

1. To get familiar with the System concepts.
2. To enable the students to understand system development phases.
3. To get acquainted with the concepts of software engineering.

#### Vocational Paper IV: System Analysis Design and Software Engineering

Unit No.	Unit Title	Contents	Purpose Skills to be developed
1	<b>Introduction Systems Concepts</b>	1.1 Systems Concepts 1.2 Basic Components of System 1.3 Elements of System 1.4 General Model of a System	To get introduce with the concept of system
2	<b>System Analysis and development</b>	2.1 System Analysis, <ul style="list-style-type: none"><li>• Systems Approach,</li><li>• System Analysis,</li><li>• System Design</li><li>• System Analyst and it's role</li></ul> 2.2 System Development Life Cycle <ul style="list-style-type: none"><li>• System Analysis</li><li>• Feasibility Study</li><li>• Requirement Analysis</li><li>• System Requirement Analysis</li><li>• System Design</li><li>• System Design Specifications and Programming</li><li>• System Implementation follow up and Maintenance</li><li>• Evaluation of the System</li></ul> 2.3 System Security-	To understand system development phases.

		<ul style="list-style-type: none"> <li>Physical Security,</li> <li>Logical Protection</li> </ul> <p>2.4 Structured System analysis and Design Method</p> <p>2.5 Systems Evaluation</p>	
<b>3.</b>	<b>System Tools and Techniques</b>	<p>3.1 Fact Gathering Techniques</p> <p>3.2 Flow- Charting</p> <p>3.3 Decision Tree and Decision Tables</p> <p>3.4 Data Flow Diagrams</p> <p>3.5 Data Dictionaries</p> <p>3.6 E-R Diagram</p> <p>3.7 Designing</p> <ul style="list-style-type: none"> <li>Input Design</li> <li>Code Design</li> <li>Forms design</li> <li>Output Design</li> </ul>	To understand and use system tools and techniques
<b>4.</b>	<b>Software Engineering</b>	<p>4.1 What is Software Engineering?</p> <p>4.2 Objectives of Software Engineering</p> <p>Software Qualities</p> <p>4.3 Methods of software Development</p> <ul style="list-style-type: none"> <li>Waterfall Analysis Model</li> <li>Spiral Model</li> </ul>	To learn the concept of Software Engineering

#### Teaching Methodology:

<b>Topic No</b>	<b>Total Lectures</b>	<b>Innovative methods to be used</b>	<b>Film shows and AV Applications</b>	<b>Expected Outcome</b>
1	4	Power Point Presentation	Presentations	To understand the concept of System
2	8	Use of ICT or Presentation and Demo Lectures	Youtube video on system development life cycle phases	To understand system development phases.

3	8	Presentation and Demo Lectures	Presentations various system tools and Demonstration of designing	To learn the system tools
4	4	Use of ICT	Computer Based Lectures	To learn the concept of Software Engineering

**Method of Evaluation:**

Subject	Internal Evaluation	External Evaluation
Unit – I	10	Theory Exam : 50 Marks Practical Exam: 20 Marks (Total 70 Marks)
Unit – II	10	
Unit – III	05	
Unit – IV	05	

**Reference Books:**

1. System Analysis Design and Software Engineering: Parthasarthy & B.W.Khalkar
2. Software Engineering: Roger Pressmen McGraw Hill

**S. Y. B. Com. (CBCS 2019 Pattern)**  
**Semester-IV**  
**Vocational Subject: Computer Application - III**  
**Subject Code: 245 (A)**

**Objectives**

1. To understand the concept of Information System.
2. To understand various types of MIS.
3. Students shall get familiar with ERP.

**Information Systems**

<b>Unit No.</b>	<b>Title</b>	<b>Contents</b>	<b>Purpose and Skills to be develop</b>
<b>1</b>	<b>Introduction to MIS</b>	1.1 Basic Information Concept 1.2 Information Vs. Data 1.3 Definition of MIS 1.4 Need 1.5 Objectives	To get familiar with MIS
<b>2</b>	<b>Decision Support System</b>	2.1 What is DSS? 2.2 Characteristics 2.3 Benefits 2.4 Components 2.5 Types of DSS	To study Decision Support System and its types
<b>3</b>	<b>Executive Support System</b>	3.1 What is ESS 3.2 Features 3.3 Advantages 3.4 Disadvantages	To learn about Executive Support System
<b>4</b>	<b>Introduction to ERP</b>	4.1 Definition 4.2 Features 4.3 Scope 4.4 Advantages 4.5 Disadvantages	To study Enterprise Resource Planning

### Teaching Methodology

Topic No.	Total Lectures	Innovative Methods to be used	Film shows and AV Applications	Expected Outcome
1.	6	Power Point Presentation	AV Applications, You Tube Video	To get familiar with Information systems
2.	8	Demo Lecture	Presentations, Hands on Assignments	To understand DSS and its types
3.	4	Power Point Presentation	YouTube Video, Hands on Assignments	Students will get familiar with ESS, its features and advantages
4.	6	Demo Lecture	Presentations, Hands on Assignments	To understand ERP its scope and features
<b>Total Lectures</b>	<b>24</b>			

### Evaluation Method

Subject	Internal Evaluation	External Evaluation
Unit 1	05	Theory Exam : 50 Marks Practical Exam : 20 Marks
Unit 2	10	
Unit 3	05	
Unit 4	10	

### Reference Books

Sr. No.	Title	Author	Publication
1	Management Information System	W. S. Jawadekar	Tata McGraw Hill Publication
2	Management Information System	Kenneth C. Laudon and Jane P. Laudon	Pearson Publication
3	Management Information System	R. Kelly Rainer, Brad Prince, Hugh Watson	Wiley Publications
4	Enterprise Resource Planning	Rajesh Ray	Tata McGraw Hill Publication
5	Enterprise Resource Planning	Alexis Leon	Tata McGraw Hill Publication



**Semester-IV**  
**Vocational Subject: Computer Application - IV**  
**Subject Code: 246 (A)**

**Objectives**

1. Student shall get acquainted with HTML and JavaScript.
2. To enable the students to develop small, real life business applications i.e. from concepts to the products.
3. To get familiar with Web page designing concepts used in business industries.

**Web page designing with HTML and JavaScript**

<b>Unit No.</b>	<b>Title</b>	<b>Contents</b>	<b>Purpose and Skills to be develop</b>
<b>1</b>	<b>Introduction to HTML</b>	1.1 Introduction to HTML and WWW 1.2 Basic HTML Structure 1.3 Common HTML Tag 1.4 List, hyperlink Tags	To design a web page using basic HTML Tags.
<b>2</b>	<b>Various Tags in HTML</b>	2.1 Table Tag 2.2 Frame Tag 2.3 HTML tags and web standards for images 2.4 HTML form and form Elements	To design a simple website using various HTML Tags.
<b>3</b>	<b>Introduction to JavaScript</b>	3.1 Identifiers, Operators, 3.2 Data Types, Values 3.3 Loops 3.4 Functions	Students shall get acquainted with Scripting Language-JavaScript
<b>4</b>	<b>Arrays in JavaScript</b>	4.1 Objects 4.2 Array 4.3 Array Object 4.4 Events	To learn Arrays and Array objects in JavaScript

## Teaching Methodology

Topic No.	Total Lectures	Innovative Methods to be used	Film shows and AV Applications	Expected Outcome
1.	6	Power Point Presentation	AV Applications, You Tube Video	To get familiar with web page design
2.	8	Demo Lecture	Presentations, Hands on Assignments	To add Frames Tables and Links in web pages
3.	4	Power Point Presentation	YouTube Video, Hands on Assignments	Students will get introduce with JavaScript programming
4.	6	Demo Lecture	Presentations, Hands on Assignments	To understand JavaScript Arrays and Array Objects
<b>Total Lectures</b>	<b>24</b>			

## Evaluation Method

Subject	Internal Evaluation	External Evaluation
Unit 1	05	Theory Exam : 50 Marks  Practical Exam : 20 Marks
Unit 2	10	
Unit 3	05	
Unit 4	10	

## Reference Books

Sr. No.	Title	Author	Publication
1	World Wide Web Designing with HTML	C Xavier	Tata Mc Graw Hill Publication
2	HTML and CSS : The Complete Reference	Powell and Thomas	Tata Mc Graw Hill Publication
3	HTML and CSS Step by Step Guide for Beginners	Daniel Bell	
4	A Smarter Way to Learn JavaScript	Mark Myers	Create Space Independent Publishing Platform
5	JavaScript: The Definitive Guide	David Flanagan	O'Reily

## **Acknowledgement**

The Syllabus Restructuring of B.Com (Vocational) Subject – Computer Application (CBCS-2019 Pattern) is a manifestation of excellence in the faculty of Commerce and Management. Savitribai Phule Pune University's focus has always been in raising the academic standards and excellence in the field of education. The B.Com (Vocational) Programme predominantly endeavours for holistic development of students.

It has emphasized on cultivating various skills and has also desired software technology expertise amongst the Commerce students. This revision has been possible only with the help and support of different eminent personalities. The contribution of all the members as a team has enabled the robust revision of all the titles of the Programme. SPPU is grateful to Hon. Prof. Dr. Nitin Karmalkar, Vice Chancellor, Hon. Dr. N. S. Umarani, Pro-Vice Chancellor, who has always lent continuous support and encouraged everyone involved in this task of restructuring. SPPU is also grateful to Hon. Dr. Parag Kalkar, Dean, Faculty of Commerce and Management and Dr. Yashodhan Mithare, Associate Dean, Faculty of Commerce and Management. They have been an inspiration for all the members to complete the work. Dr. Mrs. Leena Bhat Vocational Co-ordinator, Nashik District contributed to the great extent in the preparation of the Vocational Syllabus. The technological aspect in the course content is contributed by Mrs. Suwarna Mulay and Mrs. Pradnya Bapat.

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