Core Course
CC-101 Fundamentals of Computer

Course Introduction:
The course would make students acquainted with the basics of computers.

Objectives:
The student would be able
1) To understand the basic uses and applications of computer.
2) To know different types of memory and various input and output devices.
3) To get familiar with various computer codes.

No. of Credits: 3
Theory Sessions per week: 4
Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	**Introduction to Computers and its components**	**10 hours**

	• **Computer**
	     o Introduction to Computer
	     o The Components of Computer
	     o Advantages and Disadvantages of Computer
	     o Generations of Computer
	     o Computer Software
	     o Categories of Computers
	        ▪ Personal Computers
	        ▪ Mobile Computers and Mobile Devices
	        ▪ Consoles
	        ▪ Servers
	        ▪ Mainframes
	        ▪ Super Computers
	        ▪ Embedded Computers
	     o Examples of Computer Usage
	     o Applications of Computer in Society
		5 hrs

	• **Components of Computer**
	     o The System Unit
	     o Processor
	     o Data Representation
	     o Memory
	     o Expansion Slots and Adaptor Cards
		5 hrs

	o Ports and Connectors		
	o Buses		
	o Bays		
	o Power Supply		
	o Mobile Computers and Devices		
2	**Input and Output Units**		**10 hours**
	• **Input Devices**		
	o Introduction to Input Devices		
	o Keyboard		
	o Pointing Devices		
	▪ Mouse		
	▪ Trackball		
	▪ Touchpad		
	▪ Pointing Stick		
	▪ Light Pen		
	▪ Touch Screen		
	▪ Pen Input		
	o Controllers for Gaming and Media Players		
	▪ Gamepads		
	▪ Joysticks and Wheels		
	▪ Light Guns		
	▪ Dance Pads		
	▪ Motion-Sensing Game Controllers	5 hrs	
	▪ Touch-Sensitive Pads		
	o Voice Input		
	o Input for PDAs, Smart Phones and Tablet PCs		
	o Digital Camera		
	o Video Input		
	▪ PC Video Cameras		
	▪ Web Cams		
	▪ Video Conferencing		
	o Scanners and Reading Devices		
	▪ Optical Scanners		
	▪ Optical Readers (OCR, OMR, BCR, RFID Reader, MICR, Magnetic Stripe Card Reader, Data Collection Devices)		
	▪ Terminals (Point-of-Sale Terminal, Automated Teller Machine)		
	▪ Biometric Input		

		• **Output Devices**	
		o Introduction to Output Devices	
		o Display Devices	
		o Flat-Panel Displays	
		o CRT Monitors	
		o Printers	
		▪ Non-Impact Printers (Ink-Jet, Photo, Laser, Thermal, Mobile, Label and Postage, Plotters and Large-format Printers)	5 hrs
		▪ Impact Printers (Dot-matrix, Line)	
		o Speakers, Headphones and Earphones	
		o Fax Machines and Fax Modems	
		o Multifunction Peripherals	
		o Data Projectors	
		o Force-Feedback Joysticks, Wheels and Gamepads	
3	**Storage**		**10 hours**
		• **Storage**	
		o Introduction to Storage	
		o Magnetic Disks	
		o Optical Disks	
		o Tape	9 hrs
		o PC Cards and Express Card Modules	
		o Miniature Mobile Storage Media	
		o Microfilm and Microfiche	
		o Enterprise Storage	
		• **Files**	
		o Introduction to Files	1 hrs
		o Types of Files	
4	**Computer Codes**		**10 hours**
		• **Computer Codes**	
		o Introduction to Computer Codes	
		o Decimal System	
		o Binary System	
		o Hexadecimal System	
		o Octal System	3 hrs
		o 4-bit BCD System	
		o 8-bit BCD System	
		o ASCII code	
		o 16-bit Unicode	

		• **Conversion of Numbers (includes fixed and fractional numbers)**	7 hrs
		o Non-Decimal to Decimal	
		o Binary to Decimal	
		o Decimal to Binary	
		o Binary to Octal	
		o Octal to Binary	
		o Octal to Decimal	
		o Decimal to Octal	
		o Binary to Hexadecimal	
		o Hexadecimal to Binary	
		o Hexadecimal to Decimal	
		o Decimal to Hexadecimal	
		o Hexadecimal to Octal	
		o Octal to Hexadecimal	

Textbook:

Introduction to Computers (First Edition 2008)
Publisher : Cengage Learning
By Gary B. Shelly, Thomas J. Cashman and Misty E. Vermaat

Reference Books:

1. Fundamentals of Computer(First Edition- 2009)
   Publisher: McGraw-Hill
   by Balaguruswamy

2. Computer Fundamentals(Fourth Edition- 2007)
   Publisher: BPB Publications
   by Pradeep Sinha and Priti Sinha

3. Computer Fundamentals(First Edition-2010)
   Publisher: Pearson
   by Anita Goel

Core Course
CC-102 Problem Solving and C Programming

Course Introduction:

Students will be provided with basic knowledge of C programming language - control structures, loops and arrays. Students will learn to use flowchart and develop algorithms to solve problems.

Objectives:

Students would be able

1) To create their own logic and implement using C Programming.
2) To understand how to use programming in day to day application.

No. of Credits: 3
Theory Sessions per week: 4
Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	**Pre Programming Techniques**	**10 hours**
	• **Introduction to Programming Languages** o Introduction to Machine level language o Introduction to Assembly language o Introduction to Higher level language o Limitations and Features. o Classification of Computer Language - Procedural Language and Non Procedural Language.	2 hrs
	• **Tools and Techniques of Problem Analysis** o Algorithm Development and Flow Chart o Numerous Examples in Algorithm Development and Flow Chart	8 hrs
2	**C Language Overview**	**10 hours**
	• **Getting Started With 'C' Language** o History of C o Basic Structure of C o Executing C program o Character set & C Tokens o Identifiers & Keywords o Data Types o Storage Class o Constants and Variables o Type Casting o Comments	5 hrs
	• **Operators & Expression** o Types of Operators and Expression o Precedence & Associativity	3 hrs

		• **Console based I/O and related built-in I/O function**
		   o printf(), scanf(), getch(), getchar(), putchar()
		   o Concept of Header File and #include ,#define
			2 hrs

3		**Control Structure**	**10 hours**

		• **Decision Making Structure**
		   o If
		   o If-else
		   o Nested If-else
		   o Switch
			4 hrs

		• **Loop Control Structure**
		   o While
		   o Do-While
		   o For
		   o Nested loop
			5 hrs

		• **Other Statements** o break, continue, goto, exit	1 hrs
4		**Array & String**	**10 hours**

		• **Array**
		   o One, Two – Dimensional Arrays
		   o Initialization and working with Array.
		   o Introduction to Multidimensional Arrays.
			6 hrs

		• **Character Arrays and Strings**
		   o Initialization and working with String.
		   o Comparing and String Handling functions.
			4 hrs

Textbook:

Programming In C (Second Edition)
Publication : Pearson Education
by Ashok N. Kamthane

Reference Book :

1. Simplifying C (First Edition 2010)
   Publication : Dreamtech
   by Harshal Arolkar and Sonal Jain

2. Programming in ANSI C (Fifth Edition 2011)
   Publication : Mc Graw Hill
    by Balagurusamy

3. Programming in C (First Edition 2011)
   Publication : Oxford Higher Education
   by Reema Thareja

Core Course
CC-103 Introduction to Internet and HTML

Course Introduction:
This course shall introduce students to internet - history, impact, connections, services, applications and security. Students will also able to gain knowledge of basic HTML tags and advanced HTML features like frame, forms and layer.

Objectives:
Students would be able
1) To understand the various uses and role of internet.
2) To identify the different connections, services, work of internet.
3) To understand the basic and advanced HTML tags.

No. of Credits: 3
Theory Sessions per week: 4
Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	**Introduction to Internet**	**10 hours**

	• Introduction to Internet
	• Evolution & history of internet
	• Growth of Internet
	• Owners of Internet
	• Services of Internet
	• How does Internet works?
	• Internet addressing & DNS
	• Internet Vs Intranet
	• Impact of Internet
	• Governance on Internet
	• Getting connected
	• Different types of connections
	    o Dial-UP connections
	    o ISDN
	    o ADSL
	    o Leased Line Connections
	    o Satellite Connections
	• Level off internet connectivity
	    o One level
	    o Two level
	    o Three level
	• Internet service provider
	• Internet account options
		5 hrs

		o Telephone option o Protocol option o Service option	

		• Switching:
		    o Circuit switching
		    o Packet switching
		    o Message switching
		• Routers
		• Gateways
		• Current trends on internet
		    o Iphone
		    o VOIP
		    o Internet video
		    o E-commerce
		    o Wireless communication
		    o Collaborative computing
		    o Podcasting
		    o Video conferencing
		• Interactivity tools(Overview)
		    o ASP
		    o ActiveX control
		    o VB script
		    o Java script
		    o Front page
		    o Flash
		• Multimedia and animation
		• WWW
		    o Evolution of web
		    o Basic element of www
		    o Web browsers
			5 hrs

2	**Internet Applications and Services**		**10 hours**

		• E-Mail
		    o Introduction
		    o E-mail System
		    o E-mail Protocols
		    o About E-mail addresses
		    o Structure of E-mail Message
		    o E-mail clients and server
		    o Mailing list
		    o E-mail security
			2 hrs

		• Remote Login
		• Telnet
		    o Introduction to Telnet
		    o Telnet Client
		    o The Telnet protocol
		    o Telnet emulation
			4 hrs

	• File Transfer Protocol
	    o Introduction
	    o Types of FTP server
	    o FTP software
	    o Types of search(match)
	• Search engines
	    o Introduction
	    o Criteria
	    o Search Agent
	    o How to register to search engine
	    o About Popular search engines	

	• USENET
	    o NEWS group hierarchies
	    o News reader
	    o Who administers
	    o Common task of news readers
	    o Relation between news &e-mail
	• Chatting & IRC
	    o Client software
	    o Chat server
	    o IRC network
	• Internet Security
	    o Overview
	    o Aspect & needs of security
	    o E-mail security
	    o Web security
	• VPN
	    o Introduction
	    o Connection
	    o Protocol
	    o Client
	• Firewall
	    o Types
	    o Firewall with GUI
	    o Choosing a suitable firewall
	    o Advantage
	    o Drawback
		4 hrs

3	**Introduction to HTML**	**10 hours**

	• HTML
	    o Introduction
	    o HTML document structure
	    o Adding text in newline(
	</BR>)
	    o Creating heading (to).
	    o Creating a paragraph (<P>--</P>)
	    o Creating a horizontal ruler (<HR>--</HR>)
	    o Sub Script, Super Script, Text
		6 hrs

		Alignment(<align>---</align>)	
		o Formatting Of text (<B>, <U>, <I>)	
		o Font tag	
		o Grouping of text (<Div>---</Div>, <Span>---</Span>)	
		o Indenting Quotation(<Block quote>---</Block quote>)	
		o Scrolling text<marquee>---</marquee>)	
		o Working with Character entity / Special character	
		o HTML Comments	

		• Working with list:
		   o Order list
		   o Unordered list
		   o Definition list
			2 hrs

		• Working with table:
		   o Creating table
		   o Specifying caption
		   o Table headings
		   o All table related Tags & attributes.
			2 hrs

4	**Advanced HTML**		**10 hours**

		• Working with Frames:
		   o <frameset>------</frameset> & all attribute of tag
		   o <Frame>----</frame> & all attribute of tag(including target attribute)
			3 hrs

		• Working with Links: anchor tag with its entire attribute.
		• Working with Images:
		   o <img>---</img> & all its Attributes
		   o Creating Image maps (<map>---</map> & <area>---</area>) and their attributes
		• Working with multimedia: Sound & video
			3 hrs

		• Working with Forms:
		   o Creating form(<form>--</form>) & all its attribute
		   o Adding controls to an HTML form
		   o <Input>---</input> tag and its all attribute
		   o <text area>-----</text area>
		   o Adding a selection control
		   o Grouping the control of html forms(<Field set> and <legend> tags)
		• Layer:
		   o Layer tag
		   o Layer Attribute
		   o Method
		   o Event Handler
		   o Use of Layer
			4 hrs

Text Book:

1. Internet Technology and Web Design(First Edition-2011)
   Publisher: Tata McGraw Hill
   By ISRD group

2. HTML 4.0 In Simple Steps(First Edition-2010)
    Publisher: DreamTech Press.
   By Kongent Solution

Reference Book:

1. Internet Secrets (Internet technology and web design)
   Publisher: Choice International
   By Shailendra Mishra

2. World wide web Design with HTML(First Edition-2010)
    Tata McGraw Hill
    By C Xavier

3 Web Enabled commercial application development using HTML, Javascript,
   DHTML and php
   BPB Publication.
   By Ivan Bayross

4. Developing Web Applications(First Edition-2011)
    Wiley India.
    By Ralph Moseley, M. T. Savaliya

5. HTML & Web Design Tips & Techniques(First Edition-2002)
    Tata McGraw Hill
    By Kris, Konrad, Andy

Core Course
CC-104 Basics of Mathematics

Course Introduction:

This course aims to provide student with the knowledge and skills necessary to interpret and use basic mathematical data, symbols and terminology useful in computer science. The knowledge of the subject forms the base of computer science.

Objectives:

 The objective of this course is to enable students to understand concepts of Set Theory, Coordinate Geometry, Matrix Algebra and Calculus and solve simple application problems related to Computer Science based on these.

No. of Credits: 3
Theory Sessions per week: 4
Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	**Set Theory and Functions**	**10 hours**
	• Basic definitions of Set Theory • Methods of representation of Set (Property method, Listing method)	1 hrs
	• Set operations (Union, Intersection, Complement of a set, Difference of sets, Symmetric difference, Cartesian product of sets)	2 hrs
	• Properties of set operations (Commutative, Associative, Distributive, De-Morgan's laws) • Power set and Cardinality of sets.	2 hrs
	Functions	
	• Introduction of Functions • Definition of function • Domain, Co – domain • Range of a function	1 hrs
	• Graph of a functions	1 hrs
	• Types of Functions (Linear, Quadratic, Polynomial, Implicit and • Explicit functions and examples related with it)	2 hrs
	• Exponential and Logarithmic with their properties and related examples, Introduction to Trigonometric functions.	1 hrs
2	**Matrix**	**10 hours**
	• Definition of Matrix • Types of Matrix (Square, Row, Column, Zero, Diagonal, Scalar, Identity, Transpose, Symmetric, Skew – symmetric)	2 hrs
	• Arithmetic operations of Matrices (Addition, Scalar Multiplication, Matrix Multiplication)	3 hrs
	• Introduction to Determinants • Invertible matrix	1 hrs
	• Computation of Inverse using Definition	1 hrs

		• Simultaneous Solution of set of Linear equations using Cramer's	
		• Rule	
		• Matrix inversion method	3 hrs
		• Rank of Matrix	
3	**Co–ordinate Geometry**		**10 hours**
		• Introduction to Co-ordinates	
		• Quadrants and Lines	2 hrs
		• Distance formula in R2 (without proof)	
		• Section Formula (without proof)	1 hrs
		• Area of a triangle (without proof) and related examples	2 hrs
		• General Equation of a Straight line	
		• Slope and intercepts of a line	2 hrs
		• Parallel Lines	
		• Perpendicular Lines	3 hrs
		• Angle between two lines (without proof) and related examples	
		Simple examples should be asked for the above concepts.	
4	**Limit, Differentiation and Integration**		**10 hours**
		• Limit	
		o Expansion of concept of Limit	
		o Some Standard Limits (without proof)	2 hrs
		o Continuity of a function	
		o Discontinuity and Examples	
		• Differentiation	
		o Definition of Derivative	
		o Rules for Differentiation (without proof)	
		o Differentiation of function of a function	5 hrs
		o Chain Rule	
		o 2nd order derivatives	
		• Integration	
		o Introduction to indefinite integral	
		o Definition of Integration & Methods of Integration	
		o Substitution Methods	3 hrs
		o Some Standard Formulae (without proof) and example based on the standard forms	
		o Introduction to definite integration and simple examples on it	

Textbook:

Business Mathematics (Latest Edition)
Publisher: S. Chand and Sons Publications
By: V.K.Kapoor

Reference Book:

Engineering Mathematics (Third Edition)
Publisher: Pearson Education
By: Anthony Croft, Robert Davison, Martin Hargreaves

Core Course
CC-105 *CC-102 Practicals

Course Introduction:

Students will be implementing basics of C programming language features like control structures, loops and arrays.

Objectives:

The students would be enable

1) To know the practical basics of C Programming.
2) To understand practical knowledge of programming in day to day application.

No. of Credits: 3
Practical Sessions per week: 3
Teaching Hours: 40 hours

The students are expected to write program in 'C' language unit wise as given below.
 The list in each unit is **indicative only and may or may not be asked in the examination.**

UNIT		TOPICS / SUBTOPICS	TEACHING HOURS
1		**Using input and output statements, Operators**	**10 hours**
	1	Find the Simple Interest. Inputs are principal amount, period in year and rate of interest.	
	2	Find the area and perimeter of square and rectangle. Input the side(s) through the keyboard.	
	3	Accept any three numbers and find their squares and cubes.	
	4	Write a program to enter the temperature in Fahrenheit and convert it to Celsius.[C = ((F-32)*5)/9]	
	5	Write a program to store and interchange two float numbers in variables a and b.	
	6	Write a program to accept an integer and display it in octal and hexadecimal formats.	
	7	Write a program to enter text with gets() and display it using printf() statement also find the length of the text.	
	8	Write a program to enter two numbers and find the smallest out of them. Use conditional operator.	
	9	Write a program to enter a number and carry out modular division operation by 2, 3 and 4 and display the remainders.	
	10	Write a program to find the average temperature of five sunny days. Assume the temperature in Celsius.	
	11	Write a program to enter two numbers. Make the comparison between them with conditional operator. If the first number is greater than second perform multiplication otherwise division operation.	
	12	Write a program to display numbers from 0 to 9. Use ASCII range 48 to 59 and control string %c.	
	13	Write a program to accept number of seconds and display its corresponding hours, minutes and seconds.	

2		**Using conditional statements**	**10 hours**
	1	Write a program to check whether the number is positive, negative or zero.	
	2	Write a program to find the maximum of three integer values.	

	3	Write a program to check whether the blood donor is eligible or not for donating blood. The conditions laid down are as under. Use if statement.
		    a) Age should be above 18 yrs but not more than 55 yrs.
		    b) Weight should be more than 45kgs.	

	4	Write a program to calculate bill of a job work done as follows.
		Use if else statement.
		    a) Rate of typing 3 Rs/page
		    b) Printing of 1st copy 5Rs/pages & later every copy 3Rs/page.
		The user should enter the number of pages and print out copies he/she wants.	

	5	Write a program to enter a character through keyboard. Use switch() case structure and print appropriate message. Recognize the entered character whether it is vowel, consonant or symbol.	
	6	Write a program to enter a numeric value with in the range from 1 to 12 and give its corresponding month name.	

	7	The ABC Insurance Company Ltd. Offers the following three categories of car insurance policy to car owners:
		    ➔ Category A, here the basic premium is calculated as 2% of the car's value.
		    ➔ Category B, here the basic premium is calculated as 3% of the car's value.
		    ➔ Category C, here the basic premium is calculated as 5% of the car's value.
		Write a program that accepts the car value and category of insurance from the user and calculates the premium to be paid.	

	8	Write a program to implement calculator using switch case.	
	9	Write a program to display the grade according to the marks entered by the user using else-if ladder.	
	10	Write a C Program to input gender and salary of an employee and check whether salary of an employee is taxable or not.(Salary limit for Male : 1,50,000 and for female : 1,80,000) [Take input gender as 'M' or 'F' and match that.]	
3		**Using control statements**	**10 hours**
	1	Write a program to accept an integer N. Evaluate the value of series $1 + 1/2^2 + 1/3^3 + 1/4^4 + \ldots + 1/N^N$.	
	2	Write a program to accept an integer value from the user until a value 999 is entered, count total number of odd and even numbers (excluding 999) from the numbers entered.	
	3	Write a program to accept an integer. Generate a series of first N prime numbers.	
	4	Write a program that accepts an integer N from the user.	

		Extract and display each digit of the integer in English. For eg. If the user enters 132 then the program should display "one three two".
	5	Write a program that accepts an integer N. Sum all the digits of the number entered. For eg. if N = 470, then sum of digits N is 11.
	6	Write a program that accepts an integer N. Reverse the number entered and store it in the same variable. For eg. If N = 456 then the new value of N is 654.
	7	Write a program that accepts an integer N, if the integer N = 4, then print the pyramid : 1 121 12321 1234321 The pyramid should get modified based on the value of N. For negative values, print the appropriate message.
	8	Write a program that accepts an integer N, if the integer N = 4, then print the pyramid : 4 4 4 4 3 3 3 2 2 1
	9	Program to print the Floyd's triangle. E.g. if number of rows entered by the user is 4 then output is: 1 0 1 1 0 1 0 1 0 1
	10	Program to print the triangle * * * * * * * * * * The user should input the number of rows . E.g. the above should be the output if the user enters 4.
	11	Accept a string from the user and display the following • Count of no. of words in the string • No. of letters • No. of digits • No. of special characters.
4	**Using arrays & Strings**	**10 hours**
	1	Write a program to read 10 integers in an array. Find the largest and smallest number.
	2	Write a program to enter five numbers using array and rearrange the array in the reverse order. For eg. Numbers entered are 58324 and after arranging array elements must be 42385
	3	Write a program to read the text. Find out number of lines in it.

	4	Read the marks of five subjects obtained by five students in an examination. Display the top two student's codes and their marks.	
	5	Program to sort an Array in ascending order	
	6	Program to print Addition of two matrices	
	7	Program to print Multiplication of two matrices	
	8	Program to count the no. of occurrences of a given character in a sentence.	
	9	Program to extract n characters starting from m in a given string. (String, n and m should be provided as inputs).	
	10	Program to remove duplicate numbers from a list of numbers and print the list without duplicate numbers. E.g. if the list of numbers is : 45 67 45 89 7 3 6 7 then the output should be 45 67 89 7 3 6 .	
	11	Program to sort an Array in descending order	
	12	Program to accept a string and number from the user and find if the number and string is palindrome or not.	

Note : The students should maintain the record of typical (not simple ones) programs in their file which duly certified, should be presented at the time of final examination.

Textbook:

Programming In C (Second Edition)
Publication : Pearson Education
by Ashok N. Kamthane

Reference Book :
1.   Simplifying C (First Edition 2010)
Publication: Dreamtech
by Harshal Arolkar and Sonal Jain

2.   Programming in ANSI C (Fifth Edition 2011)
Publication: Mc Graw Hill
by Balagurusamy

3.   Programming in C (First Edition 2011)
Publication: Oxford Higher Education
by Reema Thareja

Core Course
CC-106 *CC-103 Practicals

Course Introduction:
This course aims to give practical training of HTML tags, formatting tags, list, table, link tag, image tag , frame, form and layer.

Objectives:
The students would be able
1) To write scripts using basic & advanced HTML tags .
2) To design webpage/website using HTML.

No. of Credits: 3
Practical Sessions per week: 3
Teaching Hours: 40 hours

The students are expected to write program in 'HTML' language unit wise as given below.
 The list in each unit is **indicative only and may or may not be asked in the examination.**

UNIT	TOPICS / SUBTOPICS		TEACHING HOURS
1	**Practicals related to HTML formatting tags and <div> tag.**		**10 hours**
	1	Creating and saving simple HTML document. And opening in web browser.	
	2	Modifying the background of HTML webpage (with colors & images)	
	3	Insert a line break in web page content. (use of)	
	4	Creating headings on web page (to)	
	5	Creating a paragraph(Using -----)	
	6	Creating a horizontal ruler (using <hr>----</hr>)	
	7	Demonstrate use of subscript, super script, align tag	
	8	Format the text by using formatting tags like bold italic and underline.	
	9	Create web page which demonstrate the use of font tag	
	10	Create web page with <div> tag.	
2	**Practicals related to <span>,<blockquote>,<marquee>,special characters and list tag**		**10 hours**
	1	Create web page with <span> tag.	
	2	Create web page with <blockquote> tag.	
	3	Demonstrate the use of Marquee tag. (in more than three web page)	
	4	Write HTML program to insert special characters And comment.	
	5	Write HTML program to create a simple order list.	
	6	Write HTML program to create a simple Unordered list.	
	7	Write HTML program to create definition list.	

	8	Write HTML program to create order list within Unordered list.	
	9	Write HTML program to create Unordered list within Unordered list.	
	10	Write HTML program to create order list within order list.	
3	**Practicals related to list, table and frame**		
	1	Write HTML program to create Unordered list within order list.	
	2	Write HTML program to create nested list. Like fruits, vegetables, subjects etc.	
	3	Write HTML program to create simple table.	
	4	Write HTML program to create complex table.	
	5	Like Mark sheet, Electricity bill, telephone bill, time –table etc.	**10 hours**
	6	Write HTML program to create three horizontal frame in single web page	
	7	Write HTML program to create three vertical frame in single web page .	
	8	Write HTML program to create both horizontal & vertical frame in single web page.	
4	**Practicals related to link, image map, sound & video file and form**		**10 hours**
	1	Write HTML program to demonstrate use of different LINK, ALINK and VLINK attributes of body tag.	
	2	Linking different section of single web page.	
	3	Inserting Image on a web page (with all attributes).	
	4	Write HTML program in which make image as a link.	
	5	Write HTML program to create Image Map.	
	6	Write HTML program to add sound & video.	
	7	Write HTML program to create a form including all element of forms.	
	8	Write HTML program to e-mail registration form.	
	9	Write HTML program to enter bill detail form.	
	10	Write HTML program to enter student detail form. Etc.	

Note: The students should maintain the record of typical (not simple ones) programs in their file which duly certified, should be presented at the time of final examination.

Text Book:
1. Internet Technology and Web Design(First Edition-2011)
     Tata McGraw Hill
     By ISRD group

2. HTML 4.0 In Simple Steps(First Edition-2010)
     DreamTech Press.
     By Kongent Solution

Reference Book:

1. Internet Secrets (Internet technology and web design)
   Choice International
   By Shailendra Mishra

2. World wide web Design with HTML(First Edition-2010)
   Tata McGraw Hill
   By C Xavier

3 Web Enabled commercial application development using HTML, Javascript, DHTML and php
   BPB Publication.
   By Ivan Bayross

4. Developing Web Applications(First Edition-2011)
   Wiley India.
   By Ralph Moseley, M. T. Savaliya

5. HTML & Web Design Tips & Techniques(First Edition-2002)
   Tata McGraw Hill
   By Kris, Konrad, Andy

Core Course
CC-107 PC Software (Practicals)

Course Introduction:

The course would make students acquainted with the features of Micrsoft Office tools. It lays down emphasis on basic as well as advance features of MS Office tools.

Objectives:

The students would be able

1) To gain knowledge of various MS office tools.
2) To develop skills for effective use of the MS office tools.

No. of Credits: 3
Practical Sessions per week: 3
Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	**Introduction to Operating System, DOS and Windows**	**10 hours**
	• **DOS** o Definition o Types o Functions o Booting Process o Introduction To DOS o Comparison with GUI o Wildcard characters o Working with DOS cmds: ▪ DIR, MD, RD, CD,Copy, Type, DEL, REN, Date, time CLS, VER, Move, ATTRib, Xcopy	6 hrs
	• **Windows** o Components Of Windows ▪ Desktop ▪ Icon ▪ My computer ▪ My documents ▪ Network Neighborhood ▪ Recycle bin ▪ Start menu ▪ Taskbar ▪ Windows explorer o Control Panel ▪ Date & time ▪ Display ▪ Mouse	4 hrs

		▪ User accounts ▪ Add & remove programs o Files and Folders ▪ Creating Folder ▪ Folder Operations(copying , moving and deleting) ▪ Creating files & file operations ▪ Creating Shortcuts o System Tools ▪ Disk Defragmentation	
2	**MS Word & Introduction to Excel**		**10 hours**
		• **MS Word Introduction** o Creating word documents o Navigating and editing word documents o Formatting, viewing and printing a document	2 hrs
		• **MS Word Advanced Features** o Working with tables and graphics o Mail Merge o Other Features ▪ Autocorrect ▪ Autotext ▪ Macros ▪ Protecting documents	5 hrs
		• **Excel** o Introduction To Excel o Concept of Workbook o Worksheet, Workspace o Types of data o Formatting Workbook o Conditional formatting o Sorting Data	3 hrs
3	**MS PowerPoint**		**10 hours**
		• **MS Powerpoint Introduction** o Creating ,browsing &saving Presentation o Editing & formatting slides o Working with objects	4 hrs
		• **Enhancing presentation using multimedia** o Transitions o Preset Animation o Rehearse Timings o Pack & go wizard o Pen o Custom Show	6 hrs
4	**Advanced Excel**		**10 hours**
		• **Advanced Excel Features** o Data validation o Data filter (Auto & Advance)	6 hrs

	o Charts
	o What if analysis
	    ▪ Goal seek
	    ▪ Scenario
	o Protecting Worksheet
	o Types of error	

	• **Functions and Formulas**
	o Mathematical
	    Round, ceil, floor, fact, subtotal, sum , sumif
	o Logical
	    AND, OR, NOT, if
	o Statistical
	    Min, max, avg, count if
	o Text
	    Concatenate, Exact, find, left, right, len, lower, upper, trim
	o Lookup
	    Hlookup, Vlookup
	o Date and Time
	    Date, day, days360, hour, minute, now, second, time, today, year, datediff
		4 hrs

Textbook:

Working with Personal Computer Software(Second Edition 2010)

Publisher : Wiley India, New Delhi

By R.P.Soni, Harshal Arolkar , Sonal Jain

Reference Books:

1. Office 2003 in Simple Steps
Publisher: Dreamtech Press
by Kognent Learning Solutions Inc

2. Microsoft Office Plain And simple (Edition - 2003)
Publisher: Microsoft Press
By Jerry Joyce & Marianne Moon

ELECTIVE COURSE
(EC-101): HEALTH EDUCATION

Number of credits: 2
Lectures per week: 2
Teaching Hours: 20

UNIT - I:
    a) Concept of Health & Health education
    b) Health Education – Aims, Principles, Contents and Methods.
    c) Levels of Health Care in India, 3-Tier system of health care
    d) Positive health : Meaning & Spectrums
    e) Role of Heredity & Environment

UNIT - II:
    a) Nutrition:
- Proximate Principles
- Balance diet
- Malnutrition

    b) Effects of Smoking, Drugs and Alcohol
    c) School Health services & Programme
- Aspects
- Role of the P.E. Teacher, Principal and Doctor

UNIT - III:
    Community & Environmental Health
- Pollution:- Its causes & effect on health
  - i. Air Pollution
  - ii. Water Pollution
  - iii. Noise Pollution
- Occupational Hazards
- Housing
- Population: - Policy, explosion, dynamics & family welfare Programme

UNIT - IV:
    a) Epidemiology of Communicable Disease
- Small & Chicken Pox
- Tuberculosis
- Measles & Mumps
- Malaria, Dengue and Chickengunia
- Rabies, Jaundice & Yellow fever

    b) Epidemiology of Non-Communicable Disease
- Coronary Heart Disease (CHD)
- Cancer
- Diabetes
- Hypertension

    c) Sexually Transmitted Diseases

Reference:

- Park J.E., Park K*. Text Book for preventive and social Medicine*Jabalpur : Message Banarasidas Bhanet 1980 Edn.8
- Turner C.E. *The School Health and health Education* (st. Louis : TheC.V.
- Mosby Co. 1952) Edn. 2
- Bedi, Yashpal, *Social and preventive Medicine* (Delhi: Atamaram & Sons1983).
- Ghosh B.N. *A Treaties of Hygiene and Public Health* (Calcutta : Scientific Publication Co. 1952) Edn. 2

ELECTIVE COURSE
EC-101 CULTURE AND CIVILISATION

Objectives of the Course:
Students would be able
   1. To introduce the students the basic concepts of Culture and Civilization.
   2. To get an overall idea about Indian Culture with special reference to business.
   3. To get an idea about Organizational and Corporate Culture.

Number of credits: 2
Lectures per week: 2
Teaching Hours: 20

UNIT - I: Culture- concept, meaning & definition - Elements of culture - Discourses on culture in 19th and 20th Century *(an overview)* - Layers of culture - Manifestations of culture - Civilization - concept, meaning & definition - Characteristics of civilization - difference between culture and civilization - Cultural diversity - Dimensions of cultural diversity.

UNIT - II :   Indian Culture & Heritage - cultural diversity of India - Geographic - Religious - Languages –Clothing and attire - Food habits - Cultural - Economic Culture &History of India *{Trade & Industrial Organization, Traders & Shopkeepers, Inland routes and Trade marts, Exports & Imports, Production centers & Specialization, Credit & Banking, Barter & Medium of exchange, Labour and vocational mobility)* - Business culture of India -Specialty of Indian business style - Industrialization in India - History of Industrialization - Industrialization today.

UNIT - III :   Business culture - business culture models - Interpersonal interaction model & Risk and feedback model *(Power culture, Achievement culture, Support culture, Role culture, Macho, Tough-guy culture, Work-hard and Play-hard culture, Bet-the-Company culture & Process Culture).-* Business culture consultants - Organizational culture and business history - Typologies of organizational culture - Key elements of organization culture. - Organization culture & Ethics.

UNIT - IV: Corporate culture - Evolution of Corporate culture - Corporate culture and organizational culture - Necessity for designing - Corporate culture, values and strategic change - Organizational capabilities - Changing and --Cultivating a positive corporate culture - a better corporate culture - Corporate culture and performance – Corporate culture and its historical context in India - Corporate culture and Indian Industries.

ELECTIVE COURSE
(EC-101): LEARNING FROM WORLD LEADERS

Number of credits: 2
Lectures per week: 2
Teaching Hours: 20

Course Introduction:
It brings together the ideas, innovation and achievements of the great world thinkers and leaders of contemporary times for the students to learn and benefit from. In studying the selections, the students will get to discuss and debate a wide range of topics—from academic disciplines, such as philosophy, history, sciences, psychology, literature, performing arts and theatre to social and cultural issues and much more. This will provide the students with a window into a critical understanding of the globalized world. The personalities selected in this course are indicative, and additions or changes can be made according to the choice of the teachers, giving them a leeway to adapt the course to their own teaching methods and pedagogic requirements. Approximately four selections from each category need to be studied during the course. A typical course would include an extract from the life story/work/speech/personal correspondence/biography etc., of these personalities, an annotated description of the context of the personality, his/her work and contribution to humanity.

Units	*Topics and Subtopics*
I. From the World of Sciences	*Extracts from the life stories and works of: (Any Two)* Einstein, Edison, Rutherford, Marconi, C. V. Raman, Ronald Ross; Marie and Pierre Curie; Alexander Fleming; Frederik Sanger
II. From the world of Industry	*Extracts from the life stories and works of: (Any Two)* Bill Gates; Larry Page and Sergey Brin; John Ford; Steve Jobbes; Lee Iaococca; Rupert Murdoch; Richard Branson; Marjorie Scardino;
III. From the World of Politics and Social Enterprise	*Extracts from the life stories and works of: (Any Two)* Abraham Lincoln, Lenin, Nelson Mandela; Barack Obama, Gorbachev, Mustafa Kemal Pasha; Yitzhak Rabin; Sukarno; Ong San Su Kyi; Golda Meyer;
IV. From the World of Arts, Culture, and Sports	*Extracts from the life and stories of: (Any Two)* Hellen Keller; Charles Chaplin; The Beatles; Michael Angelo; Picasso; Tyeb Mehta; Danny Boyle; Richard Attenborough; Pele; Bolt; Jessie Owens; Bryan Lara, Don Bradman

Foundation Course
FC-101 Communication Skills

Course Introduction:
Communication has to keep pace with people's life style, business and occupations. There are changes in communication style as technology influences everything that we do: business, industry, education, entertainment and our daily lives. As it is used in every walk of life the course is designed keeping in mind all the four language skills – Listening, Reading, Writing and Speaking. The syllabus covers four units named Theory of Communication, Written Communication, Speaking Strategies and Language Work. These four units fulfill the requirement of the communication subject.

Objectives:
Communication is a very essential skill for everyone to be successful in their professional carrier and daily life. The objective is to acquaint the students with the basic concept of communication, how to draft formal and business letters, polishing their speaking abilities and revising their grammatical and word power.

No. of Credits: 2
Theory Sessions per week: 3
Teaching Hours: 40

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	**Theory of Communication**	**10 hours**
	• Definition & process of Communication	1 hrs
	• Verbal – Non-verbal Communication	2 hrs
	• Dimensions of Communication	2 hrs
	• Features of effective Communication	2 hrs
	• Barriers to effective Communication	2 hrs
	• Objectives of Communication	1 hrs
2	**Written Communication**	**10 hours**
	• Understanding the basics of letter writing	2 hrs

	• Business Letters
	  o Inquiry & Reply letters
	  o Placing, Execution and Cancellation of an orders
		3 hrs

	• Non Business formal letters
	  o Letter to the Post Master
	  o Letter to the Police Commissionaire
	  o Letter to the Municipal Health Commissionaire
	  o Letter to the Editor
	  o Letter to the Director of your college
		3 hrs

	• Job Application	2 hrs

3	Speaking Strategies	10 hours
	• Vowels and Consonants	2 hrs
	• Braking words into syllabus and making accent/stress (Elementary level)	2 hrs
	• **Interview** o Introduction o General preparation for an Interview o Types of questions generally asked o Types of Interviews	3 hrs
	• **Presentation** o Preparing an outline of the presentation o Using visual aids o Body language and effective presentation	3 hrs
4	Language Work	10 hours
	• Tenses	4 hrs
	• Preposition	2 hrs
	• Confusables *	2 hrs
	• One word substitute	1 hrs
	• Homonyms	1 hrs

Textbook:

1. Communication Skills
   Publisher:Oxford University press.
   By: Meenakshi Raman, Sangeeta Sharma
   Unit - 1 : Chapter-1 Communication Theory
   Unit - 2 : Chapter-11 Basic Official Correspondence
   Unit - 3 : Chapter-3 Phonetics
   Unit - 4 : Chapter-10 Grammar & Vocabulary

Reference Books:

1. Communication Skills
   Publisher: Prentice Hall of India Pvt Ltd.
   By Leena Sen,
2. Effective Technical Communication
   Publisher: Tata Mac. Co. Ltd
   By M Ashraf Rizvi
3. Oxford Business English Dictionary
   Publisher: Oxford Uni. Press.
4. Business English & Communication
   Publisher: Mac Graw Hill Internationl edition
   By Lyn R. Clark, Kenneth Zimmer and Joshoph Tinervia,

List of Confusables *

(1)	Aboard	(18)	Check	(35)	Draft
	Abroad		Cheque		Draught
(2)	Abstain	(19)	Cite	(36)	Economic
	Refrain		Site		Economical
(3)	Accept	(20)	Coast	(37)	Eligible
	Except		Cost		Illegible
(4)	Access	(21)	Commitment	(38)	Emigrant
	Excess		Commission		Immigrant
(5)	Adapt	(22)	Complement	(39)	Extant
	Adopt		Compliment		Extent
(6)	Addition	(23)	Confidant	(40)	Facilitate
	Edition		Confident		Felicitate
(7)	Affect	(24)	Continual	(41)	Fair
	Effect		Continuous		Fare
(8)	Alternate	(25)	Credible	(42)	Foreword
	Alternative		Creditable		Forward
(9)	Amiable	(26)	Curb	(43)	Hoard
	Amicable		Kerb		Horde
(10)	Appraise	(27)	Damage	(44)	Industrial
	Apprise		Damages		Industrious
(11)	Ascent	(28)	Dear	(45)	Intermediary
	Assent		Deer		Intermediate
(12)	Avoid	(29)	Defer	(46)	Irrecoverable
	Evade		Differ		Irrevocable
(13)	Bail	(30)	Deficit	(47)	Judicious
	Bale		Deficiency		Judicial
(14)	Berth	(31)	Deny	(48)	Loose
	Birth		Refuse		Lose
(15)	Beside	(32)	Depose	(49)	Minute
	Besides		Dispose		Minutes
(16)	Boast	(33)	Deprecate	(50)	Official
	Boost		Depreciate		Officious
(17)	Carton	(34)	Descent		
	Cartoon		Dissent		