

MANNAR THIRUMALAI NAICKER COLLEGE
PASUMALAI, MADURAI- 625 004

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

(Re-accredited with 'A' Grade by NAAC)



B.Sc., Computer Science
SYLLABUS AND REGULATIONS

UNDER
CHOICE BASED CREDIT SYSTEM (CBCS)
(For those who joined during 2018-2019 and after)

Eligibility for Admission

Candidates seeking admission to the B.Sc Degree course must have the Higher Secondary Education, (should have studied Computer Science and Mathematics in HSC) of the Government of Tamil Nadu or any other state or its equivalent qualification.

Duration of the course

The duration of the course shall be three academic years comprising six semesters with two semesters in each academic year.

Subject of Study

Part I: Tamil

Part II: English

Part III:

1. Core Subjects
2. Allied Subjects
3. Electives

Part IV :

1. Non Major Electives
2. Skill Based Subjects
3. Environmental Studies
4. Value Education

Part V :

Extension activities

The scheme of Examination

The components for continuous internal assessment are:

Two tests and their average	--15 marks
Seminar /Group discussion	--5 marks
Assignment	--5 marks
Total	--25 marks

Pattern of the questions paper for the continuous Internal Assessment

(For Part I, Part II, Part III , NME & Skilled Paper in Part IV)

The components for continuous internal assessment are:

Part –A

Six multiple choice questions (answer all) 6 x 01= 06 Marks

Part –B

Two questions (‘either or ‘type) 2 x 07=14 Marks

Part –C

One question out of two 1 x 10 =10 Marks

Total	30 Marks

Pattern of the question paper for the Summative Examinations:

Note: Duration- 3 hours

Part –A

Ten multiple choice questions 10 x 01 = 10 Marks
 (No Unit shall be omitted; not more than two questions from each unit.)

Part –B

Five Paragraph questions (‘either or ‘type) 5 x 07 = 35 Marks
 (One question from each Unit)

Part –C

Three Essay questions out of five 3 x 10 =30 Marks
 (One question from each Unit)

Total	75 Marks

The Scheme of Examination (Environmental Studies and Value Education)

Two tests and their average	--15 marks
Project Report	--10 marks*
Total	<u>--25 marks</u>

** The students as Individual or Group must visit a local area to document environmental assets – river / forest / grassland / hill / mountain – visit a local polluted site – urban / rural / industrial / agricultural – study of common plants, insects, birds – study of simple ecosystem – pond, river, hill slopes, etc.

Question Paper Pattern

Pattern of the Question Paper for Environmental Studies & Value Education only) (Internal)

Part –A

(Answer is not less than 150 words)

Four questions (‘either or ‘type) 4 x 05=20 Marks

Part –B

(Answer is not less than 400 words)

One question (‘either or ‘type) 1 x 10=10 Marks

	30 Marks
Total	30 Marks

Pattern of the Question Paper for Environmental Studies & Value Education only) (External)

Part –A

(Answer is not less than 150 words)

Five questions (either or type) 5 x 06 =30 Marks

(One question from each Unit)

Part –B

(Answer is not less than 400 words)

Three questions out of Five 3 x 15 = 45 Marks
each unit (One question from each Unit)

	75 Marks
Total	75 Marks

Minimum Marks for a Pass

40% of the aggregate (Internal +Summative Examinations).

No separate pass minimum for the Internal Examinations.

27 marks out of 75 is the pass minimum for the Summative Examinations.

PROGRAMME SPECIFIC OUTCOMES

PSO1: To understand the principles and working of computer systems. Students can assess the hardware and software aspects of computer systems.

PSO2: To understand the structure and development methodologies of software systems. Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of programming language and open source platforms.

PSO3: To apply mathematical methodologies to solve computation task, model real world problem using appropriate data structure and suitable algorithm.

PSO4: To investigate and evaluate new technologies and make recommendations with respect to their application. Appreciate the importance of new and emerging technologies, and the strategies available for life-long learning.

DEPARTMENT OF COMPUTER SCIENCE
(For those who joined in 2018-2019 and after)

COURSE PATTERN

Study Component	I Sem	II Sem	III Sem.	IV Sem.	V Sem	VI Sem	Total Hrs/week	Total Credit	No.of Papers	Total Marks
Part – I Tamil	6(3)	6(3)	6(3)	6(3)	-	-	24	12	4	400
Part - II English	6(3)	6(3)	6(3)	6(3)	-	-	24	12	4	400
Part – III										
Core Subjects/	5(4) 5(4)	5(5) 5(5)	5(5) 5(5)	5(4) 5(4)	6(5) 6(5) 6(4)	6(5) 6(4) 6(4)	76	63	14	1400
Elective					5(4) 5(4)	5(4) 5(4)	20	16	4	400
Allied Subject	4(4)	4(4)	4(4)	4(4)			16	16	4	400
Part – IV										
Skill Based Subjects/	2(2)	2(2)	2(2)	2(2)	2(2)	2(2)	12	12	6	600
EVS/VE/	2(2)	2(2)					4	4	2	200
NME			2(2)	2(2)			4	4	2	200
Part – V										
Extension Activities				0(1)			0	1	1	100
Total	30 (22)	30 (24)	30 (24)	30 (23)	30 (24)	30 (23)	180	140	41	4100

SEMESTER – III							
Subject Code	Subject	No.of Papers	Hours/ Week	Credits	Maximum Marks		
					Int	Ext	Tot.
18UTAG31	Part I: Tamil காப்பிய இலக்கியமும் சிறுகதையும்	1	6	3	25	75	100
18UENG31	Part II: English Exploring Language Through Literature-III	1	6	3	25	75	100
18UCSC31	Part III: Core Subject Programming in Java	1	5	5	25	75	100
18UCSCP3	Programming in Java – Lab	1	5	5	40	60	100
18UCSA31	Part III: Allied Subject Operations Research	1	4	4	25	75	100
18UCSSP3	Part IV: Skill Subject Android Application Development– Lab	1	2	2	40	60	100
18UCSN31	Part IV: Non-Major Elective Web Programming- Lab	1	2	2	40	60	100
	Total	7	30	24	220	480	700

SEMESTER – IV							
Subject Code	Subject	No.of Papers	Hours / Week	Credits	Maximum Marks		
					Int.	Ext.	Tot.
18UTAG41	Part I: Tamil பழந்தமிழ் இலக்கியமும் புதினமும்	1	6	3	25	75	100
18UENG41	Part II: English Exploring Language Through Literature-IV	1	6	3	25	75	100
18UCSC41 18UCSCP4	Part III: Core Subject Programming in PHP Programming in PHP – Lab	1 1	5 5	4 4	25 40	75 60	100 100
18UCSA41	Part III: Allied Subject Numerical Aptitude	1	4	4	25	75	100
18UCSSP4	Part III: Skill Subject Web Designing – Lab	1	2	2	40	60	100
18UCSN41	Part IV: Non-Major Elective Multimedia- Lab	1	2	2	40	60	100
18UEAG40- 18UEAG49	Extension Activities	1	0	1	-	100	100
	Total	8	30	23	320	480	800



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Programme : UG	Part III	: Core
Semester : III	Hours per week	: 05
Sub Code : 18UCSC31	Credit	: 05

PROGRAMMING IN JAVA

Course Outcomes:

- CO1:** To identify classes, objects, members of a class and relationships among them needed for a specific problem.
- CO2:** To use the Java programming language for various programming technologies.
- CO3:** To study the advantages of user defined data type which provides flexibility for application development.
- CO4:** Demonstrate the concepts of Polymorphism and Inheritance.

Unit - I

Java Evolution: Java History -Java Features –How Java Differs from C and C++ - Java and Internet – Java and World Wide Web – Web Browsers – Hardware and Software requirements – Java Support Systems – Java Environment. **Overview of Java Language–** Simple Java Programs – Java Program Structure – Java Tokens – Java Statement – Implementing a Java Program – Java Virtual Machine – Command Line Arguments – Constants and Variables – Giving Values to Variable – Scope of Variables – Symbolic Constants – Type Casting.

Unit - II

Operators and Expressions: Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators – Bitwise Operators – Special Operators – Arithmetic Expressions Evaluation of Expression – Precedence of Arithmetic Operators – type conversions in Expressions – Operator Precedence and Associativity Mathematical Function. **Decision Making and Branching:** Decision Making with If Statement – Simple If Statement – If-Else Statement – Nesting If-Else Statement – Else If Ladder Statement – Switch Statement –The conditional operators.

Looping Statement: The While Statement – Do Statement– For Statement – Jump in Loops. **Class Object and Methods:** Defining a Class – Field Declaration – Method Declaration – Creating Objects – Accessing Class Members – Method Overloading – Static Member – Nesting of Methods – Inheritance: Extending A Class – Overriding method – Final Variables and Methods – Final Classes – Finalizer Methods – Abstract Methods and Classes – Methods With Variable Args– Visibility Controls.

Unit - III

Arrays, Strings and Vectors: One Dimensional Array – Creating an Array - Two Dimensional Arrays – Strings – Vectors – Wrapper Class – EnumeratedTypes.**Interface:** Define Interfaces- Extending Interfaces– Implementing Interfaces – Accessing Interface Variables.

Packages: Java API Packages -Using System Package – Naming Conventions – Creating Package – Accessing a Package – Using a Package – Adding a Class to a Package – Hiding Classes – Static Import.

Unit- IV

Multithreaded programming: Creating Thread – Extending the Thread Class – Stopping and Blocking a Thread – Life Cycle of a Thread – Using Thread Methods – Thread Exception – Thread Priority – Synchronization – Implementing the Runnable Interface.
Managing errors and exception: Types of Errors – Exceptions – Syntax of Exception Handling Code –Multiple Catch Statements - Using Finally Statement – Throwing Our Own Exception – Using Exception for Debugging.**Applet Programming:** How Applet Differ from Applications – Preparing to Write Applet – Building AppletCode – Applet Life Cycle – Creating and Executable Applet – Designing a Web Page – Applet Tag – Adding Applet to Html – Running the Applet.

Unit - V

Graphics Programming:Graphics class – Lines and Rectangle – Circle and Ellipses – Drawing Arcs – Drawing Polygons – Line Graphs – UsingControlLoops in Applet – Drawing Bar Chart. **Managing input and output in Java:**Concept of Streams –Stream Class – Byte Stream Class – Character Stream Class – Using Stream – Other Useful I/O Class – Using the File Class – Input and Output Exceptions – Creation of Files – Reading/Writing Characters - Reading / Writing Bytes – Random Access File – Interactive Input and Output.

Text Book:

1. Balagurusamy. E., **Programming with Java**, Tata McGraw Hill Private Limited, Fifth Edition, 2016, New Delhi.

Unit I:	Chapters	2 - Section 2.1 -2.9.
	Chapters	3 - Section 3.2, 3.5 to 3.7, 3.9 -3.11.
	Chapters	4 - Section 4.2 , 4.3, 4.6 -4.9.
Unit II:	Chapters	5 - Section 5.2 - 5.15.
	Chapters	6 - Section 6.2 - 6.8.

	Chapters	7 - Section 7.2 - 7.5.
	Chapters	8 - Section 8.2 - 8.6,8.8 – 8.18.
Unit III:	Chapters	9 - Section 9.2 - 9.8.
	Chapters	10 - Section 10.2 - 10.5.
	Chapters	11 - Section 11.2 - 11.10.
Unit IV:	Chapters	12 - Section 12.2 - 12.10
	Chapters	13 - Section 13.2 - 13.7, 13.9.
	Chapters	14 - Section 14.2 - 14.10.
Unit V:	Chapters	15 - Section 15.2 – 15.9 .
	Chapters	16 - Section 16.2 - 16.16.

Reference Books:

1. Radha Krishna.P, **Object Oriented Programming with Java**, University Press India Private Limited, Third Edition, 2008, Hyderabad.
2. Debasish Jana, **Java Object Oriented Programming Paradigm**, Prentice Hall of India Private Limited, Third Edition, 2008, New Delhi.
3. Xavier.C, **Programming with Java**, Scitech Publication India Private Limited, Third Edition, 2004, Chennai.

Online References:

1. <https://www.mooc-list.com/course/object-oriented-programming-java-coursera>
2. https://spoken-tutorial.org/tutorialsearch/?search_foss=Java&search_language=English



MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
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Programme	: UG	Part III	: Core
Semester	: III	Hours per week	: 05
Sub Code	: 18UCSCP3	Credit	: 05

PROGRAMMING IN JAVA - LAB

Course Outcomes:

- CO1:** To build software development skills using java programming for real world applications.
CO2: To develop software in the Java programming language.
CO3: To implement complex problems using java programming.
CO4: To familiarize the students with the concepts of Graphics.

- 1) Print the values using Command line arguments.
- 2) Calculate Harmonic series for given number.
- 3) Sort the given number using Bubble sort.
- 4) Instantiate Class methods and members.
- 5) Single Inheritance.
- 6) Student mark list using multilevel inheritance.
- 7) Volume using Method overloading.
- 8) Method overriding.
- 9) Multiply two matrices.
- 10) Sort the Strings in an alphabetical order.
- 11) String buffer.
- 12) Employee salary using an Interface.
- 13) Arithmetic operation using Package.
- 14) Multithreading.
- 15) Exception Handling
- 16) Draw the Face using an Applet.
- 17) Using control statements in an Applet.



MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)
DEPARTMENT OF MATHEMATICS WITH CA
(For those who joined in 2018-2019 and after)

Programme	: B.Sc.(Computer Science)	Part III	: Allied
Semester	: III	Hours per week	: 04
Sub. Code	:18UCSA31	Credit	: 04

OPERATIONS RESEARCH

Course Outcomes:

- CO1:** To develop skills in Mathematical formulation and Solving of LPP.
CO2: To solve specialized LPP like transportation and assignment problems.
CO3: To introduce about Network problems.
CO4: To develop skills in solving real life Network problems.

Unit-I:

Mathematical Formulation of a LPP: General form of a LPP – Summation notation – Matrix form – Canonical form – Standard form - Solution of LPP by Graphical Method.

Unit-II:

The Simplex Method – The Big M Method – Duality in LPP (Problems only).

Unit- III:

Transportation Problems: Mathematical Formulation of TP - Determining Initial Basic Feasible Solution (all methods) - Optimum solution of TP (MODI Method).

Unit -IV:

Assignment Problems: Mathematical formulation of Assignment Problems – Solution to Assignment Problems.

Unit -V:

Network Flow Problems – Minimal Spanning Tree Problem – Shortest Route Problems.

Text Books:

1. Dr. Arumugam. S, Thangapandi Isaac. A. **Topics in Operations Research – Linear Programming**, New Gamma Publishers Pvt. Ltd, March 2015, Palayamkottai, Tirunelveli.
2. Kanti Swarup, P.K. Gupta, Man Mohan, **Operations Research**, 17th Edition, Sultan Chand and Sons, 2014, New Delhi.

Unit I : Book 1: Chapter 3 - Sections: 3.2, 3.4.

Unit II : Book 1: Chapter 3 – Sections: 3.5, 3.6, 3.9.

Unit III :	Book 1: Chapter 4 – Section: 4.1
Unit IV :	Book 1: Chapter 5 – Sections: 5.1,5.2
Unit V :	Book 2: Chapter 24 – Sections: 24.2, 24.3, 24.4.

Reference Books:

1. Rathindra P. Sen, **Operations Research Algorithms and Applications**, PHI, EEE, 2010, New Delhi.
2. Panneer Selvam. R, **Operations Research**, PHI, Second Edition, 2010, New Delhi.
3. Kalavathy. S, **Operations Research**, Vikas publishing house Pvt Ltd., 4th Edition, 2013, New Delhi.



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Programme	:UG	Part IV	: Skill
Semester	: III	Hours per week	: 02
Sub Code	: 18UCSSP3	Credit	: 02

ANDROID APPLICATION DEVELOPMENT-LAB

Course Outcomes:

CO1: Develop a grasp of the Android OS architecture.

CO2: Understand different mobile application models/architectures and patterns.

CO3: Design and develop User Interfaces for the Android platform.

CO4: **Apply** a mobile development framework to the development of a mobile application.

1. Create “Hello Android” Application
2. How to create and display a new form, window or activity
3. Working With Different Layouts
4. Create simple and effective Login form on Android
5. Create registration form in android
6. Build a simple user interface
7. How to use Toast and Intents in android programming
8. Build android app using Widgets
9. Create Simple Browser
10. Add a simple List View on App
11. Changing the font for Android Text views
12. Context menu for Android
13. Android App using Color Picker
14. Create simple app with database
15. Create AgeCalculator App



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Programme	: UG	Part IV	: NME
Semester	: III	Hours per week	: 02
Sub Code	: 18UCSN31	Credit	: 02

WEB PROGRAMMING – LAB

Course Outcomes:

CO1: To make the students to understand the basics of web designing by using HTML tags.

CO2: Understand the principles of creating an effective web page, including an in–depth consideration of information architecture.

CO3: To make the students to design web pages using Forms and Frames.

CO4: To understand and practice embedded dynamic scripting on client side Internet Programming.

HTML

1. Creation of HTML Document using basic html tags.
2. Creation of formatting tags.
3. Creation of Webpage using text, color, background, font elements.
4. Creation of Webpage using table tags.
5. Creation of Webpage for image tags.
6. Creation of Webpage using HREF tags with the attributes alink, vlink.
7. Creation of Webpage showing Ordered and Unordered list for favorite hobbies.
8. Creation of Webpage ,when user clicks on the link it should go top and bottom of the page.
9. Creation of College application forms using forms.
10. Creation of Webpage for frame for your personal data.
11. Creation of image map.
12. Creation of Webpage for any online Registration form.

DHTML

13. Creation of Webpage using Inline style sheet in CSS.
14. Creation of Webpage using Internal style sheet in CSS.
15. Creation of Webpage using External Style sheet in CSS.



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Programme	: UG	Part III	: Core
Semester	: IV	Hours per week	: 05
Sub Code	: 18UCSC41	Credit	: 04

PROGRAMMING IN PHP

Course Outcomes:

CO1: To understand the concepts and architecture of the World Wide Web.

CO2: To develop a dynamic web page by the use of Java script and DHTML.

CO3: To make the students to develop skills to create server-side scripts using PHP.

CO4: To develop hands on experience using open source technologies such as HTML, CSS, Java script, PHP & MYSQL

UNIT I

FUNDAMENTALS OF PHP: Introduction – My First PHP Program – Whitespace – Echo – Echo Quotes - Variables – Constants – Operators – Pre/Post – Increment & Pre/Post-Decrement.

UNIT II

LOOPS, STRINGS AND STATEMENTS : Loops-While Loop – For Loop – For Each Loop – Do While Loop – Strings – If and Switch Statement.

UNIT III

ARRAYS AND FUNCTIONS: Arrays: Creating an Array with Array identifier – Creating Array in Mix Environment – Counting Number of elements in Array – Calculating Array values – Checking Element Existence inside an array – Associative arrays. Functions: Returning Function – Function within a function – Passing argument by value – Passing argument by Reference – Returning values from function – Variable Functions.

UNIT IV

DATABASES: Introduction – Database Tables-Queries-PHP MySQL Connection to a database-Connecting to a MySQL Database-Closing a Connection. PHP MySQL Creating Database and Tables-Creating a Database-Creating a Table-MySQL Data Types-Primary Key and Auto Increment Fields-PHP MySQL Select-Display the result in an HTML Table-PHP MySQL The WHERE Clause-The WHERE clause- PHP MySQL ORDER BY keyword-The ORDER BY keyword-Sort Ascending or Decending-Order by Two Columns-PHP MySQL Update-Update data in a database-PHP MySQL Delete from –Delete data in a Database.

UNIT V

COOKIES, SESSIONS AND FORMS: Cookies – Sessions – Forms – Running the program.**MORE ON PHP:** Date and Time – Files – Reading a File – Appending in a File – Deleting a File -Include function – Require function – PHP Database ODBC.

Text Book:

Dinesh Maidasani, **PHP**, Firewall Media (An Imprint of Laxmi Publication Pvt Ltd.,) First Edition, 2007, reprint 2008, 2013, New Delhi.

Unit I	:	Chapters	- 1
Unit II	:	Chapters	- 2
Unit III	:	Chapters	- 3
Unit IV	:	Chapters	- 4
Unit V	:	Chapters	- 5,6

Reference Books:

1. Bayross (Ivan), **Web Enabled Commercial Application Development using HTML, Java script, DHTML and PHP with CDROM**, BPB Publication, FourthEdition, 2010, New Delhi.
2. Guengerich (Steve), **PHP6 and MYSQL**, Willey India, Fourth Edition, 2014, New Delhi.
3. Murah.J and Harris.R, **PHP and MYSQL** ,Mike Murach& Associates ,Inc., 2010

Online references:

1. https://spoken-tutorial.org/tutorial-search/?search_foss=PHP+and+MySQL&search_language=English
2. <https://www.mooc-list.com/course/building-web-applications-php-coursera>



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Programme	: UG	Part III	: Core
Semester	: IV	Hours per week	: 05
Sub Code	: 18UCSCP4	Credit	: 04

PROGRAMMING IN PHP- LAB

Course Outcomes:

CO1: Helps the students to develop programming skills in Script.

CO2: Using PHP to manipulate files.

CO3: Using the PHP, MyAdmin utility to admin the MySQL database.

CO4: Gain confidence to create dynamic website on real world problems.

PHP

1. Declaration and accessing variables in PHP.
2. Decision making in PHP.
3. Control structure in PHP.
4. OTP generation in PHP
5. Price chart creation in PHP.
6. Types of arrays in PHP.
7. Forms in PHP.
8. Program to create a Simple Calculator.
9. Programs to create simple Login and Logout using sessions.
10. To send email in PHP.
11. Basic connection program in PHP / MySql.
12. Electricity bill preparation using PHP with MySql.
13. Employee pay slip preparation using PHP with MySql.
14. Student mark list preparation using PHP with MySql.
15. File upload in PHP with MySql.
16. Image Upload in PHP with MySql.
17. Combine Java script and PHP for client side validation.
18. Combine Java script and PHP for server side validation



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Programme	: UG	Part III	: Allied
Semester	: IV	Hours per week	: 04
Sub. Code	: 18UCSA41	Credit	: 04

NUMERICAL APTITUDE

Course Outcomes

CO1: To introduce basic concepts of Mathematics.

CO2: To develop the computational skills.

CO3: To improve required skills to face competitive examinations.

CO4: To create skills in solving real life word problems.

Unit I:

HCF and LCM of numbers - Simplification.

Unit II:

Average - Problems on ages.

Unit III:

Ratio and Proportion - Alligation or Mixture.

Unit IV:

Simple Interest - Calendar.

Unit V:

Permutations and Combinations – Pie charts.

Text Book:

1. Aggarwal. R.S., **Quantitative Aptitude**, 7th Fully Revised Edition, S.Chand & Company Limited, Reprint 2008, New Delhi.

Unit I – Chapter 2 (All solved problems and first 10 Exercise problems)

Chapter 4 (All solved problems and first 10 Exercise problems)

Unit II – Chapter 6 (All solved problems and first 10 Exercise problems)

Chapter 8 (All solved problems and first 10 Exercise problems)

Unit III – Chapter 12 (All solved problems and first 10 Exercise problems)

Chapter 20 (All solved problems and first 10 Exercise problems)

Unit IV – Chapter 21 (All solved problems and first 10 Exercise problems)

Chapter 27 (All solved problems and first 10 Exercise problems)

Unit V – Chapter 30 (All solved problems and first 10 Exercise problems)

Chapter 38 (All problems including Exercise)

Reference Books:

1. AbhigitGuha, **Quantitative Aptitude**, 4th Edition, Tata McGraw Hill Publication, 2011, New Delhi.
2. MohanRao.U, **Quantitative Aptitude**, Scitech Publications, Reprint 2013, Chennai.
3. Dipak Kumar Yugnirmal, **Quantitative Aptitude**, Unicorn books Pvt Ltd., 2016, New Delhi.



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Programme	: UG	Part IV	: Skill
Semester	: IV	Hours per week	: 02
Sub Code	: 18UCSSP4	Credit	: 02

WEB DESIGNING- LAB

Course Outcomes:

CO1: Helps the students to develop programming skills in HTML, DHTML.

CO2: Students gain the skills and project-based experience needed for entry into web design and development careers.

CO3: Review the current topics in Web & Internet technologies.

CO4: To analyze the web page and identify its elements and attributes.

HTML

1. Creation of HTML Document using basic tags.
2. Creation of Character Entities.
3. Creation of Webpage using text, color, background, font elements.
4. Creation of Webpage in HTML to show Block level elements and text level elements.
5. Creation of Bookshop inventory using Ordered and Unordered list.
6. Creation of Exam result webpage using Table tags and their attributes.
7. Creation of India map using image map and hyperlinks.
8. Creation of Bio-data using forms.
9. Creation of Webpage for College details using frames.
10. Creation of online job application form using forms.

DHTML

11. Creation of Webpage using Inline style sheet in CSS.
12. Creation of Webpage using Internal style sheet in CSS.
13. Creation of Webpage using External Style sheet in CSS.



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Programme	: UG	Part IV	: NME
Semester	: IV	Hours per week	: 02
Sub Code	: 18UCSN41	Credit	: 02

MULTIMEDIA-LAB

Course Outcomes:

CO1: Understand multimedia technology and tools.

CO2: Develop an application using action script language.

CO3: Develop effective web template using various website components.

CO4: Identify the basic components of multimedia skills.

Flash

1. Create an animation to represent the growing moon.
2. Create an animation to indicate a ball bouncing on steps.
3. Simulate movement of a cloud.
4. Simulate a ball hitting another ball.
5. Draw the fan blades and to give proper animation.
6. Display the background given (filename: tulip.jpg) through your name.
7. Create an animated cursor using `startdrag("ss", true); mouse.hide();`

Adobe Photoshop

8. Design a visiting card containing at least one graphic and text information.
9. Prepare a cover page for the book in your subject area. Plan your own design.
10. Extract the flower only from given photographic image and organize it on a background.
Selecting your own background for organization.
11. Adjust the brightness and contrast of the picture so that it gives an elegant look.
12. Remove the arrows and text from the given photographic image.
13. Type a word and apply the effects shadow emboss.
14. Display the background given (filename: garden.jpg) through your name using mask.
15. Change Given CMYK image into Black & White.