MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI
UG COURSES – AFFILIATED COLLEGES
B.SC. COMPUTER AND INFORMATION TECHNOLOGY
(Choice Based Credit System)
(with effect from the academic year 2020-21 onwards)

Semester I

		COMPONENTS	Hours	Credits
PART 1	T (1 COURSE)	Tamil / Other Languages	6	4
PART II	T (1 COURSE)	Communicative English	6	4
PART III	CORE SUBJECTS			
	T (1 COURSE)	Introduction to Information Technology and HTML(THEORY)	4	4
	P (1 COURSE)	Programming in HTML- LAB	3	2
	ADD ON MAJOR (MANDATORY) T (1 COURSE)	Professional English for Physical Sciences - I	4	4
Part III Allied-I	T(1 COURSE)	Office Automation	3	3
	P(1 COURSE)	Word & Spread Sheet - LAB	2	1
	Common T (1 COURSE)	Environmental Studies	2	2
	TOTAL (5T + 2P = 7 COURSE)		30	24

SEMESTER II

		COMPONENTS	Hours	Credits
PART I	T (1COURSE)	Tamil / Other Languages	6	4
PART - II	T (1COURSE)	English	6	4
PART III	CORE SUBJECTS			
	T (1COURSE)	Fundamental of Computer and C- Programming	4	4
	P (1 COURSE)	Programming In C-LAB	3	2
	ADD ON MAJOR(MANDATORY) T (1 COURSE)	Professional English for Physical Sciences - II	4	4
Part III Allied - II	T(1 COURSE)	Digital Design	3	3
	P (1COURSE)	Power Point & Database Access - LAB	2	1
	Common T (1COURSE)	Value Based Education / சமூகஒழுக்கங்களும் பண்பாட்டு விழுமியங்களும் / Social Harmony	2	2
			30	24

INTRODUCTION TO INFORMATION TECHNOLOGY AND HTML

UNIT – I

Information Technology Basics: Introduction, Information, Technology, Information technology, Present Scenario, Role of Information Technology, Information technology, and internet, careers in IT industry – Computer Memory and Storage Introduction, memory hierarchy, Random Access Memory (RAM), Read Only memory (ROM).

Input Output Media: Introduction, types of input devices, type of output

devices. **UNIT – II**

Internet: Introduction – what is Internet – History of Internet – How the web works – Web server and clients – ISP, ISDN – Domain naming system – Internet

Hypertext – HTML – Basic components of HTML – Formatting the

HTML text **UNIT – III**

URL - - protocol – server name – port – Relative URLs and Absolute URLs – linking to other HTML Documents – Linking inside the same document – Linking to other Internet Services.

UNIT – IV

Lists in HTML – ordered Lists – Using ordered lists – Unordered Lists – Directory Lists – Definition Lists – Combining list types

Graphics and Web pages – Image formats and Browsers – Graphics and HTML Documents – Images and Hyperlink anchors – Image Maps

UNIT – V

 HTML Tables – aligning table elements – row and column spanning – frames in HTML – Frameset container

HTML Forms – The <input> tag – Scrolling

Marquess **Text Books:**

1. Computer Fundamentals and windows with Internet Technology –N.KRISHNAN.
2. Fundamentals of Information Technology by Alexis Leon and Mathews
   Leon Vikas Publication. New Delhi

Reference Books:

1. Introduction to Computers, Peter Norton, sixth edition, Mc-Graw Hill Companies.

2. HTML Introduction to Web Page Design and Development, David Mercer,

   Tata Mc-Graw Hill Publishing Company Limited.

Programming in HTML - LAB

1. a. Write HTML code to develop a web page having the background in red and body "My First Page" in any other color.

   b. Create a HTML document giving details of your name, age, telephone, address, roll no. using align tag.

   c. Write HTML code to design a page containing a text in a paragraph give suitable heading style. 4. Design a page having background color given text color red and using all the attributes of font tab.

2. a. Write HTML code to create a WebPage that contains an Image as its center.

   b. Create a web Page using href tag having the attribute alink, vlink.

   c. Write a HTML code to create a web page of pink color and display moving message in red color.

3. a. Create a web page, showing an ordered list of name of your five friends.

   b. Create a HTML document containing a nested list showing the content page of any book

   c. Create a web page, showing an unordered list of name of fruits

4. Create a table in HTML with Dummy Data Name of Train Place Destination Train No Time Fare Arrival Departure

5. Write HTML code to create a web page that displays your class time table.

6. a. Create a web page with Table using Frame concept

   b. Create a web page having two frames one containing links and another with contents of the links. When link is clicked appropriate contents should be displayed on Frame 2.

7. Design an application form using all input types

8. Design a website of your own by using all html tags.

OFFICE AUTOMATION

UNIT – I
Microsoft word: Word processor Basics – Opening Microsoft Word – Closing the Document and Quitting Word – Starting Microsoft Word XP - Introduction to word – Saving the Document – Previewing – Printing – Closing – Changing the size of a document.
Editing the Document: Opening an existing word document – Moving the cursor – Making changes in your document – Undoing any operation – Saving changes made to the Document – Checking Spelling in the Document – Automatic correction of errors – Printing the file – Saving and Closing the Document.

UNIT – II
Designing your Document: Creating a well formatted Document – Setting the Left , Right , Top and Bottom Margins – Setting page Numbers on your Document – Specifying text at the top and the Bottom of each page.
Creating Tables : Selecting Text using the mouse – Inserting Rows – Inserting Columns – Deleting a Row – Deleting a Column – Formatting the Text – Mail Merge.

UNIT – III
Microsoft Excel: Introduction to Spreadsheets – Use of Spreadsheet – Spreadsheet Basics – Formatting a Spreadsheet – Graphs – Functions of Microsoft Excel – Starting Microsoft Excel – Excel Work Environment – Changing size of a Work book and Excel Window – Cell and Cell Address – Standard Toolbar – Formatting toolbar – the Formula bar – Status bar – Components of an Excel Workbook.
Working in Excel : Entering data in cell address – Making changes to an entry – Mathematical Calculations – Formulas using numbers – Formula using Cell address – Defining functions simple Graphs.

UNIT – IV
Microsoft Access: Introduction to Databases – Defining a Database – Understanding RDBMS – objects of a Relational Database – Macros – Functions of a DBMS – Starting Microsoft Access – Creating Tables – Understanding Database – Creating database - Creating a Table – Working on Tables – Saving the Table – Defining primary Key – Closing the Table – Closing the Database window and Quitting Access.

UNIT – V
Microsoft Powerpoint: Starting Powerpoint – Creating a presentation – Saving a Presentation – working with views – Adding Graphics, Charts and Tables – Masters – Using Slide Transition- Printing – Closing the Slides – Quitting Microsoft Powerpoint.
Text Book:
1. VIKAS GUPTA, "Comdex Computer Course Kit (XP Edition)", Dreametech press, New Delhi.
References:
Stephen L. Nelson, "The Complete Reference office 2000" Tata McGraw – Hill Publishing Company limited, New Delhi.
N.Krishnan, "Window and MS Office 2000 with Database Concepts" Scitech publications (India) Pvt Ltd., Chennai

WORD & SPREAD SHEET – LAB

I – SEMESTER

MS – Word

1. Prepare a word document for spell checking and Thesaurus.
2. Prepare a documents and apply Cut, Copy and Paste operations.
3. Find a word and Replace with another in a document.
4. Insert Header and Footer with the name of the Dept and Page No. in a document.
5. Insert a picture in your document.
6. Insert mathematical symbols using Microsoft equation 3.0.
7. Preparing News paper format (Apply Alignment, Font, Property, Line spacing, Picture Format).
8. Preparer a Bio-Data and insert the contents of qualification within the table.
9. Mail Merge
10. Macro.

MS – Excel

1. Apply formulas and functions
2. Prepare a chart for population growth.
3. Create a Pivot table.
4. Apply ascending and descending.
5. Apply auto format.

FUNDAMENTAL OF COMPUTER AND C PROGRAMMING

UNIT - 1

Fundamentals of Computers: Components of a PC – The Systems unit – Different Types of Computers – Setting up a System – Turning on the System – Logging on – Using the mouse – Windows Desktop – Hardware and Software – Installing the Software.

Starting Windows XP: Getting familiar with the Desktop – Moving from one Window to another Enlarging a window to screen size – Reverting a window to its previous size – Reducing the Window to a taskbar button – Opening a taskbar button into a window – Adjusting the windows size freely Closing Window – Creating a shortcut for a program – Quitting Window XP.

UNIT – II

Declarations: Introduction – Character set – C Tokens – Keywords and Identifiers – Constants – Variables - Data Types - Declaration of Variables - Declaration of Storage class - Assigning Values to Variables - Defining Symbolic Constants - Declaring Variable as Constant - Declaring Variable as Volatile - Overflow and Underflow of Data.

Operators and Expressions: Introduction - Arithmetic Operators - Relational Operators - Logical Operators– Assignments Operators – Increment and decrement operators – Conditional operators – Bitwise Operators – Special Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operators – some computational problems – Type computational problems – Type conversions in Expressions – operator precedence and Associativity – Mathematical Functions.

Managing Input and Output Operations: Introduction – Reading a character – Writing a Character – Formatted Input – Formatted Output.

UNIT – III

Decision Making and Branching: Introduction – Decision Making with IF Statement – Simple IF Statement – The IF. Else statement – Nesting of IF. Else Statement-the ELSE.IF Ladder -the Switch Statement – The? Operator – The GOTO Statement.

Decision Making and Looping: Introduction –The WHILE Statement –The DO Statement – The FOR Statement – Jumps in Loops – Concise Test Expression.

UNIT-IV

Arrays: Introduction – One Dimensional Arrays – Declaration of Dimensional Arrays-Initialization of One Dimensional Arrays –Two Dimensional Arrays – Initializing Two Dimensional Arrays – Multi – Dimensional Arrays – Dynamic Arrays.

Character Arrays and Strings: Introduction – Declaring and Initializing String Variables-Reading Strings from Terminal – Writing Strings to Screen Arithmetic Operations on Characters –putting Strings to together – Comparison of Two String – Strings Handling Functions – Table of Strings.

UNIT – V

User - Defined Functions: Introduction – Need for User –Defined Functions – a multi – function program – Elements of User –Defined Functions-Defining of functions – Return values and their Types - Functions Calls - Function Declaration - Category of Functions - No Arguments and No Return values - Arguments but No Return Values - Arguments with Return Values – No Arguments but Returns a Value – Functions that Returns multiple values – Nesting of Functions-Recursion-Passing Arrays top Functions-Passing Strings top Functions- Passing String top Functions - The scope., Visibility and Lifetime of Variables – Multifile programs.

Structure and Unions: Introduction – Defining a Structure – Declaring Structure Variables – Accessing Structure members – Structure Initialization Copying and Comparing Structure Variables – Operations on Individual Members – Arrays of Structures – Arrays within Structures- Structures with structures- Structures – Structures and Functions – Unions – Size of Structures- Bit Fields.

Text Book:

1. Programming in ANSI C, E. Balagurusamy, 6rd Edition, Tata McGraw Hill Publishing Company, 2012.
2. Peter Norton, *"Introduction to Computers",* Tata McGraw-Hill Publishing Company Limited, New Delhi.

Reference Books:

1. Programming with C, Schaum's Outline Series, Gottfried, Tata McGraw Hill, 2006
2. Programming with ANSI and Turbo C, Ashok N. Kamthane, Pearson Education, 2006
3. H. Schildt, C: The Complete Reference, 4th Edition, TMH Edition, 2000.
4. Kanetkar Y., Let us C, BPB Pub., New Delhi, 1999.

MSU/ 2020-21 / UG-Colleges /Part-III (B.Sc. Computer and Information Technology) / Semester – II / Major Practical

Programming in C- LAB

1. Write a C program to check the given number is prime or not.

2. Write a program to calculate simple Interest and Compound Interest.

3. Writer a C program to find the roots of a Quadratic Equation using simple if statement.

4. Writer a C program to sort numbers in ascending order using **for** statement.

5. Writer a C program to print Fibonacci Series using **while** statement.

6. Writer a C program to find the value of $1^3+2^3+5^3+\ldots\ldots+25^3$ using **do… while** statement.

7. Writer a C program to print the grade of a student using **switch… case** statement.

8. Writer a C program for simple calculator using **switch/case** loop.

9. Writer a C program to read in a three digit number produce following output (assuming that the input in 539) 5 hundreds 3 tens 9 units.

10. Writer a C program for swapping two variables without using third variable.

11. Writer a C program to prepare EB Bill using **if…elseif** ladder.

12. Writer a C program to find sum of Digits and reverse of the number using function.

13. Writer a C program to find factorial and GCD value using recursion.

14. Writer a C program to find the product of two Matrices.

15. Writer a C program to arrange the names in alphabetical order using **strcmp()** function.

DIGITAL DESIGN

Unit – I

Digital Systems and Binary Numbers: Digital Systems – Binary Numbers – Numbers – Base Conversions – octal and Hexadecimal Numbers – Complements – Signed Binary Numbers – Binary Codes – Binary Storage and Registers- Binary Logic.

Boolean Algebra: Introduction – Basic Definitions – Axiomatic Definition of Boolean algebra – Basic Theorems and properties of Boolean Algebra – Boolean Functions.

Unit – II

Logic Gates: Canonical and Standard Forms – other Logic Operations – Digital Logic Gates
– integrated Circuits.

Gate –Level Minimization: Introduction – The Map Method –Four – Variable Map-Five – Variable Map – Product –of-Sums Simplification –Don't Care Conditions.

Unit- III

NAND and NOR Implementation – Other Two – Level Implementations – Exclusive OR Function.

Combinational Logic: Introduction – Combinational Circuits – Analysis procedure – Design Procedure – Binary Adder – Subtractor – Decimal Adder – Binary Multiplier – Magnitude Comparator.

Unit –IV

Decoders – Encoders – Multiplexers

Synchronous Sequential Logic: Introduction – Sequential Circuits - Storage Elements Latches – Storage Elements: Flip-Flops – Analysis of Clocked Sequential Circuits.

Unit – V

Registers and Counters: Registers – shift Registers – Ripple Counters – Synchronous Counters- Others Counters.

Memory: Introduction – Random Access Memory – Memory Decoding – Error Detection and Correction – Read Only Memory.

Text Book:
   1. M. Morris Mano, Michael D. Ciletti, "Digital Design", Prentice Hall of India Private Ltd.

References
   1. Albert Paul Malvino, Donald P.Leach, "Digital Principle and Applications", Tata McGraw –Hill Publishing Company Limited, New Delhi.
   2. Donald D. Givone, "*Digital Principles and Design*" Tata McGraw –Hill Publishing Company Limited, New Delhi.
   3. RP Jain, "*Modern Digital Electronics*", Tata McGraw –Hill Publishing Company Limited, New Delhi.

POWER POINT & DATABASE ACCESS -LAB

MS – Powerpoint

1. Create a power point presentation with 3 slides.
2. Create a design template with 3 slides.
3. Create a presentation with animation.
4. Create a power point presentation with 4 slides. Set slide transition time of 3 seconds and Display your presentation.
5. Create a presentation with auto content wizard.

MS – Access

1. Create an employee database.
2. Create a students database. Set a filed to primary key.
3. Create an salary list preparation.
4. Create an report.
5. Create an Mailing labels.