DEPARTMENT OF COMPUTER SCIENCE

B.Sc. (INFORMATION TECHNOLOGY)

(Students admitted during 2021-2022 Onwards)

(Under CBCS with Outcome Based Education (OBE) Pattern)

SYLLABUS

V & VI SEMESTER

GOBI ARTS & SCIENCE COLLEGE

(Govt. Aided Autonomous Co-educational Institution, Affiliated to
Bharathiar University, Coimbatore, Accredited with 'A' Grade by NAAC (4th cycle)
and Recognised as a STAR College by DBT, Government of India)

KARATTADIPALAYAM POST,

GOBICHETTIPALAYAM - 638453

ERODE DISTRICT.

BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN

K1-Remember; **K2**-Understanding; **K3**-Apply; **K4**-Analyze; **K5**-Evaluate

I. END OF SEMESTER (EOS) EXAMINATIONS:

1. Part III-Theory: 75 Marks (Converted into 50 Marks)

Knowledge Level	Section	Marks	Description	Total
K1	A (Answer All)	10 × 1 = 10	MCQ	75
K2	B (Either or Pattern)	5 × 5 = 25	Short answers	
K3 & K4	C (Either or Pattern)	5 × 8 = 40	Descriptive/Detailed	

2. Practical Examinations: 50 Marks

Knowledge Level	Section		Total
	Practical	Record work	
K3	45	05	50
K4			
K5			

II. CONTINUOUS INTERNAL ASSESSMENT (CIA):

1. Test – I & II: 25 Marks (Theory)

Knowledge Level	Section	Marks	Description	Total
K1	A (Answer All)	5 × 1 = 5	MCQ	25
K2	B (Either or Pattern)	2 × 5 = 10	Short answers	
K3 & K4	C (Either or Pattern)	1 × 10 = 10	Descriptive/Detailed	

2. Test –III: Model Exam 75 Marks (Converted into 50 Marks)

Knowledge Level	Section	Marks	Description	Total
K1	A (Answer All)	10 × 1 = 10	MCQ	75 Marks
K2	B (Either or Pattern)	5 × 5 = 25	Short answers	
K3 & K4	C (Either or Pattern)	5 × 8 = 40	Descriptive/Detailed	

3. Practical Internal Assessment: 50 Marks

Knowledge Level	Section					Total
	One Test	Lab Performance	Observation Submission in Time	Record Submission in Time	Attendance	
K3	30	05	05	05	05	50
K4						
K5						

Components of Continuous Internal Assessment (CIA)

Components	Allotment of Internal Assessment Marks for a Maximum of 100 Marks (Converted into 50 Marks)
Two Tests (1 hour) [25+25=50/2]	25
Model Exam (75 Marks Converted into 50 Marks)	50
Learning by doing / Skill Development / Case Study / Innovation / Assignment. (Any Two-5+5 = 10 Marks)	10
Seminar / Quiz / Term Paper / Composition / Field Visit / Industrial Visit / GD / Skill / Extension Activity etc. (Any Two-5 + 5 = 10 Marks)	10
Attendance	05
CIA Total	**100**

Programme Code:	B.Sc.	Programme Title:	Information Technology	
Course Code:	21UAIT12	Course Title:	Batch:	2021
Total Hours:	60	Java Programming (Common for CS, CA, IT, CT)	Semester:	V
			Credits:	4.5

Course Objective

The course aims

- To learn object orient programming fundamentals and the characteristics of Java language.
- To learn the syntax, semantics and use of basic Java programming language constructs.
- To know the syntax and use of utilities, applets, simple graphics methods and image loader.
- To develop stand alone applications and applet programs in Java.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1	CO1	Understand the fundamentals of object-oriented Programming and basic constructs of Java such as data types, operators and arrays.
K1, K2, K3	CO2	Understand the syntax and use of control statements, classes and inheritance to write programs.
K2, K1, K3	CO3	Obtain knowledge about concepts, syntax and use of packages, interfaces, threads and exception handling for writing programs.
K1, K2	CO4	Learn the use, syntax and implementation of Java utilities.
K3, K4, K5	CO5	Gain knowledge to develop applications using applets and simple graphics methods.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate

SYLLABUS		
Unit	Content	No. of Hours
I	**OBJECT ORIENTED FUNDAMENTALS AND JAVA REVOLUTION:** Object Oriented Programming – Encapsulation – Inheritance – Polymorphism – Java Genesis – Characteristics – Java Programming Techniques – Reserved Words – Identifiers Literals – Operators – Separators – Variables – Types – Arrays – Operator Precedence.	12
II	**FLOW – CONTROL AND CLASSES:** If – Else – Break – Switch – Return Statements – Looping – While – Do While – For – Comma Statements – Continue – Classes – Declaration – Object References – Instance Variables – New Operator – Method Declaration – Method Calling – this Operator Constructors – Methods Overloading – Inheritance – Super Class – Dynamic Method Dispatch – Final Static – Abstract Classes.	12
III	**PACKAGES AND INTERFACES:** Packages – The Package Statement – Import Statement – Interface Statement – Implements Statement – Constructors – String Creation – String Concatenation – Character Extraction – Exception Handling	12

	Fundamentals – Types – Uncaught Exceptions – Nested try Statement – The Java thread Model Priorities – Thread API Summary.	
IV	**UTILITIES AND APPLETS:** Dictionary Class – Hash Tables – String Tokenizer – Runtime – System Class – Comparison – Input and Output – File Directory – *Filename Filter*- File Streams*.*	12
V	**Applets:** HTML Applet Tab – Order of Applet initialization – Sizing Graphics – Simple Graphics Method – Draw line – Draw Arc – Font Manipulation – Simple Image Loader –*Image Observer** – Summary.	12

< - Self study>*

Text Book:

Partick Naughton, "*The Java Hand Book*", Tata McGraw Hill Pvt. Ltd., Fourth Reprint, 1997. (Unit – I – V)

Reference Books:

1. E Balagurusamy, "*Programming with Java A Primer*", McGraw Hill Publisher (India), Fifth Edition, 2015.
2. C. Muthu, "*Programming with Java*", Tata McGraw Hill Pvt. Ltd (India), Second Edition, 2008.
3. R. Krishnamoorty, S. Prabhu, "*Internet and Java Programming*", New Age International Pvt. Ltd., First Edition, 2006.

E-references:

1. https://www.edureka.co/blog/java-tutorial/
2. https://www.tutorialspoint.com/java/java_basic_syntax.htm

   https://www.geeksforgeeks.org/java-applet-basics/

Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	L	M	H	S
CO2	H	M	S	H	S
CO3	S	H	M	H	S
CO4	M	S	S	M	H
CO5	S	H	S	H	S

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology

Course Code:	21UAIT13	Course Title:	Batch:	2021
Total Hours:	60	Python Programming (Common for CS, CA, IT, CT)	Semester:	V
			Credits:	4.5

Course Objective

The course aims

- To learn core Python scripting elements such as variables and flow control structures.
- To acquire programming and Object Oriented Skills in Python.
- To learn file handling concepts and exception handling in Python.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2, K5	CO1	Explain the basic principles of Python programming language.
K1, K2, K5	CO2	Express different Decision Making statements, Arrays and Strings.
K1, K2, K3, K5	CO3	Describe the Functions, List, Tuples and Dictionaries.
K1, K2, K3, K4, K5	CO4	Implement the concept of Object Oriented Programming.
K1, K2, K3, K4, K5	CO5	Understand and design Interfaces, Exceptions and different File handling operations.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 - Evaluate

SYLLABUS		
Unit	Content	No. of Hours
I	**Introduction to Python:** Python, Features of Python, Execution of Python program, Python Virtual Machine (PVM) **Datatypes in Python:** Comments in Python, DocStrings, How Python sees Variables, Datatypes in Python, Built-in Datatypes, bool Datatype, Sequences in Python, Sets, Literals in Python, Determining the Datatype of a Variable, What about Characters, User-defined Datatypes, Constants in Python, Identifier and Reserved words, Naming Conventions in Python. **Operators in Python, Input and Output.**	12
II	**Control Statements:** Control Statements, The if Statement, A Word on Indentation, The if...else Statement, The if...elif...else Statement, The while Loop, The for Loop, Infinite Loops, Nested Loops, The else Suite, The break Statement, The continue Statement, The pass Statement, The assert Statement, The return Statement, **Arrays in Python:** Array, Advantages of Arrays, Creating an Array, Importing the Array Module, Indexing and Slicing on Arrays, Processing the Arrays, Types of Arrays, **String and Characters:** Creating Strings, Length of a Sting, Indexing in Strings, Slicing the Strings, Repeating the Strings, Concatenation of Strings, Checking Membership, Comparing Strings, Removing spaces from a String, Finding Sub Strings, Counting Substrings in a String, Strings are Immutable, Replacing a String with another String, Splitting and Joining Strings, Changing Case of a String, Checking Starting and Ending of a String, String Testing Methods.	12
III	**Functions:** Difference between a Function and a Method, Defining a Function, Calling a Function, Returning Results from a Function, Returning Multiple Values	12

	from a Function, Functions are First Class Objects, Pass by Object Reference, Formal and Actual Arguments, Positional Arguments, Keyword Arguments, Default Arguments, Variable Length Arguments, Local and Global Variables, The Global Keyword, Passing a Group of Elements to a Function, Recursive Functions. **Lists and Tuples, Dictionaries.**	
IV	**Introduction to OOPs:** Classes and objects- Creating a Class, The self Variable, constructor, Types of Variables, Namespace, Types of Methods, Passing Members of One Class to Another Class, Inner Class. Inheritance and Polymorphism.	**12**
V	**Abstract classes and Interfaces:** Method and class, Interfaces in Python, Abstract classes Vs Interfaces, Exceptions- Errors in a python programs, Exceptions, Exception Handling, Types of Exceptions, * *Files in python- Files, Types of File in Python, Opening a File, Closing a File, Working with Text Files Containing Strings, Knowing Whether a File Exists or Not, Working with Binary Files, The With Statement, The seek() and tell() Methods, Random Accessing of Binary Files.*	**12**

< - Self Study>*

Text Book:

Dr. R. Nageswara Rao, *"Core Python Programming"*, Second Edition, Dreamtech Press, 2018. (Unit – I to V)

Reference Books:

1. B. Nagesh Rao, "Learning Python", CyberPlus Infotech Pvt. Ltd., 2016-17.
2. Mike McGrath, *"Python – in easy steps"*, McGraw Hill Education (India) Private Limited, 2013.
3. Ashok Namdev Kamthane, Amit Ashok Kamthane, "Programming and Problem Solving with PYTHON", McGraw Hill Education (India) Private Limited, 2018.
4. Reema Thareja, "Problem Solving and Programming with Python", Oxford University Press, 2018.

E-references:

1. https://www.tutorialspoint.com/python/index.htm
2. https://www.learnpython.org/
3. https://www.geeksforgeeks.org/python-programming-examples/

Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	H
CO2	S	S	S	S	H
CO3	S	S	S	S	H
CO4	S	S	S	S	H
CO5	S	S	S	S	H

S - Strong; **H** - High; **M** - Medium; **L** – Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology

Course Code:	21UAIT14	Course Title:	Batch:	2021
Total Hours:	60	Computer Networks (Common for CS, BCA, IT and CT)	Semester:	V
			Credits:	4.5

Course Objective

The course aims

- Acquire basic knowledge in networking environments and its applications in the area of business and others.
- Learn about how to use network software and hardware with network environment.
- Learn about networks layers.
- Learn about network protocol and internet using networks.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K2, K4	CO1	Understand the basics knowledge about computer networks and public switched telephone networks.
K2, K3	CO2	Understand the fundamentals of elementary data link protocol and sliding window protocols.
K1, K2, K3, K5	CO3	Know about various operations of algorithms in networks.
K2, K3, K4	CO4	Learn about various types of protocol and layers.
K2, K4, K5	CO5	Acquire knowledge about computer networks domain name system and electronic mail using internet.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 - Evaluate

SYLLABUS		
Unit	Content	No. of Hours
I	INTRODUCTION – Uses of Computer Networks – Network Hardware – Network software – Reference models –PHYSICAL LAYER – Guided transmission media, the Public switched telephone network.	12
II	DATA LINK LAYER – Data link layer design Issues – Elementary data link protocols – Sliding window protocols.	12
III	NETWORK LAYER – Network layer design issues – Routing algorithms – Congestion control algorithms.	12
IV	TRANSPORT LAYER – The transport service* – Elements of transport protocols – The internet transport protocols: UDP	12
V	THE APPLICATION LAYER – Domain Name System – *Electronic Mail** – The World Wide Web.	12

< - Self study>*

Text Book:

Andrew S. Tanenbaum, "*Computer Networks*", Prentice Hall of India, Fourth Edition, 2007. [UNITS I – V]

Reference Books:

1. Larry Peterson & Bruce S.Davie, *"Computer Networks a Systems Approach"*, Elsevier, Fourth Edition, 2007.
2. Douglas E.Comer, *"Computer Networks and Internets",* Pearson Education, Fourth Edition, 2004.
3. William Stallings, *"Computer Networking with Internet Protocols and Technology",* Pearson Education, First Impression, 2007.
4. Uyless Black, *"Computer Networks",* PHI learning private limited, Second Edition, 2010.

E-references:

1. https://www.geeksforgeeks.org/computer-network-tutorials
2. https://www.tutorialspoint.com/data_communication_computer_network/index.html
3. https://www.softwaretestinghelp.com/computer-networking-basics

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	M	H	H	M	H
CO2	H	H	S	H	S
CO3	S	S	M	M	M
CO4	H	S	M	H	S
CO5	H	S	H	S	M

S - Strong; **H -** High; **M -** Medium; **L –** Low

Course Code:	21UAIT15	Course Title:	Batch:	2021
Total Hours:	60	Software Engineering (Common for CS, IT, CT)	Semester:	V
			Credits:	4.5

Course Objective

The course aims

- To make the students to understand the basic concepts of software engineering and software development process.
- To understand the concept of project management and project planning activities.
- To know the concept of software requirements and software maintenance.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2	CO1	Remember and understand the software engineering process.
K1, K2	CO2	Understand and describe the concept of project management process and planning estimation.
K1, K2, K3	CO3	Remember the building block of software requirements and software design process.
K1, K2, K3	CO4	Describe the concept of software implementation and software testing.
K1, K2, K3	CO5	Understand the concepts of software quality, software maintenance process.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** - Evaluate

SYLLABUS		
Unit	**Content**	**No. of Hours**
I	INTRODUCTION TO SOFTWARE ENGINEERING: Software – Software Crisis – What is software Engineering? – Evolution of Software Engineering Methodologies – Software Engineering Challenges – SOFTWARE PROCESS: Software Process – Phased Development Life Cycle – Software Development Process Models.	12
II	SOFTWARE PROJECT MANAGEMENT: Project Management Essentials – What is Project Management? – Project Management Team – Project Life Cycle – Project Management Process – PROJECT PLANNING AND ESTIMATION: Project Planning Activities – Software Metrics and Measurements – Project Size Estimation – Effort Estimation Techniques – Staffing and Personnel Planning – Project Scheduling and Milestones-Task Identification-Work Breakdown Structure.	12
III	REQUIREMENTS ENGINEERING: Software Requirements – Requirement Engineering Process – Requirement Analysis – Requirements Specification – Requirement Validation. SOFTWARE DESIGN: Software Design Process – Characteristic of Good Software Design –Design Principles – Modular Design – Software Architecture – Design Methodologies – Structured Design.	12
IV	IMPLEMENTATION: Coding Principles – Coding Styles – Coding Errors – WARE TESTING: Testing Fundamentals – Black Box Testing – **White *Box Testing**** – Levels of Testing.	12

V	SOFTWARE QUALITY AND RELIABILITY: Software Quality Concepts – Software Quality Factors – Verification and Validation - Software Quality Assurance – Quality Control – Best Practices of Software Engineering – Software Reliability. SOFTWARE MAINTENANCE: Software Change – Software Evolution – ***Software Maintenance**** – Maintenance Cost – Software Reuse.	12

< - Self study>*

Text Book:

Ugrasen Suman, *"Software Engineering Concepts and Practices"*, Cengage Learning, First Edition, 2013. (Unit I - V).

Reference Books:

1. Roger S. Pressman, *"Software Engineering: A Practitioners Approach"*, Tata McGraw Hill Publications, Fourth Edition, 1997.
2. Timothy C.Lethbridge & Robert Laganière, "*Object-Oriented Software Engineering: Practical Software Development using UML and Java*", Tata McGraw-Hill, Second Edition, 2005.
3. P. Jalote, "*An Integrated Approach to Software Engineering*", Narosa Publication House, Third Edition, 2008.

E-references:

1. https://www.guru99.com/what-is-software-engineering.html
2. https://en.wikipedia.org/wiki/Software_engineering
3. https://www.tutorialspoint.com/software_engineering

Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	M	H	M	H
CO2	H	M	S	H	L
CO3	M	S	S	S	L
CO4	M	S	M	M	S
CO5	H	H	H	H	H

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology

Course Code:	21UAITP7	Course Title:	Batch:	2021
Total Hours:	60	Major Core Programming Lab – VII : (Java Programming) (Common for CS, CA, IT, CT)	Semester:	V
			Credits:	2.0

Course Objective

The course aims

- To gain knowledge about basic Java language syntax and semantics to write Java programs.
- To write programs for the concepts of object oriented programming include classes, inheritance, packages, interfaces and exception handling and applet programming.
- To Implement inheritance and file operations.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2, K5	CO1	Write programs using simple data types.
K1, K2, K5	CO2	Write programs using classes, control statements, arrays and strings.
K1, K2, K3, K5	CO3	Write programs using inheritance, interface and exception handling.
K1, K2, K3, K4, K5	CO4	Write programs for thread creation and implementation.
K3, K4, K5	CO5	Write programs for utilities and applets.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate

SYLLABUS	
1. 2. 3.	Write a java program to find the number of odd, even and prime numbers. Write a java program to display Floyd's triangle upto the given limit. Write a java program to (i) display the number in reverse order (ii) find the sum of the digits.
4. 5. 6.	Write a java program to count the number of vowels in the given string. Write a java program to arrange the given set of names in alphabetical order. Write a java program to find matrix multiplication for the given numbers.
7. 8. 9.	Write a java program to perform arithmetic and scientific operations. Write a java program to perform stack operation using Interface. Write a java program to display any two subject marks and sports marks of the student and find the total marks using Interface.
10. 11. 12.	Write a java program to handle different Exceptions. Write a java program for i) assigning thread priority ii) executing thread methods yield(), stop() and sleep(). Write a java program for traffic light simulation using Applet.
13. 14. 15.	Write a java program to display digital clock using Applet. Write a java program to display different fonts using Applet. Write a java program using File to get the string and display it using Byte stream classes.

Text Book:

Partick Naughton, "*The Java Hand Book*", Tata McGraw Hill Pvt. Ltd., Fourth Reprint, 1997.

Reference Books:

1. E Balagurusamy, "*Programming with Java A Primer*", McGraw Hill Publisher (India), Fifth Edition, 2015.
2. C. Muthu, "*Programming with Java*", Tata McGraw Hill Pvt. Ltd (India), Second Edition, 2008.
3. R. Krishnamoorty, S. Prabhu, "*Internet and Java Programming*", New Age International Pvt. Ltd., First Edition, 2006.

E-references:

1. https://www.edureka.co/blog/java-tutorial/
2. https://www.tutorialspoint.com/java/java_basic_syntax.htm
3. https://www.geeksforgeeks.org/java-applet-basics/

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	L	H	H	M
CO2	H	S	M	H	S
CO3	S	M	S	H	S
CO4	H	H	S	M	H
CO5	S	H	S	H	S

S - Strong; **H -** High; **M -** Medium; **L –** Low

Course Code:	21UAITP8	Course Title:	Batch:	2021
Total Hours:	60	Programming Lab – VIII: (Python Programming) (Common for CS, CA, IT, CT)	Semester:	V
			Credits:	2.0

Course Objective

The course aims

- To learn core Python scripting elements such as variables and flow control structures.
- To acquire programming and Object Oriented Skills in Python.
- To learn file handling concepts and exception handling in Python.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2, K5	CO1	Explain the basic principles of Python programming language.
K1, K2, K5	CO2	Express different Decision Making statements, Arrays and Strings.
K1, K2, K3, K5	CO3	Describe the Functions, List, Tuples and Dictionaries.
K1, K2, K3, K4, K5	CO4	Implement the concept of Object Oriented Programming.
K1, K2, K3, K4, K5	CO5	Understand and design Interfaces, Exceptions and different File handling operations.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** - Evaluate

SYLLABUS

1. Write a Python program to print prime numbers.
2. Write a Python program to check the given string is palindrome or not.
3. Write a Python program to print fibonacci series.
4. Write a Python program to find the factorial value for a given number using recursive function.
5. Write a Python program to count the total number of vowels, consonants and words in a text sentence.
6. Write a Python program to perform stack operations using list.
7. Write a Python program to perform queue operations using list.
8. Write a Python program to perform built in functions of list manipulation.
9. Write a Python program to create a file.
10. Write a Python program to read and display file content.
11. Write a Python program to print the calendar.
12. Write a Python program to display student details using simple class.
13. Write a Python program to implement the concept of constructor.
14. Write a Python program to perform operator overloading.
15. Write a Python program to implement the concept of single inheritance.

Text Book:

Dr. R. Nageswara Rao, *"Core Python Programming"*, Second Edition, Dreamtech Press, 2018. (Unit – I to V)

Reference Books:

1. B. Nagesh Rao, "Learning Python", CyberPlus Infotech Pvt. Ltd., 2016-17.
2. Mike McGrath, *"Python – in easy steps"*, McGraw Hill Education (India) Private Limited, 2013.
3. Ashok Namdev Kamthane, Amit Ashok Kamthane, "Programming and Problem Solving with PYTHON", McGraw Hill Education (India) Private Limited, 2018.
4. Reema Thareja, "Problem Solving and Programming with Python", Oxford University Press, 2018.

E-references:

1. https://www.tutorialspoint.com/python/index.htm
2. https://www.learnpython.org/
3. https://www.geeksforgeeks.org/python-programming-examples/

Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	H
CO2	S	S	S	S	H
CO3	S	S	S	S	H
CO4	S	S	S	S	H
CO5	S	S	S	S	H

S-Strong; **H**-High; **M**- Medium; **L**-Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology

Course Code:	21UAIT16	Course Title:	Batch:	2021
Total Hours:	90	Web Design (Common for CS, BCA, IT, CT)	Semester:	VI
			Credits:	4.5

Course Objective

The course aims

- To learn the syntax, semantics and applications of web design languages which include HTML, JAVASCRIPT and DHTML.
- To learn the syntax and use of XML documents.
- To develop static and dynamic websites.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2, K3, K5	CO1	Obtain knowledge to create website using the various elements of HTML which include text, list, table, image, hyperlink and form tags.
K1, K2, K3, K4	CO2	Develop a website using the programming constructs of JavaScript.
K2, K3, K4	CO3	Gain knowledge about Form, String, Math & Date objects, User defined objects of JavaScript.
K2, K3, K4	CO4	Create dynamic and attractive WebPages using CSS properties of dynamic HTML.
K1, K2, K3, K5	CO5	Gain knowledge about XML for describing data using DTD, CSS and XSL style sheets.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 - Evaluate

SYLLABUS		
Unit	Content	No. of Hours
I	INTRODUCTION TO HTML - Hyper Text Markup Language, HTML Tags, Structure of HTML program, Titles and Footers, Text Formatting, Heading Styles, Text styles and other text effects. Lists - Adding Graphics to HTML documents - Tables - Linking documents - Frames - Forms - Sample programs.	18
II	INTRODUCTION TO JAVASCRIPT - JavaScript in web pages, Advantages of Java script, Writing Java script into HTML, Basic Programming Techniques, Operators and expressions in Java script, Java Programming Constructs, Condition Checking, ***Loops****, Built-in and User Defined Functions, Placing text in a Browser, Dialog boxes - Sample programs.	18
III	THE FORM OBJECT - Methods, Properties & methods of Form elements, Text, Password, Button, Submit, Reset, Checkbox, Radio, TextArea, Select & Option elements. Built-in objects in JavaScript - String, Math & Date objects. User defined objects- creating a user defined object, Instances, Objects within Objects.	18
IV	DYNAMIC HTML - Cascading Style Sheets (CSS) - ***Font attributes****, Color and background attributes, Text attributes, Border attributes, Margin attributes, List attributes - Class - using the <SPAN> tag-External style sheets - using the <DIV> tag - Sample programs.	18

V	INTRODUCTION TO XML – Introduction, XML Fundamentals, Document Type Definitions, XML Parsers, Entities. Document Type Definitions (DTD) – Internal DTD, External DTD, Element declarations, Attributes, Creating Attribute Lists, DTD symbols, Entities. XML Style Sheets (XSL) – Introduction, Cascading Style Sheets, eXtensible Style Sheet Language (XSL), Presenting Data in the Tabular Format. Sample programs.	18

< - Self study>*

Text Books:

1. Ivan Bayross, "*Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP*", BPB Publications, Fourth Edition, 2010. [UNITS – I - IV]
2. A.K.Saini and Sumit Tuli, "*Mastering XML*", EXCEL BOOKS Pvt. Ltd., First Edition, 2002. [UNIT V]

Reference Books:

1. Ravinder Singh, Amit Gupta, "*Magic with HTML, DHTML & JAVASCRIPT*", University Science Press, First Edition, 2009.
2. C. Xavier, "*World Wide Web Design with HTML*", Tata McGraw Hill Education Pvt. Ltd., Thirteenth Reprint, 2010.
3. Ann Navarro, Chuck White, "*Mastering XML*", BPB Publication, First Indian Edition, 2000.

E-references:

1. https://www.w3schools.com>html
2. https://www.tutorialspoint.com/xml/xml_overview.htm
3. https://www.javatpoint.com/javascript-tutorial

Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	L	H	H	M
CO2	H	M	S	H	S
CO3	S	M	S	H	S
CO4	S	H	S	M	H
CO5	S	H	S	H	S

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology	
Course Code:	21UEIT01	**Course Title:**	**Batch:**	2021

Total Hours:	90	Major Skill Based Paper : Computer Graphics (Common for CS, BCA, IT and CT)	**Semester:**	VI
			Credits:	4.5

Course Objective

The course aims

- To provide comprehensive introduction about computer graphics system.
- To design algorithms and two dimensional transformations.
- To facilitate the students elaborately know about computer graphics techniques in C programming.
- To implement the computer graphics techniques to solve the variety of graphics problems.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2	CO1	Design algorithms and two dimensional transformations.
K1, K2, K3, K5	CO2	Familiar with techniques of clipping, three dimensional graphics and three dimensional transformations.
K1, K2, K3	CO3	Actively involving in design, development and testing of modeling, rendering, shading and animation.
K1, K2, K4, K5	CO4	Implement various graphics drawing algorithms, 2D-3D transformations and clipping techniques.
K2, K4	CO5	Practical knowledge about color modeling and its application procedures.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate

	SYLLABUS	
Unit	**Content**	**No. of Hours**
I	**Overview Of Graphics Systems**: Video Display Devices – Input Devices. **Output Primitives**: Points & Lines – Line Drawing Algorithm – DDA Algorithm – Bresenham's Line Algorithm – Circle Generating Algorithms.	18
II	**Two Dimensional Geometric Transformations:** Basic Transformations - Matrix Representations & Homogeneous Co-ordinates - Composite Transformations: Translations, Rotations, Scalings – General Pivot-Point Rotation, Fixed Point Scaling - Reflection and Shear Transformations. **Two Dimensional Viewing:** The Viewing Pipeline – Window to Viewport Coordinate Transformation. Clipping Operations – Point Clipping – Line Clipping – Cohen-Sutherland Line Clipping – **Polygon Clipping**: Sutherland-Hodgeman Polygon – Curve Clipping – Text Clipping – Exterior Clipping. Interactive Picture Construction Techniques.	18
III	**Three Dimensional Concepts:** Three Dimensional Display Methods. Three Dimensional Object Representations: Polygon Surfaces - Curved Lines and Surfaces. **Three Dimensional Geometric And Modelling Transformations**: Translation – Rotation – Coordinate Axes Rotations – General Three Dimensional Rotations – Scaling - Reflection and Shear Transformations.	18

IV	**Visible-Surface Detection Methods**: Classification of Visible-Surface Detection Algorithm – Back-Face Detection – Depth-Buffer Method - Scan-Line Method - Depth-Sorting Method - Area-Subdivision Method - Octree Method - ***Curved Surfaces****.	18
V	**Color Models And Color Applications:** Properties of Light - Standard Primaries and the Chromaticity diagram - Intuitive Color Concepts - RGB Color Model – YIQ Color Model – ***CMY Color Model**** - HSV Color Model – HLS Color Model.	18

< - Self study>*

Text Book:

Donald Hearn & M. Pauline Baker, "*Computer Graphics*", Prentice Hall of India, Second Edition, 2003.

Reference Books:

1. Roy A.Plastock, Gorden Kalley, "Theory *& Problems of Computer Graphics*", Schaum's Outline Series, 1987.
2. R.K.Chauvan, Abhishek Taneja, "*Computer Graphics & Multimedia"*, Galgotia Publications Pvt. Ltd, 2009.
3. D.P.Mukherjee, Debasish Jana, "*Computer Graphics Algorithms and Implementations",* PHI Learning Private Ltd, 2010.
4. Edward Angel, "*Interactive Computer Graphics – A Top Down Approach using OpenGL*", Pearson Publications, Fifth Edition, 2013.

E-references:

1. https://www.tutorialspoint.com/computer_graphics/index.htm
2. https://www.javatpoint.com/computer-graphics-tutorial
3. https://www.programmingsimplified.com/c-graphics-programming-tutorial

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	H	H	M
CO2	S	S	H	S	S
CO3	H	H	S	S	H
CO4	H	M	S	S	H
CO5	S	M	H	M	L

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology	
Course Code:	21UAITP9	**Course Title:**	**Batch:**	2021
Total Hours:	60	Major Core Programming Lab - IX :	**Semester:**	VI

		(Web Design) (Common for CS, BCA, IT, CT)	**Credits:**	2.5

Course Objective

The course aims

- To develop static web design using HTML.
- To develop dynamic web design using DHTML and JavaScript Language.
- To develop XML programs using CSS and XSL style sheets.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K3, K4	CO1	Create static web pages using HTML text level, list, table, hyperlinks, frames and forms Tags.
K3, K4, K5	CO2	Develop scripting programs using simple JavaScript programming constructs.
K3, K5	CO3	Write JavaScript program using objects.
K3, K4, K5	CO4	Add various styles in web documents using Internal & External style sheets.
K3, K4, K5	CO5	Develop XML applications to structure the document using DTD, CSS and XSL style sheets.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate

SYLLABUS

HTML

1. Write a HTML program to design an invitation card using text level tags.
2. Write a HTML program to display transfer certificate application form using list tag.
3. Write a HTML program to display a student mark sheet using table tag.
4. Write a HTML program to design Gobi Arts & Science College website using hyperlinks.
5. Write a HTML program to design a website for product advertisement using frames.
6. Write a HTML program to design student Bio-data using forms tag.

JAVASCRIPT

7. Write a JavaScript program to display stars based on the user input.
8. Write a JavaScript program to ask a question & accept an answer using Dialog Boxes.
9. Write a JavaScript program to display Current Date and Time.

DHTML

10. Write a DHTML program to design a webpage for super market offers using Internal Style Sheet.
11. Write a DHTML program to design a web page for company profile using External Style Sheet.
12. Write a DHTML program to display dynamic content based on the mouse place operations.

XML

13. Write a XML program to display bank details using XSL style sheet.
14. Write a XML program to display employee details using CSS style sheet.
15. Write a XML program to display book details using CSS style sheet.

Text Books:

1. Ivan Bayross, "*Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP*", BPB Publications, Fourth Edition, 2010.
2. A.K.Saini and Sumit Tuli, "*Mastering XML*", EXCEL BOOKS Pvt. Ltd., First Edition, 2002.

Reference Books:

1. Ravinder Singh, Amit Gupta, "*Magic with HTML, DHTML & JAVASCRIPT*", University Science Press, First Edition, 2009.
2. C. Xavier, "*World Wide Web Design with HTML*", Tata McGraw Hill Education Pvt. Ltd., Thirteenth Reprint, 2010.
3. Ann Navarro, Chuck White, "*Mastering XML*", BPB Publication, First Indian Edition, 2000.

E-references:

1. https://www.w3schools.com>html
2. https://www.tutorialspoint.com/xml/xml_overview.htm
3. https://www.javatpoint.com/javascript-tutorial

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	M	H	M	M	H
CO2	S	S	S	H	S
CO3	H	M	M	M	H
CO4	S	H	S	H	M
CO5	H	S	H	H	H

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology	
Course Code:	21UEITP1	**Course Title:**	**Batch:**	2021
Total Hours:	60	Major Skill Based Practical :	**Semester:**	VI

		Programming Lab - X : (Computer Graphics) (Common for CS, BCA, IT and CT)	**Credits:**	2.5

Course Objective

The course aims

- To provide a comprehensive study of graphics concepts using C programming language.
- To facilitate the students elaborately know about computer graphics techniques in C programming.
- To implement the computer graphics techniques to solve the variety of graphics problems.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K3, K4	CO1	Apply and Analyze the core concepts of computer graphics.
K3, K5	CO2	Analyze interactive computer graphics using C graphics packages and apply graphics primitives and attributes.
K3, K5	CO3	Evaluate the coordinate attributes and apply with coordinate spaces, coordinate conversion and transformations of graphics objects.
K3, K4, K5	CO4	Apply, Analyze and Evaluate 2D & 3D geometrical transformations and its representations.
K3, K5	CO5	Apply and Analyze the color models and its applications.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** - Evaluate

S. No.	SYLLABUS
1. 2. 3.	Write a C program to plot a Line using DDA Line Drawing Algorithm. Write a C program to plot a Line using Bresenham's Line Drawing Algorithm. Write a C program to plot a Circle using Bresenham's Circle Drawing Algorithm.
4. 5. 6.	Write a C program to plot a Circle using Mid-Point Circle Drawing Algorithm. Write a C program to display a Man Walking using Stick Simulation. Write a C program to Clip a Line Using Line Clipping Algorithm.
7. 8. 9.	Write a C program for Flag Hoisting. Write a C program for Text Animation. Write a C program to display different shapes.
10. 11. 12.	Write a C program for Eye Blinking. Write a C program to display a Chess Board. Write a C program to display a clock.
13. 14. 15.	Write a C program for 2D Translation. Write a C program for 2D Rotation about fixed point. Write a C program for 2D Scaling about fixed point.

Text Book:

Donald Hearn & M. Pauline Baker, "*Computer Graphics*", Prentice Hall of India, Second Edition, 2003.

Reference Books:

1. Roy A.Plastock, Gorden Kalley, "Theory *& Problems of Computer Graphics*", Schaum's Outline Series, 1987.
2. R.K.Chauvan, Abhishek Taneja,"*Computer graphics & Multimedia* ", Galgotia Publications Pvt. Ltd, 2009.
3. D.P.Mukherjee, Debasish Jana, "*Computer Graphics Algorithms and Implementations",* PHI Learning Private Ltd, 2010.
4. Edward Angel, "*Interactive Computer Graphics – A Top Down Approach using OpenGL*", Pearson Publications, Fifth Edition, 2013.

E-references:

1. https://www.tutorialspoint.com/computer_graphics/index.htm
2. https://www.javatpoint.com/computer-graphics-tutorial
3. https://www.programmingsimplified.com/c-graphics-programming-tutorial

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	H	M	S	M
CO2	H	S	S	S	S
CO3	S	S	H	M	S
CO4	S	S	S	S	H
CO5	M	H	M	M	L

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology	
Course Code:	21UAIT17	**Course Title:**	**Batch:**	2021
Total Hours:	90	Programming With PHP	**Semester:**	VI

		(Common for CS, BCA, IT, CT)	**Credits:**	4.5

Course Objective

The course aims

- To understand the syntax and semantics of the PHP Scripts and MYSQL Database.
- To develop and implement various types of dynamic web pages in the PHP Scripts.
- To apply the PHP Scripts in the appropriate applications.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2	CO1	Remember the PHP Scripts along with MySQL and understand the components of PHP and various operators.
K2, K3, K5	CO2	Understand the various techniques of scripts, functions and how it is implemented in website developing.
K2	CO3	Working with Date and Time functions in PHP and also investigate the object and String functions.
K2, K3, K5	CO4	Be aware of the dynamic web page with HTML Forms and PHP Script.
K2, K3, K4	CO5	Know about the Files, directories and creating and using Images in PHP Scripts.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate

	SYLLABUS	
Unit	**Content**	**No. of Hours**
I	Introduction of PHP: What is PHP? Advantages of PHP –**PHP Language structure:** The Building blocks of PHP – Variables – Data types – type casting – Operator and Expressions – Constants - **Introduction to MYSQL:** Data types – table creation - insert, select, replace, update and delete commands – using where in your Queries.	18
II	**Flow control function in PHP:** Switching Flow–***Loops****–code block and browser output. **Working with Arrays:** Array definition-Creating Arrays–Array Related Functions–**Working with Function:** Definition-Calling functions-Defining a function-returning values from user defined functions-variable scope-static statement-more about arguments-testing for existence of a function.	18
III	**Working with Strings, Date and Time:** Formatting strings with PHP – Investigating strings in PHP – Manipulating strings with PHP – using Date and Time functions– **Working with objects:** Creating an object – properties of object – object methods – constructors - Object Inheritance.	18
IV	**Working with forms:** ***Creating a simple input form**** – Accessing form – combining HTML and PHP code on a single page – using hidden fields to save state – redirecting the user – sending mail on form submission - working with file uploads – **Working with cookies and user sessions:** Introducing cookies – setting a cookies– Deleting a cookie – session function – starting a session - working with session variables – passing session IDs - Destroying sessions and unsetting variables.	18
V	**Working with files and Directories:** Including files with include() – validating files - Creating and Deleting file – opening a file for writing, reading and appending –	18

	reading from files – Writing or appending to a file - working with directories - Opening pipes to and from processes using popen()- Running commands with exec(), system() or passthru() – **Working with images:** Image creation process – Drawing a new image – Creading pie charts - modifying existing images – using images created by scripts.	

< - Self study>*

Text Book:

Julie C. Meloni, "*PHP, MYSQL and Apache*", Dorling Kindersley (India) Pvt. Ltd., 2005. (Unit I – V)

Reference Books:

1. Jeremy Allen & Charles Hornberger, "*PHP, Apache, MySQL Web development*", Wiley Publications, First Edition, 2006.
2. Vikram Vaswani, "*A Beginner's Guide PHP*", Tata McGraw Hill Education Pvt. Ltd., Fourth Edition, 2005.
3. Steven Holzner, "*PHP: The Complete Reference*", Tata McGraw Hill Education Pvt. Ltd., First Edition, 2008.
4. Sheldon Moes, "*Beginning MYSQL*", Wiley Publications, Fourth Edition, 2005.

E-references:

1. https://www.www3.com
2. http://www.spoken-tutorial.org
3. https://www.studytonight.com

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	L	M	S
CO2	S	S	M	M	L
CO3	H	S	H	H	H
CO4	S	S	S	S	M
CO5	S	S	M	S	H

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	B.Sc.	**Programme Title:**	Information Technology	
Course Code:	21UAITPA	**Course Title:**	**Batch:**	2021
Total Hours:	60	Programming Lab - XI : (PHP) (Common for CS, BCA, IT, CT)	**Semester:**	VI
			Credits:	2.5

Course Objective

The course aims

- To understand the syntax and semantics of the PHP Scripts and MYSQL Database.
- To develop and implement various types of dynamic web pages in the PHP Scripts.
- To apply the PHP Scripts in the appropriate applications.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2	CO1	Remember the PHP Scripts along with MySQL and understand the components of PHP and various operators.
K2, K3, K5	CO2	Understand the various techniques of scripts and how it is implemented in website developing.
K2	CO3	Working with Date and Time functions in PHP and also investigate the object and String functions.
K2, K3, K5	CO4	Be aware of the dynamic web page with combining HTML and PHP.
K2, K3, K4	CO5	Learn about the File manipulation, directories and Images in PHP Scripts.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 – Evaluate

S. No.	SYLLABUS
1. 2. 3.	Write a PHP program to validate the text box. Write a PHP program to draw different shapes. Write a PHP program to perform the string manipulation.
4. 5. 6.	Write a PHP program to perform the file uploading. Write a PHP program to perform the user registration form using HTML tags. Write a PHP program to display the date and time using AJAX.
7. 8. 9.	Write a PHP program to check the user login. Write a PHP program to create a college website. Write a PHP program for cookies and session concepts.
10. 11. 12.	Write a PHP program to perform the file read, write, open and append operation. Write a PHP program to create a library information using inheritance. Write a PHP program for online examinations.
13. 14. 15.	Write a PHP program to send the mail using mail concept. Write a PHP program for supermarket. Write a PHP program for online recharging.

Text Book:

Julie C. Meloni, "*PHP, MYSQL and Apache*", Dorling Kindersley (India) Pvt. Ltd., 2005.

Reference Books:

1. Jeremy Allen & Charles Hornberger, "*PHP, Apache, MySQL Web development*", Wiley Publications, First Edition, 2006.
2. Vikram Vaswani, "*A Beginner's Guide PHP*", Tata McGraw Hill Education Pvt. Ltd., Fourth Edition, 2005.
3. Steven Holzner, "*PHP: The Complete Reference*", Tata McGraw Hill Education Pvt. Ltd., First Edition, 2008.
4. Sheldon Moes, "*Beginning MYSQL*", Wiley Publications, Fourth Edition, 2005.

E-references:

1. https://www.www3.com
2. http://www.spoken-tutorial.org
3. https://www.studytonight.com

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	L	M	S
CO2	S	S	M	M	L
CO3	H	S	H	H	H
CO4	S	S	S	S	M
CO5	S	S	M	S	H

S - Strong; **H -** High; **M -** Medium; **L –** Low

Question Paper Pattern

(Common for Major, Allied, Allied Optional and Major Optional Papers)

For EOS Examinations: 75 Marks (Converted into 50 Marks)

The Question Paper is to be divided into THREE Sections.

Section-A Carries 10 Marks, Section-B Carries 25 Marks and Section-C Carries 40 Marks.

Section-A Contains 10 Multiple Choice Questions. (10 x 1 = 10 Marks)

Two Questions from each unit. (Q. No: 1 to 10)

Section-B Contains 5 Either or Choice Questions. (5 x 5 = 25)

Each Question carries 5 Marks. Both (a) and (b) from the same unit.

Q. No.: 11 (a) or (b) to 15 (a) or (b)

Section-C Contains 5 Either or Choice Questions. (5 x 8 = 40)

Each Question carries 8 Marks. Both (a) and (b) from the same unit.

Q. No.: 16 (a) or (b) to 20 (a) or (b)

For CIA Examinations: 25 Marks

CIA Test I and II Question Paper Pattern: (25 Marks)

Section-A: Five Multiple Choice Questions. (5 x 1 = 5)

Section-B: Two Questions with internal choice. (either or type) (2 x 5 = 10)

Section-C: One Question with internal choice. (either or type). (1 x 10 = 10)

Components of Continuous Internal Assessment (CIA)

Components	Allotment of Internal Assessment Marks for a Maximum of 100 Marks (Converted into 50 Marks)
Two Tests (1 hour) [25+25=50/2]	25
Model Exam (75 Marks Converted into 50 Marks)	50
Learning by doing / Skill Development / Case Study / Innovation / Assignment. (Any Two-5+5 = 10 Marks)	10
Seminar / Quiz / Term Paper / Composition / Field Visit / Industrial Visit / GD / Skill / Extension Activity etc. (Any Two-5 + 5 = 10 Marks)	10
Attendance	05
CIA Total	**100**

Programme Code:	ALL U.G.	**Programme Title:**	Major Optional	
Course Code:	21UFIT01	**Course Title:**	**Batch:**	2021
Total Hours:	60	Print Media Technology	**Semester:**	V
			Credits:	3.0

Course Objective

The course aims

- To provide a basic study of Working with objects of Libre Office draw application.
- To facilitate the understanding of tools of Libre Office.
- To provide idea to work with shapes of CorelDraw.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2	CO1	Remember and Understand the objects and its properties.
K1, K2	CO2	Remember and Understand the basic tools of CorelDraw.
K2, K3	CO3	Understand and Apply the basics of Open Office writer interface, find and replace option, auto spell check options.
K1, K3, K4	CO4	Remember, Apply and Analyze the basic commands for formatting the document.
K2, K3, K5	CO5	Understand, Apply and Evaluate the CorelDraw tools, basic designs and shapes.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 – Evaluate

SYLLABUS		
Unit	Content	No. of Hours
I	**Creating and Modifying Objects Using Draw:** Working with Objects -Creating & Selecting an Object-Changing Outline & Fill Properties of an Object-Working with Slides-Saving the Draw Document-Modifying Objects-Working on a Group-Quiting the Application.	12
II	**Tools**: Knife Tool-Eraser Tool-Smudge Tool-Cloning objects-working with Artistic Text-Paragraph Text-Text and Styles.	12
III	**Exploring the Openoffice.org Writer Interface:** Working with a Document-Editing Document in Writer-Write Document-Exploring Selection Modes-Making Changes to a Document-Find and Replace Features-Autocorrect Context menu and Word Completion Features-Spelling & Grammar Checker-Hyperlinks-Merging & Saving to a Document.	12
IV	**Formatting the Document:** Setting Page Margins-Headers and Folders working with a Table-***Formatting a Text in a Document****-Working with Graphics Templates-Designing & Navigating the Document-Styles-Previewing & Printing a Document.	12
V	**Creating Basic Shapes**: Rectangle-Ellipse and Polygon-Using the Artistic Media Tool-Applying Preset to Lines-Drawing with Brushes-Applying the Sprayer-***Combining Objects****-Converting Objects to Curves.	12

< - Self study>*

Text Books:

1. Vikas Gupta, "*Comdex Linux and Open Office Course Kit*", Dreamtech Press, First Edition 2010. [Unit I, III, IV].
2. Steve Bain, *"CORELDRAW 12:The Official Guide"*, Dreamtech Press, First Edition, 2004. [Unit II, V].

Reference Books:

1. Andy Channelle, "*Beginning Open Office3*", Apress, First Edition, 2009.
2. Shalini Gupta, Adity Gupta, "*Coreldraw 12 In Simple Steps*", Dreamtech Press, First

Edition, 2006.

3. A.K.Lodha, "*Coreldraw 12*", Law Point, First Edition, 2004.

E-references:

1. http://www.spoken-tutorial.org
2. https://www.tutorialsforopenoffice.org/category_index/wordprocessing.html

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	H	H	S
CO2	S	S	S	S	H
CO3	H	H	L	S	H
CO4	H	S	M	H	M
CO5	H	M	M	S	S

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	ALL U.G.	Programme Title:	Major Optional	
Course Code:	21UFITP1	Course Title:	Batch:	2021
Total Hours:	60	Print Media Technology (Lab)	Semester:	V
			Credits:	1.0

Course Objective

The course aims

- To provide a basic study of Working with objects of Libre Office draw application.
- To facilitate the understanding of tools of Libre Office.
- To provide idea to work with shapes of Libre Office Draw.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K3, K4	CO1	Apply and Analyze the objects and its properties.
K3	CO2	Apply the basic tools of CorelDraw.
K3, K5	CO3	Apply and Evaluate the basics of Open Office writer interface, find and replace option, auto spell check options.
K3, K4	CO4	Apply and Analyze the basic commands for formatting the document.
K3, K5	CO5	Apply and Evaluate the CorelDraw tools, basic designs and shapes.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 – Evaluate

S. No.	SYLLABUS
1.	Design a Blinking Text by using LibreOffice Draw.
2.	Create a Invitation Card using LibreOffice Draw.
3.	Create a Christmas Tree using a LibreOffice Draw.
4.	Design a Logo by using LibreOffice Draw.
5.	Design a National Flag using LibreOffice Draw.
6.	Design a Natural Scenery by using LibreOffice Draw.
7.	Design Traffic Signal by using LibreOffice Draw.
8.	Design a Book Cover by using LibreOffice Draw.
9.	Design a Flower by using LibreOffice Draw.
10.	Design an General Advertisement by using LibreOffice Draw.

Text Books:

1. Vikas Gupta, "*Comdex Linux and Open Office Course Kit*", Dreamtech Press, First Edition 2010. [Unit I, III, IV].
2. Steve Bain, *"CORELDRAW 12:The Official Guide"*, Dreamtech Press, First Edition, 2004. [Unit II, V].

Reference Books:

1. Andy Channelle, "*Beginning Open Office3*", Apress, First Edition, 2009.
2. Shalini Gupta, Adity Gupta, "*Coreldraw 12 In Simple Steps*", Dreamtech Press, First Edition, 2006.
3. A.K.Lodha, "*Coreldraw 12*", Law Point, First Edition, 2004.

E-references:

1. http://www.spoken-tutorial.org
2. https://www.tutorialsforopenoffice.org/category_index/wordprocessing.html

Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	H	H	S
CO2	S	S	S	S	H
CO3	H	H	L	S	H
CO4	H	S	M	H	M
CO5	H	M	M	S	S

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	ALL U.G.	Programme Title:	Major Optional	
Course Code:	21UFIT02	Course Title:	Batch:	2021
Total Hours:	60	Internet & E-Commerce	Semester:	V
			Credits:	3.0

Course Objective

The course aims

- To effective E-Commerce professionals with in dual disciplinary environments.

- To provide a well balanced foundation of knowledge in both Business and IT disciplines.
- To develop the skill sets specific to E-Commerce.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2, K4	CO1	Understand to create WebPages using HTML Editors.
K4, K5	CO2	Express the benefits and limitations of E-Commerce.
K2, K3	CO3	Describe Retailing in Electronic Commerce with Internet.
K2, K4	CO4	Illustrate Business to Business Commerce and Electronic Payment system protocol.
K1, K2, K4	CO5	Discuss Internet Infrastructure for Electronic Commerce.

K1 – Remember; K2 – Understanding; K3 – Apply; K4 – Analyze; K5 – Evaluate

SYLLABUS		
Unit	Content	No. of Hours
I	Creating Web Pages - HyperText Markup Language - Simple Examples - Linking - Adding Images - Displaying Data and Controlling pages layout with Tables - Controlling Navigation with Frames - Forms - HTML Editors.	12
II	Foundations of E-Commerce: Definitions - Electronic Markets - Inter organizational Information Systems - Classification of E – Commerce field by nature of the transactions - Benefits and Limitations - The Driving Forces of Electronic Commerce - Business Pressures - Business processing Re engineering.	12
III	Retailing in Electronic Commerce: Business to Consumers(B2C) Electronics Market - Online Customer Service - Electronic Intermediaries - Procedures for Internet Shopping - Internet Consumers and market Research: Building Customer Relationship - Consumer Behaviour Model - Consumer purchasing decision making.	12
IV	Business to Business Electronic Commerce (B2B) - Characteristics - Models- Supplier Oriented market places - Buyer oriented Market places - Intermediary Oriented Market Places - other B2B models - EDI - Electronic Marketing - Electronic Payment Systems and Protocols: Electronic credit cards – electronic fund transfer and debit cards - Electronic check system - ***Unified Payment Systems**.***	12
V	Infrastructure for Electronic Commerce: Internet Protocols - TCP/IP -Domain Names - Internet Client / Server Applications - Internet Security-Selling on the Web: Functional Requirements – Outsourcing vs. Insourcing - In sourcing - ***Chatting on the WEB**.***	12

< - Self study>*

Text Book:

Efraim Turban, Jae Lee, David King, H.Michael Chung, *"Electronic Commerce - a Managerial Perspective"*, Pearson Education, 2005. (Unit I – V)

Reference Books:

1. Efraim Turban, Jae Lee, David King, H.Michael Chung, "*E - Commerce*", Firewall Media – 2005.
2. D.Minoli and E.Minoli, *"Web Commerce Technology Handbook"*, Tata McGraw-Hill, New Delhi, 1999.
3. E.Awad, *"Electronic Commerce"*, Prentice-Hall of India, New Delhi, 2002.

E-references:

1. https://www.w3schools.com/tags/
2. https://www.tutorialspoint.com/html/
3. https://htmldog.com/

Mapping with Programme Specific Outcomes

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	S	S	M	H
CO2	M	S	H	H	S
CO3	S	H	S	M	S
CO4	M	S	H	S	M
CO5	H	S	S	H	S

S - Strong; **H -** High; **M -** Medium; **L –** Low

Programme Code:	ALL U.G.	**Programme Title:**	Major Optional	
Course Code:	21UFITP2	**Course Title:**	**Batch:**	2021
Total Hours:	60	HTML (Lab)	**Semester:**	V
			Credits:	1.0

Course Objective

The course aims

- To make students to work practically in creating web pages.
- To make students practically aware of dynamic web pages.
- To familiarize the standards in creating web pages using frames, Hyper links.

Course Outcomes (CO)

On the successful completion of the course, students will be able to

Knowledge Level	CO Number	Course Outcome
K1, K2, K3	CO1	Create web page using simple tags.
K1, K2, K3	CO2	Display Text effects and create table in web page.
K2, K3, K4	CO3	Insert hyper link in a web page.
K1, K2, K3	CO4	Design web page using frames and list.
K1, K2, K4	CO5	Construct Form and design advertisement using text animation tags.

K1 – Remember; **K2** – Understanding; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate

S. No.	SYLLABUS
1.	Write a HTML program for Simple Tags.
2.	Write a HTML program for Changing Font Size and style.
3.	Write a HTML program for Alignment of Text.
4.	Write a HTML program to Display Text Effects.
5.	Write a HTML program for Time Table using Table.
6.	Write a HTML program for College Student Market Sheet.
7.	Write a HTML program to display Reversing Text.
8.	Write a HTML program to Hyper Link Pages.
9.	Write a HTML program for Display College Webpage using Frames.
10.	Write a HTML program for Ordered and Unordered List.
11.	Write a HTML program for Text Submission using forms.
12.	Write a HTML Program for Advertisement using Marquee.

Text Book:

Efraim Turban, Jae Lee, David King, H.Michael Chung, *"Electronic Commerce - a Managerial Perspective"*, Pearson Education, 2005. (Unit I – V)

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Mapping with Programme Specific Outcomes

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	S	S	M	H
CO2	M	S	H	H	S
CO3	S	H	S	M	S
CO4	M	S	H	S	M
CO5	H	S	S	H	S

S - Strong; **H -** High; **M -** Medium; **L –** Low