

Savitribai Phule Pune University
Faculty of Commerce & Management
Revised Syllabus (CBCS 2019 Pattern) Under Vocational Course at First Degree Level

Preamble

Vocational Education refers to, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.

As per the UGC and Savitribai Phule University of Pune norms, vocational education is an integral part of general education. It is a means of preparing for occupational fields and for effective participation in the world of work and for responsible citizenship. In this sense, it can become an instrument for promoting environmentally sound sustainable development and a method of facilitating poverty alleviation.

In a time of continuous economic, social and technological change, there is a need to develop the knowledge and skills that will help the workforce become more flexible and responsive to the needs of local human resources, while competing in the global economy.

Objectives of the Course:

Present structure of B. Com. Vocational of Savitribai Phule Pune University aims at:

- Preparing a student for an occupational field.
- Providing the foundation for productive and satisfying careers.
- Imparting broad knowledge and generic skills applicable to a number of occupations within a given field so that the individual is not limited in his/her choice of occupation and is able to transfer from one field to another during his/her working life.

Class: T.Y.B.Com Vocational Semester - V

Subject: Computer Applications -I

Course Code: 355 Voc (A)

Total Credits: 04

Objectives:

- 1. To get acquainted with Python Programming.**
- 2. To enable the students to develop Python programming skills.**
- 3. To understand the concept of loop and control statements.**

Unit No.	Unit Title	Contents	Purpose & Skills to be develop
1.	Introduction to Python	1.1 Introduction to Python Programming 1.2 Characteristics of Python 1.3 Features of Python 1.4 Applications of Python	To get familiar with Python Programming Language
2.	Basics of Python Programming	2.1 Python Variables 2.2 Data Types 2.3 Operators 2.4 Simple Python Program	Simple Problem Solving and to develop Logic and Programming Skills.
3.	Decision Making Statements	3.1 If Statement 3.2 If-else Statement 3.3 nested If-else Statement 3.4 Program on if – else statement	To understand decision making Statements using Python

4.	Loop Control Programming	4.1 While Loop 4.2 For Loop 4.3 Nested Loops 4.4 Loop Control Statements 4.4.1 Break Statement 4.4.2 Continue Statement 4.4.3 Pass Statement	To understand Loops and Loop Control Statements using Python
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Teaching Methodology

Topic No.	Total Lectures	Innovative Methods to be used	Film shows and AV Applications	Project	Expected Outcome
1.	10	Presentation, Class Test, Group Discussion, Case Study, Home Assignment	Short Film, AV Application, Youtube Video		Students will get the basic knowledge of python.
2.	12	Presentation, Class Test, Group Discussion, Case Study, Home Assignment	Short Film, AV Application, Youtube Video		Students will be able to develop Basic Python Programs using decision making statements.
3.	12	Presentation, Class Test, Group Discussion, Case Study, Home Assignment	Short Film, AV Application, Youtube Video		It will help the students to implement Loops in Python.

4.	14	Presentation, Class Test, Group Discussion, Case Study, Practical Assignment	Demonstration, hands on assignments, Short Film, AV Application, Youtube Video		Students will be able to learn the basic GUI Programming and Data Analysis using Pandas.
Total Lectures	48				

References

Sr. No.	Title of the Book	Author/s	Publication	Place
1	Introduction to Problem Solving with Python	E. Balagurusamy	TMH	-
2	Python for Beginners	Harsh Bhasin	New Age International (P) Ltd.	-
3	Python GUI Programming CookBook	Burkhard A. Meier	Packt	-

List of Practicals

- 1) Python program to add two numbers.
- 2) Python program to calculate Simple Interest.
- 3) Python program to display maximum of two numbers.
- 4) Python program to check whether the given number is Positive or Negative.
- 5) Python Program to calculate DA, HRA and Net Salary of an Employee according to the following conditions:

If salary < 10000; DA is 3% of Basic Salary and HRA is 7% of Basic Salary

If salary < 15000; DA is 5% of Basic Salary and HRA is 8% of Basic Salary

If salary < 20000; DA is 6% of Basic Salary and HRA is 10% of Basic Salary

- 6) Python program to find factorial of the given Number.
- 7) Python program to find sum of 1 to 10 Numbers.
- 8) Python program to display Multiplication Table of a given Number.

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Revised Syllabus (CBCS 2019 Pattern) Under Vocational Course at First Degree Level
Class : TYB.Com (Vocational Subject) Semester - V
Subject : Computer Applications – II
Course Code : 356 Voc (A) No. of Credits : 04

Objectives of the Course:

- 1) To get familiar with the web designing concepts.
- 2) To get acquainted with web based software development process.
- 3) To facilitate the students to develop the web based applications.

Unit No.	Unit Title	Contents	Purpose & Skills to be developed
1.	Introduction to Web site	1.1 Introduction 1.2 Types of Website 1.3 Web development process model 1.4 Web Design Pyramid	To understand the basic concepts of website. To understand web development process.
2.	Website design	2.1 Factors influencing website design 2.2 Elements of Website Design 2.2.1 Site Structure 2.2.2 Site Navigation 2.3 Principles of good website design 2.4 Web content design 2.5 Designing for the world wide	To understand the basic structure of websites and web content design.
3.	IT infrastructure	3.1 Web App Architecture 3.2 Web Page Layout 3.3 Domain Name System	To get acquainted with website planning.

		3.4 Web Site Planning 3.5 Hyperlink Diagram	
4.	Web Publishing	4.1 Web authoring tools 4.2 Website Hosting 4.3 Search Engines 4.4 Registering Website on Search Engine	To get familiar with website hosting.

Teaching Methodology:

Topic No.	Total Lectures	Innovative Methods to be used	Film Shows and A.V. Application	Project	Expected Outcome
1	12	PowerPoint Presentations, various videos, Presentation, Class Test, Group Discussion, Case Study, Home Assignment	Short Film, AV Application, YouTube Video and various theories of systems are available on various digital platforms.	List attached	To learn the various types of website and web development process.
2	12	PowerPoint Presentations, various videos, Presentation, Class Test, Group Discussion, Case Study, Home Assignment	Short Film, AV Application, YouTube Video, various case studies are available on digital platforms		Students will get acquainted with the factors influencing website design.
3	12	PowerPoint Presentations, various videos,	Short Film, AV Application,		Students will be aware of various

		Presentation, Class Test, Group Discussion, Case Study, Home Assignment	YouTube Video and Demonstrations		infrastructures to design the website.
4	12	PowerPoint Presentations, various videos, Presentation, Class Test, Group Discussion, Case Study, Home Assignment	Short Film, AV Application, YouTube Video and Demonstrations		It will help the students to learn publishing of the web site.
Total Lectures	48	(including Theory and Practicals)			

References:

1. Basics of Website design, NIIT, Prentice-Hall of India Pvt Ltd.
2. Web Design in a Nut Shell - Jennefer Neiderst (SPD) O'Reily
3. Web Publishing - Deseuza and D'souza

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Class : TYB.Com (Vocational Subject)

Semester : VI

Subject : Computer Applications - I

Course Code : 365 (A) Voc

No. of Credits : 04

Objectives of the Course:

1. To get familiar with upcoming emerging technologies in IT.
2. To get acquainted with the applications and use of new trends.
3. To provide upward linkages for further studies in IT.

Unit No.	Unit Title	Contents	Purpose & Skills to be developed
1	New trends of Computing	1.1 Introduction to Computing 1.2 Cloud Computing 1.2.1 Meaning 1.2.2 Characteristics 1.2.3 Cloud Computing Models- IaaS, PaaS SaaS 1.2.4 Advantages of Cloud Computing 1.2.5 Applications of Cloud Computing	To learn new trends of computing in IT. To get familiar with the various applications of Cloud Computing
2	Artificial Intelligence	2.1 Introduction to Artificial Intelligence 2.2 Purpose of AI 2.3 Advantages of AI	To understand the concept of Artificial Intelligence. To get acquainted with the various

		2.4 Applications of Artificial Intelligence in business	applications of AI.
3	Internet of Things (IoT)	3.1 Introduction to IoT 3.2 Working of IoT 3.3 Features of IoT 3.4 Advantages of IoT 3.5 Applications of IoT	To learn the basic concepts of IoT and its applications.
4	Virtual Reality and Augmented Reality	4.1 Introduction – VR 4.2 Working of VR 4.3 Principles and Applications of VR 4.4 Introduction - AR 4.5 Applications of AR	To aware the concepts of VR and AR.

Teaching Methodology:

Topic No.	Total Lectures	Innovative Methods to be used	Film Shows and A.V. Application	Project	Expected Outcome
1	16	PowerPoint Presentations, Class Test, Case Study, Home Assignment	AV Applications, YouTube Videos		Students will get familiar with the concept of Cloud Computing.
2	10	PowerPoint Presentations, Class Test, Case Study, Home Assignment	Short Film, AV Applications, YouTube Videos		Students will get knowledge of Artificial Intelligence and its applications.
3	10	PowerPoint Presentations,	Short Film, AV Applications,		It will help students to understand the basic

		Class Test, Case Study, Home Assignment	YouTube Videos		concepts of IoT
4	12	PowerPoint Presentations, Class Test, Case Study, Home Assignment	Short Film, AV Applications, YouTube Videos		Student should get acquainted with the use of VR and AR.
Total Lectures	48	(including Theory and Practicals)			

References:

Sr. No.	Title of Book	Author/s	Publication	Place
1	Fundamentals of Cloud Computing	A. Kannammal	Cengage	
2	Artificial Intelligence	Elaine Rich, Kevin Knight, Shishankar Nair	McGraw Hill	
3	Internet of Things (IoT)	by Dr Kamlesh Lakhwani , Dr Hemant Kumar Gianey , Joseph Kofi Wireko , Kamal Kant Hiran	BPB	
4	Learning Virtual Reality: Developing Immersive Experiences and Applications for Desktop, Web, and Mobile	Tony Parisi	O' Reilly Media Inc	

5	Augmented Reality: Principles and Practice	Dieter Schmalstieg and Tobias Höllerer	Pearson Education	
6	IT in new Era	Dr. Mrs. Leena Bhat, Mrs. Suwarna Mulay, Mrs. Pradnya Bapat		

List of Practicals:

1. To study an application of Cloud computing – Online Data storage.
2. To study application of Artificial Intelligence in Health care
3. To study the use of Artificial Intelligence in Robotics.
4. To study applications of IoT.
5. To study use of IoT for smart home.
6. To study applications of Virtual Reality
7. To study working of Virtual Reality.
8. To study applications of Augmented Reality.

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Class : TYB.Com (Vocational Subject) Semester : VI
Subject : Computer Applications – II
Course Code : 366 Voc (A) No. of Credits : 04

Project Work

Objectives of the Course:

- 1) To develop project by the students.
- 2) To get acquainted with web based software development process.
- 3) To facilitate the students to develop the web based applications.

Students should prepare project with the help of project guide and develop a website or a software product. Use guidelines given by the college to prepare a project.

ACKNOWLEDGEMENT

The syllabus restructuring of B.Com(Vocational) subject: Computer Applications 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 field of education . The B.Com (Vocational) program predominantly follows holistic development of students.

It emphasised on cultivating various skills and also desired advertising and marketing skills and make students employable in the market. The revision has been possible only with the help and support of different eminent personalities. The contribution of all the members enabled the revision of all the titles of the programme. SPPU is great full to Hon. Prof.Dr.Nitin Karmalkar, Vice chancellor, Hon Dr. N.S.Umarani, Pro-Vice Chancellor, who has always lent continuous support and encouragement. SPPU is great full to Hon.Dr Parag Kalkar, Dean, Faculty of Commerce & Management, Dr.Yashodhan Mithare, Associate Dean, Faculty of Commerce & Management. They have been all inspiration for all the members to complete the work.