

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce,
Baramati.

SYLLABUS STRUCTURE OF

FYBBA (C.A)(2022 pattern)

Bachelor of Business Administration (Computer Application)

Syllabus (CBCS Pattern) under Academic Autonomy for the year 2022-2023

Semester –II

Subject Code	Name of Subject	Credit
UBCA121	Object Oriented Programming using C++	03
UBCA122	Web Technology (HTML5, CSS3, JavaScript, jQuery)	03
UBCA123	Software Engineering	03
UBCA124	Technical Report Writing	03
UBCA125	Digital Marketing	03
UBCA126	Computer Laboratory I [Based on UBCA121]	02
UBCA127	Computer Laboratory II[Based on UBCA122]	02
Certificate Course Democracy and Governance		02
Physical Education		02
Total		23

BBA (C.A) Programme Outcome

PSO1. Knowledge: To understand and apply the fundamental principles, concepts, and methods in diverse areas of computer science, computer applications, management, mathematics, statistics, etc.

PSO2. Problem Analysis: Identify, analyse and formulate complex real-life computing problems. Attain substantiated conclusions to solve the problems using fundamental principles of computer science and application domains by using various tools and emerging technologies.

PSO3. Design and Development: Design and develop efficient solutions for complex real-world computing problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety and the cultural, societal, and environmental considerations.

PSO4. Conduct investigations of complex problems: Ability to research, analyze and Investigate complex computing problems through the design of experiments, analysis, and interpretation of data, and synthesis of the information to arrive at valid conclusions.

PSO5. Modern Tool Usage: Create, identify and apply appropriate techniques, skills, and modern computing tools to computing activities.

PSO6. Ethics and Social Responsibility: Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practices.

PSO7. Individual and Team Work: Ability to work effectively as an individual, and as a member or leader as per need in, multidisciplinary teams.

PSO8. Life-Long Learning: Recognize the need and have the ability to engage in independent continuous reflective learning in the context of technological advancement.

PSO9. Project Management: Understand and apply computing, management principles to manage projects.

PSO10. Communication: Able to use interpersonal skills and communicate effectively with the professionals and with society to convey technical information effectively and accurately and able to comprehend and write effective reports, design documentation, and make effective presentations.

PSO11. Innovation, employability, and Entrepreneurial skills:

Identify opportunities, and pursue those opportunities to create value and wealth for the betterment of the individual and society at large.

**SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)
Academic Year 2022-2023**

Class: F.Y.BBA (C.A.) (Semester - II)

Paper Code: UBCA121

Paper: - I

Title of Paper: Object Oriented Programming using C++

Credit: 3

No. of. Hours: 48

A) Course Objectives:

1. To understand how C++ improves C with object-oriented features.
2. To learn and design concepts of C++ classes function for code reuse.
3. Demonstrate the use of various OOPs concepts with the help of programs.
4. Describe the principles of virtual functions and polymorphism.
5. To use exception handling in C++ programs.
6. Understand dynamic memory management techniques using pointers, constructors, destructors, etc
7. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.

B) Course Outcome:

Student should able to-

CO1. Understand Object Oriented Programming concepts using the C++ language

CO2. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.

CO3. Understand the principles of data abstraction, inheritance ,polymorphism.

CO4. Evaluate the concept of function overloading, operator overloading, virtual functions and polymorphism for solving problems.

CO5. Evaluate the I/O introduces exception handling.

CO6. Develop C++ programs that use: object-oriented concepts such as Information hiding, constructors, destructors, inheritance.

CO7. Develop effective, logical algorithms and implement in cleanly-compiled C++ programs

Topics/Contents	No. of Hours
Unit 1: Introduction to C++	(02Hr)
1.1 Basic Concepts of OOP, Benefits, Applications of OOP	
1.2 A Simple C++ Program	
1.3 Structure of C++ Program	
1.4 Creating a Source File, Compiling and Linking	
Unit 2: Tokens, Expressions and Control structures	(03 Hr)
2.1 Introduction	
2.2 Tokens, Keywords, Identifiers and Constants	
2.3 Data types-Basic, User Defined and Derived	
2.4 Symbolic Constant	
2.5 Type Compatibility	
2.6 Variables-Declaration and Dynamic Initialization	
2.7 Reference Variable	
2.8 Operators in C++	
2.8.1 Scope Resolution Operator	
2.8.2 Member Referencing Operators	

- 2.8.3 Memory Management Operators
- 2.8.4 Manipulators
- 2.8.5 Type Cast Operators
- 2.9 Expression and their Types
- 2.10 Special Assignment Expressions
- 2.11 Implicit Conversions
- 2.12 Operator Overloading Introduction
- 2.13 Operator Precedence

Unit 3: Functions in C++ (05 Hr)

- 3.1 Introduction
- 3.2 The main Function
- 3.3 Function Prototyping
- 3.4 Call by Reference
- 3.5 Return by Reference
- 3.6 Inline Function–Making an outside function Inline
- 3.7** Arguments-Default, Constant
- 3.8** Math Library Functions

Unit 4: Classes and Objects (10 Hr)

- 4.1 Introduction
- 4.2 Creating a Class and Objects
- 4.3 Defining Member Functions Inside and Outside Class Definition
- 4.4 Nesting of Member Functions
- 4.5 Private Member Functions
- 4.6 Arrays Within a Class
- 4.7 Memory Allocation of Objects
- 4.8 Static Data Members and Static Member Functions
- 4.9 Array of Objects
- 4.10 Objects as Function Arguments
- 4.11 Friend Functions
- 4.12 Returning Objects
- 4.13 Constructors
- 4.14** Types of Constructor
- 4.15** Destructors

Unit 5: Inheritance (09 Hr)

- 5.1 Introduction
- 5.2 Base Class and Derived Class Examples
- 5.3 Types of Inheritance
- 5.4 Virtual Base Class
- 5.5** Abstract Class
- 5.6** Constructor in Derived Class

Unit 6: Polymorphism (08 Hr)

- 6.1 Compile Time Polymorphism
 - 6.1.1 Function Overloading
 - 6.1.2 Operator Overloading Introduction
 - 6.1.3 Overloading Unary and Binary Operator
 - 6.1.4 Overloading using Friend Function
 - 6.1.5 Overloading Insertion and Extraction Operators
 - 6.1.6 String Manipulation using Operator Overloading
- 6.2 Runtime Polymorphism
 - 6.2.1** this Pointer, Pointers to Objects, Pointer to Derived

Classes

6.2.2 Virtual Functions and Pure Virtual Functions

Unit 7: Managing console I/O operations (03 Hr)

7.1 Introduction

7.2 C++ streams and C++ stream classes

7.3 Unformatted I/O operations

7.4 Formatted console I/O operations

7.5 Managing output with manipulators

Unit 8: Working with Files (05 Hr)

8.1 Classes for File Stream operations

8.2 File operations-Opening, Closing and updating

8.3 Error handling during File operations

8.4 Command Line arguments

Unit 9: Templates (03 Hr)

9.1 Introduction

9.2 Class Templates

9.3 Function Templates

9.4 Exception Handling (Introduction)

Reference Books:

1. Object oriented programming with C++ -by E Balagurusamy
2. Object Oriented Programming in C++ by Dr. G. T. Thampi, Dr. S. S. Mantha, DreamTech.
3. Object Oriented Programming with C++ by Robert Lafore

Website Reference Link:

1. W3Schools CPP Tutorial :https://www.w3schools.com/cpp/cpp_oop.asp
2. CPP Tutorials Point:
https://www.tutorialspoint.com/cplusplus/cpp_object_oriented.htm
3. CPP geeks for geeks : <https://www.geeksforgeeks.org/object-oriented-programming-in-cpp/>
4. CPP Tutorials Point : <https://www.javatpoint.com/cpp-oops-concepts>

Class: F.Y.BBA (C.A.) (Semester – II)

Subject: BBA(C.A)

Course Code: UBCA121

Course: Object Oriented Programming using C++

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO7	PO 8	PO 9	PO 10	PO 11
CO 1	3	-	-	-	-	-	-	-	-	-	1
CO 2	3	-	2	-	-	-	1	-	-	-	1
CO 3	3	2	-	-	-	-	-	-	-	-	1
CO 4	3	-	-	2	-	-	-	2	-	-	-
CO 5	3	2	-	2	-	-	-	-	-	-	-
CO 6	3	-	2	-	-	-	-	-	-	-	1
CO 7	3	-	2	2	-	-	1	2	-	-	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in computer application.

In CO1 to CO7 strongly mapped as the student will develop and the deep understanding of different concepts of OOPs concepts by using C++ programming.

PO2. Problem Analysis:

CO2 CO5 moderately mapped as contribute to the development of students' problem analysis, thinking and problem-solving skills. Students understand and solve real life problems by using various OOPs Concepts like constructor, destructor, overloading, and polymorphism.

PO3. Design and Development:

CO2 CO6 CO7 are moderately mapped as the students will be able to develop and implement basic to advanced programming concepts by using various OOPs Concepts like constructor, destructor, overloading, and polymorphism in C++.

PO4. Conduct investigations of complex problems:

CO4 CO5 CO7 are partially mapped as the students will be able to understand and apply programming skills for solving various real life problems with the help of C++ OOps Concepts.

PO7. Individual and Team Work:

CO1 CO2 CO7 are partially mapped as the students will develop ability to work individuals and groups for while problem solving.

PO8. Life-Long Learning:

CO2 and CO7 partially mapped as contribute to the development of students' ability to engage in life-long learning as all OOps concepts in C++ programming which helps to understand real life problems manipulation and development by programming skills.

PO11. Innovation, employability, and Entrepreneurial skills:

CO1 CO3 CO4 CO6 CO7 partially relate to employability skills as students are able to analyze and evaluate C++ programming concepts for professional development.

SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)
Academic Year 2022-2023

Class: F.Y.BBA (C.A.) (Semester - II)

Paper Code: UBCA122

Credit: 3

Title of Paper: Web Technology (HTML5, CSS3, JavaScript, jQuery)

No. of. Hours: 48

A] Course Objectives:

1. To impart the design, development and implementation of Dynamic Web Pages.
2. To develop programs for Web using Scripting Languages.
3. To Design and implement dynamic websites with good sense of designing and latest technical aspects.
4. To learn HTML and CSS tags and JavaScript Language programming concepts and techniques.
5. To introduce the fundamentals of Internet, and the principles of web design
6. To learn to write, test, and debug web pages using HTML and JavaScript.
7. Student will able to develop web application using various technology.

B] Course Outcome:

Students should be able to:

CO1. Analyze the web page and identify its elements and attributes.

CO2. Create web pages using HTML5 and CSS3.

CO3. Build dynamic webpage by the use of JavaScript and jQuery.

CO4. To construct basic websites using HTML and Cascading Style Sheets.

CO5. Understand internet basics, internet protocols and concepts of effective web design.

CO6. To Create forms and test for data accuracy and debug web pages using different tools.

CO7. Get knowledge and skills of project based experience needed for entry into web application.

Topics/Contents	No. of Hours
Unit 1: Introduction to Web Development	(04 Hr)
1.1. What is web app	
1.2. Client server Vs Web Server	
1.3. Front End & Back end.	
1.4. Internet-Basic, Internet Protocols(HTTP,FTP,IP)	
1.5. World Wide Web(WWW)	
1.6. HTTP Request Message, HTTP Response Message	
Unit 2: Introduction to HTML5	(12 Hr)
2.1 Introduction to HTML5, Features of HTML5, Introduction to Web 2.0 and Web3.0	
2.2 History And Major Actors	
2.2.1 A Little Retrospective	
2.2.2 What Is TheW3C?	
2.2.3 What Is The WHATWG?	
2.3 Getting Started With HTML5	
2.3.1 Feature Detection	
2.3.2 Support For Legacy Browsers	

- 2.4 Structure of a Web Page
 - 2.4.1 HTML5 DOCTYPE
 - 2.4.2 Page Encoding
 - 2.4.3 New And Updated Elements
 - 2.4.4 New Attributes
 - 2.4.5 Deprecated Elements And Attributes
- 2.5 Audio and Video
 - 2.5.1 The State of Web Audio And Video Based On Plug-in
 - 2.5.2 Attributes And Methods
 - 2.5.3 Understanding Audio/Video Events
- 2.6 HTML5 Canvas
 - 2.6.1 Overview of Graphics In The Browser
 - 2.6.2 Canvas Vs. SVG
 - 2.6.3 Using A Canvas
- 2.7 Forms
- 2.8 Working With Paths
 - 2.8.1 Drawing Straight Lines
 - 2.8.2 Drawing Circles Or Arcs
 - 2.8.3 Drawing Text
 - 2.8.4 Drawing Images
- 2.9 Understanding Transforms
 - 2.9.1 Translation
 - 2.9.2 Rotation
- 2.10 Scaling2.

Unit 3: CSS 3

- 3.1 Introducing CSS3
 - 3.1.1 What isCSS3?
 - 3.1.2 The History of CSS
- 3.2 Selectors and Pseudo Classes
 - 3.2.1 Attribute Selectors
 - 3.2.2 The Target Pseudo-Class
 - 3.2.3 UI Element States Pseudo-Classes
- 3.3 Fonts and Text Effects
 - 3.3.1 Fonts on the Web
 - 3.3.1 Font Services
 - 3.3.2 The @font-face Rule
- 3.4 Colours, Gradients, Background Images, and Masks
 - 3.4.1 Colour
 - 3.4.2 The Opacity Property
 - 3.4.3 Backgrounds
- 3.5 Selectors and Pseudo Classes
 - 3.5.1 Attribute Selectors
 - 3.5.2 The Target Pseudo-Class
 - 3.5.3 UI Element States Pseudo-Classes

- 3.6 Fonts and Text Effects
 - 3.6.1 Fonts on the Web
 - 3.6.2 Font Services
 - 3.6.3 The @font-face Rule
- 3.7 Colors, Gradients, Background Images, and Masks
 - 3.7.1 Color
 - 3.7.2 The Opacity Property
 - 3.7.3 Backgrounds
- 3.8 Transitions, Transforms and Animations
 - 3.8.1 Transitions and Transforms
- 3.9 Embedding Media
 - 3.9.1 Video Formats
 - 3.9.2 Styling Video

Unit 4: JavaScript

(12 Hr)

- 4.1 Introduction to JavaScript, Types of Scripts
- 4.2 Control and looping structure
- 4.3 Various Operators in JavaScript
- 4.4 Array its Types
- 4.5 Event Handling
- 4.6 Math, Date and String objects
- 4.7 DOM Objects
- 4.8 Form Validation
- 4.9 Dynamic effect using JavaScript

Unit 5: JQuery

(10 Hr)

- 5.1 Introduction to jQuery
 - 5.1.1 Need of jQuery
 - 5.1.2 Advantages of jQuery
 - 5.1.3 jQuery versions
 - 5.1.4 Features
- 5.2 Retrieving Page Content
 - 5.2.1 Using selectors
 - 5.2.2 Using filters
 - 5.2.3 Child, visibility, and content filters in jQuery
- 5.3 Manipulating Page Content
 - 5.3.1 Creating, getting, and setting content
 - 5.3.2 Manipulating attributes
 - 5.3.3 Inserting content
 - 5.3.4 Wrapping, replacing, and removing content
- 5.4 Methods in jQuery
- 5.5 Events in jQuery
- 5.6 Animation in JQuery
- 5.7 Plugins in JQuery

Reference Books:

1. JavaScript The Complete Reference 3rd Edition Thomas A. Powell, FritzSchneider McGraw Hill Professional,
2. HTML 5 Black Book (Covers CSS3, JavaScript, XML, XHTML, AJAX,PHP, jQuery)2Ed
3. JavaScript The Complete Reference 3rd Edition (Paperback, Powell Thomas)
4. Learning jQuery - Fourth Edition Jonathan Chaffer
5. HTML 5 Black Book (Covers CSS3, JavaScript, XML, XHTML, AJAX, PHP, jQuery)
6. Learning jQuery - Jonathan Chaffer, Karl Swedberg
7. HTML5 and CSS3 By Elizabeth Castro, Bruce Hyslop

Website Reference Link:

- 1) W3Schools HTML Tutorial: <https://www.w3schools.com/html/>
- 2) CSS Tutorial :<https://www.tutorialspoint.com/css/index.htm>
- 3) Learn Bootstrap Tutorial - JavaTpoint : <https://www.javatpoint.com/bootstrap-tutorial>
- 4) JavaScript Tutorial :<https://www.w3schools.com/js/>
- 5) The Modern JavaScript Tutorial: <https://javascript.info/>

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO7	PO 8	PO 9	PO 10	PO 11
CO 1	3	-	-	2	-	-	1	2	-	-	1
CO 2	3	-	2	-	-	-	1	2	-	-	1
CO 3	3	-	2	-	-	-	-	-	-	-	1
CO 4	3	-	2	-	-	-	1	-	-	-	-
CO 5	3	2	-	-	-	-	-	-	-	-	-
CO 6	3	-	2	2	-	-	-	-	-	-	1
CO 7	3	-	-	-	-	-	1	2	-	-	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in Computer Application.

In CO1 to CO7 strongly mapped as the student will develop and the deep understanding of different concepts of webpage development by using HTML tags, CSS and JQuery programming.

PO2. Problem Analysis:

CO5 moderately mapped as contribute to the development of students' problem analysis, thinking and problem-solving skills. Students understand and solve real life problems by using various concepts of webpage development for various application using HTML.

PO3. Design and Development:

CO2 CO3 CO4 CO6 are moderately mapped as the students will be able to develop and implement basic to programming concepts for development of websites by using various tags of HTML, Tools.

PO4. Conduct investigations of complex problems:

CO1 CO6 are partially mapped as the students will be able to understand and apply programming skills for solving various real life problems with the help of Web application developments Concepts.

PO7. Individual and Team Work:

CO1 CO2 CO4 CO7 are partially mapped as the students will develop ability to work individuals and groups for while problem solving.

PO8. Life-Long Learning:

CO1 CO2 and CO7 partially mapped as contribute to the development of students' ability to engage in life-long learning as all web application development concepts using HTML, CSS, JQuery programming which helps to understand real life problems manipulation and development by programming skills.

PO11. Innovation, employability, and Entrepreneurial skills:

CO1 CO3 CO4 CO6 CO7 partially relate to employability skills as students are able to analyze and evaluate web application development concepts for professional development.

SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)

Academic Year 2022-2023

Class: F.Y.BBA (C.A.) (Semester - II)

Paper Code: UBCA123

Credit: 3

Title of Paper: Software Engineering

No. of. Hours: 48

A) Course Objectives:

1. This course enables students to understand software and Software Process.
2. To understand the importance, limitations and challenges of processes involved in software development
3. To gain knowledge of various software models.
4. To learn about software requirements analysis and specification
5. To gain knowledge of various software design activities
6. To study software testing and maintenance
7. Verifying that the software meets its requirement and free of bugs.

B) Course outcomes:

Student should be able to:

CO1. Apply the software engineering lifecycle by demonstrating competence in communication, planning, analysis, design and deployment.

CO2. Understand the software engineering concepts.

CO3. Learn and differentiate software development methodologies.

CO4. Identify, analysis and design real life problem.

CO5. Analyze and translate a specification into a design, then realize that design practically, using an appropriate software engineering methodology.

CO6. Demonstrate to use the techniques and tools necessary for engineering practice

CO7. Solving problems of updating and improving the software to fix bug, address security, new features.

Topics/Contents	No. of Hours
Unit 1: Introduction to Software Engineering	(06 Hr)
1.1 Definition of Software	
1.2 Characteristics of Software	
1.3 Definition of Software Engineering	
1.4 Need for Software Engineering	
1.5 A Generic view of process-	
1.5.1 Software engineering layered technology	
1.5.2 A process Framework	
1.5.3 Capability maturity model integration	
1.5.4 process technology	
1.5.5 Product and Process	

Unit 2: Software Models

(08 Hr)

- 2.1 Prescriptive Process Models
- 2.2 Waterfall Model
- 2.3 Incremental Process Models
 - 2.3.1 Incremental Model
 - 2.3.2 RAD Model
- 2.4 Evolutionary Process Models
 - 2.4.1 Prototyping Model
 - 2.4.2 Spiral Model
- 2.5 An Agile view of Process
 - 2.5.1 What is Agility?
 - 2.5.2 Features of Agile Process Model
 - 2.5.3 Extreme Programming
 - 2.5.4 Scrum Model
 - 2.5.5 Adaptive Software Development

Unit 3: Requirement Engineering

(06 Hr)

- 3.1 Introduction
- 3.2 Requirement Elicitation
- 3.3 Requirement Elaboration
- 3.4 Requirement Gathering
- 3.5 Feasibility study
- 3.6 Fact Finding Techniques
- 3.7 SRS Format

Unit 4: Analysis and Design Tools

(10 Hr)

- 4.1 Decision Tree and Decision Table
- 4.2 Data Flow Diagrams (DFD) (Up to 2nd level)
- 4.3 Data Dictionary
- 4.4 Elements of DD
- 4.5 Advantages and Disadvantages of DD
- 4.6 Input and Output Design
- 4.7 Structured Design Concepts
- 4.8 Structure Chart
- 4.9 Coupling and Cohesion
- 4.10 Compulsory Case Studies on above topics

Unit 5: Software Testing and Maintenance

(08 Hr)

5.1 Definition

5.2 Software Testing Process

5.3 Unit Testing

5.4 Integration Testing

5.5 System Testing

5.6 Maintenance Definition and Types

Unit 6: Use-Case Driven Object-Oriented Analysis

(10 Hr)

6.1. Introduction to OOPS Concepts

6.1.1. Class and object

6.1.2. Abstraction and encapsulation

6.1.3. Method and messages

6.1.4. Interface, Inheritance and polymorphism

6.1.5. Structural Diagram-Class Diagram and Object diagram

6.1.6. Associations and links

6.1.7. Aggregation, Composition and Generalization

6.1.8. Inheritance, Sub Types and IS-A hierarchy

6.2. Behavioral Diagram

6.2.1. Use case Diagram

6.2.1.1 Identify Actors

6.2.1.2 Identify Use cases: describing how the user will use the system

6.2.1.3 Develop Use-Case Model

6.2.1.4 Description of Use case Diagram.

6.2.2 Activity Diagram

6.2.3 Sequence diagram

6.2.4 Collaboration Diagram.

6.2.5 Component Diagram

6.2.6 Deployment Diagram

6.2.7 State Transition Diagram Case studies should be covered on the above topic

Reference Books:

1. Software Engineering-Rogers. Pressman.
2. SADSE (System Analysis Design)-Prof. Khalkar and Prof. Parthasarathy.

Website Reference Link:

1. Software Engineering Tutorial for Beginners:
<https://www.guru99.com/software-engineering-tutorial.html>
2. Software Engineering Tutorial: <https://www.javatpoint.com/software-engineering-tutorial>
3. Software Engineering Tutorial:
https://www.tutorialspoint.com/software_engineering/index.htm

Class: F.Y.BBA (C.A.) (Semester - II) Subject: BBA(C.A)

Paper Code: UBCA123

Title of Paper: Software Engineering

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
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CO 1	3	-	-	-	-	-	-	-	-	-	-
CO 2	3	-	-	-	-	-	1	-	-	-	1
CO 3	3	-	-	-	-	-	-	1	-	-	-
CO 4	3	-	-	2	-	-	1	2	-	-	-
CO 5	3	2	-	2	-	-	-	2	-	-	-
CO 6	3	-	2	-	-	-	-	-	-	-	1
CO 7	3	-	2	-	-	-	1	-	-	-	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in Computer Application.

In CO1 to CO7 strongly mapped as the student will deep understanding of different concepts of software engineering SDLC, system flow diagrams & other concepts.

PO2. Problem Analysis:

CO5 moderately mapped as contribute to the development of students' problem analysis, thinking and problem-solving skills. Students understand and solve real life problems by using SDLC of software engineering.

PO3. Design and Development:

CO6 CO7 are moderately mapped as the students will be able to use software engineering concept for development of software applications like SDLC, Software Model, Design tools, software testing methods.

PO4. Conduct investigations of complex problems:

CO4 CO5 are partially mapped as the students will be able to understand and apply programming skills for solving various real life problems with the help of software development methods.

PO7. Individual and Team Work:

CO2 CO4 CO7 are partially mapped as the students will develop ability to work individuals and groups for while problem solving.

PO8. Life-Long Learning:

CO3 CO4 and CO5 partially mapped as contribute to the development of students' ability to engage in life-long learning as all software development concepts to understand real life problems manipulation and which help for software development and testing.

PO11. Innovation, employability, and Entrepreneurial skills:

CO2 CO6 CO7 partially relate to employability skills as students are able to analyze and evaluate software development concepts for professional development.

SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)

Academic Year 2022-2023

Class: F.Y.BBA (C.A.) (Semester - II)

Paper Code: UBCA124

Title of Paper: Technical Report Writing

Credit: 3

No. of. Hours: 48

A) Course Objectives:

1. Write clearly and in the correct style for your readers.
2. Use correct language and grammar.
3. Use layout, typography and illustrations to help get your message across.
4. Check & edit your own drafts
5. Provide you with the confidence to use written communication in your work and personal experience beyond college.
6. Develop effective communication strategies for variety of audience.
7. Get knowledge of technical report design methodologies and be able to use them.

B) Course Outcomes:

Student should be able to:

CO1. Produce a documentation plan, including estimates and schedules

CO2. Design and structure a document by analyzing the readership and selecting the right information.

CO3. Understand the basics of technical communication.

CO4. Achieve proficiency in writing technical reports.

CO5. Use professionally diverse methods of effective communication with the engineering community and Society at large.

CO6. Select the most appropriate methods, equipment and tools for writing and present good technical reports.

CO7. Analyze data and reflect this process and its results in the form of appropriate technical report.

Topics/Contents	No. of Hours
Unit 1: Introduction to Technical Communication	(03 Hr)
1.1 Basics of Technical Communication	
1.2 Components	
1.3 Process	
Unit 2: Elements of Style	(06 Hr)
2.1 Definition of Style	
2.2 Choice of Words and Phrases	
2.3 Sentence and Paragraphs Constructions and Length	
Unit 3: Business and Technical Report	(10 Hr)

- 3.1 Characteristic
- 3.2 Importance
- 3.3 Types of Reports
 - 3.3.1 Oral Report
 - 3.3.2 Written Report-
 - 3.3.2.1 Informal Report
 - 3.3.2.2 Formal Report - Informational, Interpretive, Routine Report
- 3.4 Routine Report
 - 3.4.1 Progress Report
 - 3.4.2 Laboratory Report
 - 3.4.3 Inspection report
 - 3.4.4 Inventory Report
 - 3.4.5 Annual Confidential Report on Employee

Unit 4: Planning and Preparation

(10 Hr)

- 4.1 Preparatory Steps
- 4.2 Sources of Data
 - 4.2.1 Internal Records
 - 4.2.2 Library
 - 4.2.3 Internet
- 4.3 Methods of Data Collection
 - 4.3.1 Personal Observation
 - 4.3.2 Telephone Interview
 - 4.3.3 Personal Interview
 - 4.3.4 Questionnaires**
 - 4.3.5 Mail Questionnaires**

Unit 5: Structure and Layout

(08 Hr)

- 5.1 Element of Structure
 - 5.1.1 Front Matter
 - 5.1.2 Main Body**
 - 5.1.3 Back Matter**

Unit 6: Use of Illustrations

(06 Hr)

- 6.1 Purpose
- 6.2 Characteristics of Good Illustrations
- 6.3 Types
 - 6.3.1 Tables
 - 6.3.2 Graphs**
 - 6.3.3 Drawings**

Unit 7: Report Writing

(05 Hr)

- 7.1 Rough Draft
- 7.2 Process of Writing
- 7.3 Order of Writing
- 7.4 The Final Draft
- 7.5 Check-List for Reports**
- 7.6 Communication Core**

Reference Books:

1. Business Correspondence and Report Writing, 4e-by R C Sharma Krishna Mohan Hand book of Technical)
2. Technical communication principles and practice-by Raman, Meenakshi and Sangeeta Sharma

Website Reference Link:

1. Report Writing -https://www.tutorialspoint.com/business_writing_skills/report_writing.htm
2. Introduction of Technical Report - <https://www.geeksforgeeks.org/introduction-of-technical-report/>

Class: F.Y.BBA (C.A.) (Semester - II)
 Course Code: UBCA124

BBA(C.A)
 Course: Technical Report Writing

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
CO 1	3	-	-	-	-	-	-	-	-	2	-
CO 2	3	-	2	-	-	-	1	-	-	2	-
CO 3	3	-	-	-	-	-	-	1	-	3	1
CO 4	3	-	-	-	-	-	1	1	-	3	1
CO 5	3	2	-	-	-	-	1	-	-	2	-
CO 6	3	-	2	-	-	-	-	-	-	3	-
CO 7	3	2	-	-	-	-	1	1	-	2	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in Management.

In CO1 to CO7 strongly mapped as the student will deep understanding of different concepts of technical report writing for business with help of various methods of presentation and report writing concepts.

PO2. Problem Analysis:

CO5 CO7 moderately mapped as contribute to the development of students' problem analysis, thinking and problem-solving skills. Students understand and solve real life problems by how to use appropriate methods of effective communication and analyzing the data.

PO3. Design and Development:

CO2 CO6 are moderately mapped as the students will be able to use communication & writing equipment and tools for writing and present good technical reports for business.

PO7. Individual and Team Work:

CO2 CO4 CO5 CO7 are partially mapped as the students will develop ability to work individuals and groups for while problem solving.

PO8. Life-Long Learning:

CO3 CO4 and CO7 partially mapped as contribute to the development of students' ability to engage in life-long learning as Business operations concepts of communication, documentation & writing reports concepts to understand real life problems.

PO10. Communication:

All CO1 to CO7 are moderately and strongly mapped as students will develop interpersonal skills and communicate effectively and write effective reports and design documentation with working areas.

PO11. Innovation, employability, and Entrepreneurial skills:

CO4 CO6 CO7 partially relate to employability skills as students are able to analyze and write effective reports and design documentation with working areas for professional development.

SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)

Academic Year 2022-2023

Class: F.Y.BBA (C.A.) (Semester - II)

Paper Code: UBCA125

Title of Paper: Digital Marketing

Credit: 3

No. of. Hours: 48

A] Course Objectives:

1. To give knowledge about using digital marketing in and as business.
2. To make SWOT analysis, SEO optimization and use of various digital marketing tools.
3. To create a measurable and goal oriented website or marketing plan.
4. Understanding of the principles and practices of digital marketing.
5. Understand the concepts of digital marketing and its real worlds iterations.
6. Identify and utilize various tools such as social media etc.
7. Get knowledge of how to create and run digital media based campaigns.

B] Course Outcome:

Student should be able to:

- CO1.** Identify and implement best practices in business for planning, decision making, problem solving and conflict management.
- CO2.** Explain why we get a huge list of webpages as a result of a search.
- CO3.** Examine why a certain webpage is ranked higher compared to others.
- CO4.** Organize how we can ethically boost the ranking of our webpage.
- CO5.** Describe some of the latest technologies used in Digital Marketing.
- CO6.** Develop and execute a marketing plan, resource planning, budgeting planning for successful business.
- CO7.** Ability to understand and subsequently create and strategic and targeted campaigns using digital media tools.

Unit No.	Topic	No. of Hours
Unit 1	Introduction 1.1 Understanding Internet Marketing 1.2 Search Engine Optimization 1.3 Search Engine Marketing 1.4 Email Marketing 1.5 Digital Display Marketing	(04Hr)
Unit 2	Introduction to New Age Media (Digital) Marketing 2.1 What is Digital Marketing 2.2 Digital vs. Real Marketing 2.3 Digital Marketing Channels 2.4 Types of Digital Marketing(Overview)-Internet Marketing ,Social Media Marketing, Mobile Marketing	(04Hr)
Unit 3	Creating Initial Digital Marketing Plan 3.1 Content management 3.2 SWOT analysis: Strengths, Weaknesses, Opportunities, andThreats 3.3 Target group analysis EXERCISE: Define a target group	(04Hr)
Unit 4	Marketing using Web Sites 4.1 Web design 4.2 Optimization of Web sites 4.3 MS Expression Web EXERCISE: Creating web sites, MSExpression	(04Hr)

Unit 5	Search Engine Optimization 5.1 SEO Optimization 5.2 Writing the SEO content EXERCISE: Writing the SEOContent	(04Hr)
Unit 6	Customer Relationship Management 6.1 Introduction to CRM 6.2 CRM platform 6.3 CRM models EXERCISE: CRM strategy	(04Hr)
Unit 7	Social Media Marketing 7.1 Understanding Social Media Marketing 7.2 Social Networking (Facebook, LinkedIn, Twitter, etc.)SocialMedia (Blogging, Video Sharing - Youtube, Photosharing – Instagram, Podcasts) 7.3 Web analytics - levels 7.4 Modes of Social Media Marketing 7.4.1 Creating a Facebook page Visual identity of a Facebookpage , Types of publications, Facebook Ads ,Creating Facebook Ads , Ads Visibility 7.4.2 Business opportunities and Instagram options Optimizationof Instagram profiles , Integrating Instagramwith a Web Site and other social networks ,Keeping up with posts 7.4.3 Business tools on LinkedIn Creating campaignsonLinkedIn , Analyzing visitation on LinkedIn 7.4.4 Creating business accounts on YouTubeYouTube ,Advertising , YouTube Analytics 7.4.5 E-mail marketing E-mail marketing plan , E-mailmarketing campaign analysis , Keeping upwith conversions Digital Marketing tools: Google Ads, FaceBook Ads, Google Analytic, Zapier, Google Keyword Planner EXERCISE: Social Media Marketing plan. EXERCISE: Making a Facebook page and Google Ads	(20 Hr)
Unit 8	Digital Marketing Budgeting 8.1 Resource planning 8.2 Cost estimating 8.3 Cost budgeting 8.4 Cost control	(04 Hr)

Reference Books:

- 1) Digital Marketing for Dummies By Ryan Deiss and Russ Hennes berry
- 2) Advertising and Promotion: An Integrated Marketing Communications Perspective, George Belch, San Diego University Michael Belch, San Diego University
- 3) Advertising Management :Rajeev Batra, John G. Myers, David A. Aaker
- 4) Belch: Advertising & Promotions (TMH)
- 5) The Social Media Bible: Tactics, Tools, &Strategies for Business Success by Lon Safko
- 6) Web Analytics2.0–Avinash Kaushik

Website Reference Link:

- 1) Digital Marketing Tutorial -
https://www.tutorialspoint.com/digital_marketing/index.htm
- 2) Digital Marketing Tutorial - <https://www.javatpoint.com/digital-marketing>
- 3) Digital Marketing Tutorial for Beginners-
<https://www.simplilearn.com/tutorials/digital-marketing-tutorial>

Class: F.Y.BBA (C.A.) (Semester - II)

Subject: BBA(C.A)

Paper Code: UBCA125

Title of Paper: Digital Marketing

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO7	PO 8	PO 9	PO 10	PO 11
CO 1	3	-	-	-	-	-	-	-	-	-	-
CO 2	3	-	2	2	-	-	1	-	-	-	-
CO 3	3	-	-	2	-	-	-	1	-	-	1
CO 4	3	-	-	-	-	-	1	1	-	-	1
CO 5	3	-	-	-	-	-	1	-	-	-	-
CO 6	3	-	2	-	-	-	-	-	-	-	-
CO 7	3	-	-	-	-	-	1	1	-	-	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in Digital Marketing.

In CO1 to CO7 strongly mapped as the student will deep understanding of different concepts of marketing techniques for business with help of various methods of presentation, internet, social media etc.

PO3. Design and Development:

CO2 CO6 are moderately mapped as the students will be able to use various digital marketing tools like E-Mail, Social Media, E-Commerce for business.

PO4. Conduct investigations of complex problems:

CO2 CO3 are partially mapped as the students will be able to understand and apply digital marketing skills for solving various real life problems with the help of marketing methods.

PO7. Individual and Team Work:

CO2 CO4 CO5 CO7 are partially mapped as the students will develop ability to work individuals and groups for while problem solving.

PO8. Life-Long Learning:

CO3 CO4 and CO7 partially mapped as contribute to the development of students' ability to engage in life-long learning as Business operations concepts of digital marketing to understand real life problems.

PO11. Innovation, employability, and Entrepreneurial skills:

CO4 CO6 CO7 partially relate to employability skills as students are able to analyze and use digital marketing methods of business for working areas for professional development.

SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)
Academic Year 2022-2023

Class: F.Y.BBA (C.A.) (Semester - II)

Paper Code: UBCA126

Title of Paper: Computer Laboratory I

[Based on UBCA121]

Credit: 2

No. of. Hours: 48

A) Course Objectives:

1. To introduces object oriented programming concepts using the C++ language.
2. To understand the principles of data abstraction, inheritance and polymorphism
3. To learn exception handling, formatted I/O and Unformatted I/O
4. Get knowledge of the principles of virtual function and polymorphism.
5. Able to demonstrate the skills necessary to correctly compile ,debug and test programs in C++.
6. To study how to implement copy constructors and class member functions.
7. Analyze how inheritance and virtual functions implement dynamic binding with polymorphism.

B) Course Outcomes:

Student should be able to:

- CO1.** Develop applications for a range of problems using OOP's techniques.
- CO2.** Able to develop programs with reusability.
- CO3.** Handle the exception in programing.
- CO4.** Develop program for file handling.
- CO5.** Analyze a problem description and design and build object oriented software using good coding practices and techniques
- CO6.** Use C++ to demonstrate practical experience in developing object oriented solutions.
- CO7.** Apply the C++ features to program design and implementation.

Topics/Contents

Assignments on Basics programs of C++ without Class

Assignments on functions- call by value, call by reference, default argument and constant argument

Assignments on inline function

Assignments on basic programs using Class

Assignments on Array of object, object as a function argument

Assignments on Friend function

Assignments on Constructor, destructor

Assignments on Inheritance

Assignment on polymorphism- function overloading, operator overloading

Assignments on File Handling

Assignments on Template- class template, function template

Class: F.Y.BBA (C.A.) (Semester - II)

Subject: BBA(C.A)

Course Code: UBCA126

Course: Computer Laboratory I[Based on UBCA121]

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
CO 1	3	-	2	-	-	-	-	-	-	-	1
CO 2	3	-	2	-	-	-	1	-	-	-	1
CO 3	3	2	2	-	-	-	-	-	-	-	1
CO 4	3	-	2	2	-	-	-	2	-	-	-
CO 5	3	2	2	2	-	-	-	-	-	-	-
CO 6	3	-	2	-	-	-	-	-	-	-	1
CO 7	3	-	2	2	-	-	1	2	-	-	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in Computer Application.

In CO1 to CO7 strongly mapped as the student will develop and the deep understanding of different OOPS programming concepts of C++ language.

PO2. Problem Analysis:

CO2 CO5 moderately mapped as contribute to the development of students' problem analysis, thinking and problem-solving skills. Students understand and solve real life problems by using various OOPS concepts provided like inheritance, polymorphism, constructor, destructor by C++ language.

PO3. Design and Development:

All of the course outcomes are moderately mapped as the students will be able to develop and implement basic to advanced OOPS programming concepts in C++ language.

PO4. Conduct investigations of complex problems:

CO4 CO5 CO7 are partially mapped as the students will be able to understand and apply programming skills for solving various real life problems with the help of OOPS concepts provided by C++ language.

PO7. Individual and Team Work:

CO2 CO7 are partially mapped as the students will develop ability to work individuals and groups for while problem solving.

PO8. Life-Long Learning:

CO4 and CO7 partially mapped as contribute to the development of students' ability to engage in life-long learning as all concepts in C++ programming which helps to understand real life problems manipulation and development by programming skills.

PO11. Innovation, employability, and Entrepreneurial skills:

CO1 CO2 CO3 CO6 CO7 partially relate to employability skills as students are able to analyze and evaluate C++ programming concepts for professional development.

SYLLABUS (CBCS) FOR F.Y.BBA (C.A.) (w. e. from June, 2022)
Academic Year 2022-2023

Class: F.Y.BBA (C.A.) (Semester – II)

Paper Code: UBCA127

Title of Paper: Computer Laboratory II
[Based on UBCA122]

Credit: 2

No. of. Hours: 48

A) Course Objectives:

1. To study basic concepts of web technology
2. To develop and understanding of how CSS can enhance the design of the webpage.
3. To understand how to develop web based applications using JavaScript.
4. To introduce the fundamental of internet and the principles of web designing.
5. To construct basic websites using HTML and Cascading Style Sheets.
6. Describe the concept of world wide web , and requirements of effective web design.
7. To Design and implement dynamic websites with good sense of designing and latest technical aspects.

B) Course Outcomes:

Student should be able to:

- CO1.** Implement the given HTML program.
- CO2.** Able to create and apply CSS styling.
- CO3.** Use JavaScript concept.
- CO4.** Develop skills required for designing, developing web applications in web technology.
- CO5.** To develop modern interactive web Applications using PHP, XML, HTML.
- CO6.** To build dynamic web pages with validation using java script objects and by applying different event handling mechanism.
- CO7.** Use server side Scripting with PHP to generate the web pages dynamically using the database connectivity.

Topics/Contents

Assignments on Basic HTML Tags

Assignments on Creating List, Tables through HTML

Assignments on Styling HTML with CSS

Assignments on JavaScript

Assignments on form Validation

Assignment on External linking, internal linking and image with link.

Assignment on Forms in html

Assignment on Styling HTML with CSS

Assignment on JavaScript

Assignment on JavaScript validation.

Assignment on jQuerys

Class: F.Y.BBA (C.A.) (Semester - II)

Subject: BBA(C.A)

Course Code: UBCA126

Course: Computer Laboratory I[Based on UBCA121]

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Course Outcomes	Programme Outcomes (POs)										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
CO 1	3	-	2	-	-	-	-	-	-	-	1
CO 2	3	-	2	2	-	-	-	2	-	-	1
CO 3	3	-	2	-	-	-	-	2	-	-	1
CO 4	3	-	2	2	-	-	-	2	-	-	-
CO 5	3	-	2	-	-	-	-	-	-	-	-
CO 6	3	2	2	2	-	-	-	-	-	-	1
CO 7	3	2	2	-	-	-	-	2	-	-	1

PO1. Knowledge:

All of the course outcomes (COs) contribute to the development of students' disciplinary knowledge in Computer Application.

In CO1 to CO7 strongly mapped as the student will develop and the deep understanding of different web application development programming concepts of HTML, PHP, CSS, JQuery language.

PO2. Problem Analysis:

CO6 CO7 moderately mapped as contribute to the development of students' problem analysis, thinking and problem-solving skills. Students understand and solve real life problems by using web application development programming concepts of HTML, PHP, CSS, JQuery language.

PO3. Design and Development:

All of the course outcomes are moderately mapped as the students will be able to develop and implement basic to advanced web development programming concepts in PHP, HTML language.

PO4. Conduct investigations of complex problems:

CO2 CO4 CO6 are partially mapped as the students will be able to understand and apply programming skills for solving various real life problems with the help of web application development.

PO8. Life-Long Learning:

CO2 CO3 CO4 and CO7 partially mapped as contribute to the development of students' ability to engage in life-long learning as all concepts in HTML, PHP programming which helps to understand real life problems manipulation and web application development by programming skills.

PO11. Innovation, employability, and Entrepreneurial skills:

CO1 CO2 CO3 CO6 CO7 partially relate to employability skills as students are able to analyze and evaluate web development application programming concepts for professional development