Shri Vaishnav Vidyapeeth Vishwavidyalaya

B. Tech., B. Tech. + M. Tech. and B. Tech. + MBA (Information Technology)
Choice Based Credit System (CBCS) 2018-19
SEMESTER I

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	THEORY END SEM University Exam	THEORY Two Term Exam	THEORY Teachers Assessment*	PRACTICAL END SEM University Exam	PRACTICAL Teachers Assessment*
BTMACS 101	UG	Mathematics - I	3	1	-	4	60	20	20	-	-

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
1. The student will have ability to:
2. 1. To introduce the students with the Fundamentals of the Differential, Integral, Vector Calculus and NumericalAnalysis.

Course Outcomes:
1. Upon completion of the subject, students will be able to:
2. Understand and apply the basics of the differential calculus.
3. Know the fundamental principles of the integral calculus and apply them.
4. Apply the techniques in the numerical analysis.
5. Know the numerical solution of the system of linear algebraic equations.
6. Understand and apply the basics of the vector calculus.

Syllabus:

UNIT I
Differential Calculus
Limits of functions, continuous functions, uniform continuity, montone and inverse functions. Differentiable functions, Rolle'stheorem, mean value theorems and Taylor's theorem, power series. Functions of several variables, partial derivatives, chain rule, Tangent planes and normals. Maxima, minima, saddle points, Lagrange multipliers, exact differentials

UNIT II
Integral Calculus
Riemann integration, fundamental theorem of integral calculus, improper integrals.Application to length, area, volume, surface area of revolution. Multiple integrals with application to volume, surface area, Change of variables.

UNIT III
Numerical Analysis
Number Representation and Errors: Numerical Errors; Floating Point Representation; Finite Single and Double Precision Differences; Machine Epsilon; Significant Digits.
Numerical Methods for Solving Nonlinear Equations: Method of Bisection, Secant Method, False Position, Newton-Raphson's Method, Multidimensional Newton's Method, Fixed Point Method and their convergence.

UNIT IV

Numerical Methods for Solving System of Linear Equations: Norms; Condition Numbers, Forward Gaussian Elimination and Backward Substitution; Gauss-Jordan Elimination; FGE with Partial Pivoting and Row Scaling; LU Decomposition; Iterative Methods: Jacobi, Gauss Siedal; Power method and QR method for Eigen Value and Eigenvector.

UNIT V

Vector Calculus

Gradient and directional derivative. Divergence and Curl of Vector point function, line and surface integrals. Green"s, Gauss" and Stokes" theorems and their applications.

Text Books:

1. T. M. Apostol, Calculus, Volume I, 2nd Ed, Wiley, 1967.

2. T. M. Apostol, Calculus, Volume II, 2nd Ed, Wiley,1969.

3. K. E. Atkinson, Numerical Analysis, John Wiley, Low Price Edition(2004).

4. S. D. Conte and C. de Boor, Elementary Numerical Analysis - An Algorithmic Approach, McGraw-Hill,2005.

5. B. S. Grewal, Higher Engineering Mathematics, Khanna Publishers,Delhi

References:-

1. R. G. Bartle and D. R. Sherbert, Introduction to Real Analysis, 5th Ed, Wiley,1999.
2. J. Stewart, Calculus: Early Transcendentals, 5th Ed, Thomas Learning (Brooks/ Cole), Indian Reprint,2003.
3. J. Stewart, Calculus: Early Transcendentals, 5th Ed, Thomas Learning (Brooks/ Cole), Indian Reprint,2003.
4. J. D. Hoffman, Numerical Methods for Engineers and Scientists, McGraw-Hill,2001.
5. M.K Jain, S.R.K Iyengar and R.K Jain, Numerical methods for scientific and engineering computation (Fourth Edition), New Age International (P) Limited, New Delhi,2004.
6. S. C. Chapra, Applied Numerical Methods with MATLAB for Engineers and Scientists, McGraw-Hill2008.

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SEMESTER I

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BTCS 204		COMPUTER PERIPHERALS & INTERFACES	3	1	2	5	60	20	20	30	20

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
1. To learn the concept of memory modules and types along with advanced memory.
2. To learn the input/output components presents on the motherboard.
3. To learn different modes of power supply to the PC and it's troubleshooting.
4. To learn different types of interfaces and ports of PC board.
5. To learn the device drivers and peripherals attached to the PC board.

Course Outcomes:
Upon completion of the course, students will be able:
1. To understand the hierarchy of the Memory used for PC and its applications.
2. To understand the use and working of I/O components.
3. To understand the principles behind the power supply and its usage.
4. To understand the onboard and external interfaces and its utility on PC board.
5. To understand the use and requirement of peripherals and their device drivers.

Syllabus:

UNIT I
Memory: Introduction to memory and its use, Memory chips and Modules: DIPP, SIPP, SIMM, DIMM, SO-DIMM, RIMM, Parity checking and ECC, ROM and its types, RAM and its types, Trouble shooting of Memory, Advanced Memory technologies: RDRAM, DDRAM, PRAM, VRAM.

UNIT II
Motherboard: Motherboard Controllers and System Resources, I/O System Bus: ISA, MCA, ELSA, VESA local bus, PCI, AGP, PCIX, Onboard I/O devices, Chipsets, ROM BIOS, ROM POST, CMOS settings, Motherboard Form factor: AT and ATX Motherboard, LPX and NLX form factor.

UNIT III
Power Supply: Power Supply Functions and Operations, Power Supply Quality and Specifications, Power Supply and Form factors, Ventilation and Cooling: Fan, Processor cooling, Temperature limits, Power Problems and procedures, Power protection devices, Back-up power system.

UNIT IV

Interfaces and I/O Ports: Floppy Disk interface: Controller, Power cable, Control/Data cable, IDE interfaces: ATA standards, Master/Slave Configuration, Data transfer modes, SCSI interface: Bus, Standards, Hardware's, which is better SCSI or IDE, Serial ports, Parallel ports, USB, Troubleshooting.

UNIT V

Device Drives and Peripherals: Magnetic Storage: Reading/Writing, hard disk drives, Floppy disk drives, Optical Storage devices: CD-ROM drive, DVD-ROM drive, Keyboard: layouts, interfaces, Pointing devices, Mouse, Monitors, Printers, Troubleshooting of device drivers and peripherals.

Text Books:
1. Craig Zacker& John Rourtre, PC Hardware- The complete reference,First Edition, TMH, 2017
2. S.K. Chauhan, PC Upgrading, maintenance and troubleshooting guide, First Edition,.
3. B. Govindarajalu, IBM PC and CLONES: Hardware, Troubleshooting and Maintenance McGraw Hill Education, 2nd Edition 2002
4. Mark Minasi, The Complete PC Upgrade and Maintenance Guide, Sixteenth edition Wiley, 2005
5. Mike Meyers, Introduction to PC Hardware and Troubleshooting, 1st edition, McGraw Hill Education, 2017

References:
1. Stephen Bigelow, Bigelow's Troubleshooting, Maintaining & Repairing PCs, 5 edition, McGraw Hill Education, 2017
2. Manahar Lotia, Pradeep Nair, Payal Lotia, Modern Computer Hardware Course, Second Revised Edition, BPB Publications, 2007
3. Vikas Gupta, Comdex Hardware and Networking Course Kit: Revised & Upgraded, Dreamtech Press, 2014
4. Dan Gookin, Troubleshooting and Maintaining Your PC All–in–One For Dummies, 3rd edition, John Wiley & Sons, 2017
5. Robert Bruce Thompson, Barbara Fritchman Thompson, Building the Perfect PC, 3 edition, O′Reilly, 2010

List of Practicals:
1. To study and demonstrate the motherboard.
2. To study microprocessor and its types.
3. To study Back Power Supply: SMPS and UPS.
4. To study the Optical Drives: CD-ROM and DVD-ROM.
5. To study the working principle of keyboard and mouse.
6. To study different types ports and slots on board.
7. To study various types of Cables and their Connectors.
8. To study the working principle of monitor.
9. To study different types of printers.
10. To study the process of assembling a Motherboard.
11. To study working of Floppy Disk Drive.

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SEMESTER I

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BTIT1 01	UG	INTRODUCTION TO INFORMATION TECHNOLOGY	3	-	2	4	60	20	20	-	50

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
*__Teacher Assessment__ shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
1. The student will have ability to
2. Understand fundamentals of Information Technology.
3. Understand the social impact of Information Technology.

Course Outcomes:
1. At the end of this course students will be able.
2. To understand the basics of Computer Network and its working.
3. To understand the basics of DBMS and its use in real world.
4. To understand the basics and working of devices and software's in the computer.
5. To understand the basic Internet Services like E-mail, Telnet, FTP, WWW, HTML, and URL.
6. To understand the basic concepts of Cloud Computing.
7. To understand social impact of IT services in Real World.

Syllabus:

UNIT I
Data and Information: Introduction, Type of Data, Simple model of Computer, Organization of CPU, Register, Bus Architecture, Instruction Set, Memory & Storage Systems, I/O Devices, and System & Application Software.
Introduction to Operating System: Function, Types, Management of File, Process & Memory.

UNIT II
Introduction to Database Management System: Introduction, File Oriented Approach and Database Approach, Data Models, Architecture of Database System, Introduction and Working of Internet, Introduction to Network Protocol and Topologies. Types of Network: ISO-OSI Model, Functions of Different Layers. Internet Working Concepts, Devices, TCP/IP Model, LAN, WAN, Web Browser.

UNIT III
IT Application in Communication: Introduction to Cellular Mobile Systems, Cellular Mobile Telephone Systems, A Basic Cellular System, Operation of Cellular Systems. Network Services-

Telephone Services, Radio and TV Broadcasting, Audio-Visual Conferencing, Video-on-Demand.

UNIT IV
IT Applications in Multimedia: Introduction, Components of Multimedia and Challenges, Video Compression, Video Coding Technology: JPEG, MPEG, and JBIG.
Introduction to Cloud Computing: Types, Services, Models, Characteristics, Benefits and Challenges, Application, Limitations.

UNIT V
IT Application in E-Commerce and E-Governance: Introduction, Different Types of E-Commerce with Examples, Advantages and Disadvantages, E-Commerce in India, E-Services, E-Commerce Security, Internet Security and Ethics, Technology Issues, Social Issues, Introduction to E-Governance, Challenges, Application, Advantages, Case Study of MP-online and IRCTC.

Text Books:
1. Fundamentals of Computers: E Balagurusamy, TMH
2. Information Technology Principles and Application: Ajoy Kumar Ray & Tinku Acharya PHI.

Reference Books:
1. V.Rajaraman, Introduction to Information Technology; PHI
2. Santiram Kal Basic Electronics, PHI
3. M.N. Rao Cloud Computing, PHI
4. Computer Networks:Andrew Tananbaum, PHI
5. Data Base Management Systems, Korth, TMH
6. William Cy Lee , Mobile Cellular Telecommunications, 2ndEdition, MC Graw Hill.

List of Practical:
1. To study about the Generation of the Computer.
2. To study about MS-DOS Internal & External Commands.
3. To study about the Installation process of Windows Operating System.
4. To study about Widows related operation: Control Panel, Device Manager.
5. Creation and editing of text files using MS-Word.
6. Creation and operating of spreadsheet using MS -Excel.
7. Creation and editing power - point slides using MS -Power Point.
8. To study about MP-Online website and create report on it.
9. To study about IRCTC website and create report on it.
10. To study about NPTEL website and create report on.

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SEMESTER I

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BTEC 104	UG	Digital Logic & Circuit Design	3	1	2	5	60	20	20	30	20

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
*__Teacher Assessment__ shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
The objective of this course is to:
1. Use of Boolean algebra and Karnaugh Map to simplify logic function.
2. Describe the operation of different Combinational and Sequential Logic Circuits.

Course Outcomes:
After completion of this course the students will be able to:
1. Design an optimal digital logic circuit to meet the given specifications.
2. Evaluate the performance of the given digital logic circuit based on specific criteria for reliable system implementation.…

Syllabus:

UNIT I
  Number System & Codes: Introduction to number systems, Binary numbers, Octal & Hexadecimal Numbers, Number base Conversion, Signed binary numbers : 1‟s Complement & 2‟s Complement representation and their arithmetic operation, Floating point representation, binary codes, BCD,ASCII, EBCDIC, Gray codes, Error detecting and Correcting codes, Hamming codes.

UNIT II
  Boolean algebra and Logic gates: Introduction, Logic operations, Axioms and laws of Boolean algebra, Demorgan‟s theorem, Boolean functions, Canonical and standard forms. Logic gates and their applications, universal gates, NAND-NOR implementation of logic functions. Minimization techniques for logic functions-K-map, Tabular / QuineMcCluskey method.

UNIT III
  Combinational logic: Arithmetic circuits- Half adder, Full adder, Halfsubtractor, Full subtractor, Parallel and Serial adder, BCD adder, Multiplexer, De-multiplexer, Encoder & Decoder.

UNIT IV
  Sequential logic: Introduction, Latch and Flip Flop- S-R, D, JK and T, State diagram, characteristic equation, state table and excitation table, Flip flop conversion, applications of Flip flop, Counters, Registers.

UNIT V
Semiconductor Memories and A/D and D/A converters: Semiconductor Memory – RAM, ROM- Organization, operation and their Types, PLD- PAL, PLA, PROM, FPGA, Analog to Digital (A/D)and Digital to Analog (D/A) converters and their types.

Text Books:
1. M. Morris Mano,"Digital Logic and Computer Design", Pearson Education, 2016.
2. S Salivahanan and S Arivazhagan: Digital Circuits and Design,4th Edition, VikasPublishing House, 2012.

Reference Books:
1. A. Anand Kumar, "Fundamentals of Digital Circuits", 4th Edition, PHI,2016.
2. Floyd and Jain,"Digital Fundamentals", 10th Edition, Pearson Education India,2011.
3. Roland J.Tocci,Widmer,Moss, "Digital Systems Principles and Applications", 10th Edition, Pearson 2009.
4. Stephen Brown, ZvankoVranesic, "Fundamentals of Digital Logic Design", 3rd Edition, McGraw Hill, 2017.

List of Practical's:
1. To study and test of operation of all logic gates for various IC"s(IC7400,IC7403,IC408,IC74332,IC7486).
2. Verification of DeMorgan"s theorem.
3. To construct of half adder and fulladder.
4. To construct of half subtractor and full subtractor circuits.
5. Verification of versatility of NAND gate.
6. Verification of versatility of NOR gate.
7. Design a BCD to excess 3codeconverter.
8. Design a Multiplexer/Demultiplexer
9. Analysis of various flip flops with Preset and Clear capability.
10. Design of Johnson and Ring counter.
11. Design of synchronous and asynchronous up/down counters.

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COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BTCS104	UG	Principles of 'C' Language	3	0	-	3	60	20	20	-	-

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit;
*****Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
The student will have ability to:
1. Identify situations where computational methods and computers would be useful.
2. Given a computational problem, identify and abstractthe programming task involved.
3. Approach the programming tasks using techniques learned and write pseudo-code.
4. Choose the right data representation formats based on the requirements of the problem.
5. Use the comparisons and limitations of the various programming constructs and choose the right one for the task in hand.
6. Write the program on a computer, edit, compile, debug, correct, recompile and run it.
7. Identify tasks in which the numerical techniques learned are applicable and apply them to write programs, and hence use computers effectively to solve the task.

Course Outcomes:
Upon completion of the subject, students will be able to:
1. Understand the basic terminologies used in computer programming.
2. Proficient in using the basic constructs of C, to develop a computer program.
3. Understand the use of functions, pointers, arrays and files in programming.
4. Understand the fundamentals of procedure-oriented programming and be able to apply it in computer program development.

Syllabus:

UNIT I
Introduction to programming languages:
Evolution of Programming Languages, Structured Programming, The Compilation Process, Object Code, Source Code, Executable Code, Operating Systems, Interpreters, Linkers, Loaders, Fundamentals Of Algorithms, Flowcharts.

UNIT II
Introduction to 'C' Language: Character Set.Variables and Identifiers, Built-In Data Types. Variable Definition, Arithmetic Operators and Expressions, Constants And Literals, Simple Assignment Statement, Basic Input/Output Statement, Decision Making Within A Program, Conditions, Relational Operators, Logical Connectives, If Statement, If-Else Statement, Loops:

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While Loop, Do While, For Loop. Nested Loops, Infinite Loops, Switch Statement, Structured Programming.

UNIT III

One Dimensional Arrays: Array Manipulation; Searching, Insertion, Deletion of an Element from an Array; Finding the Largest/Smallest Element in an Array; Two Dimensional Arrays, Addition/Multiplication of Two Matrices, Transpose of a Square Matrix, Strings as Array of Characters, Address Operators, Pointer Type Declaration, Pointer Assignment, Pointer Initialization, Pointer Arithmetic, Functions And Pointers, Arrays And Pointers, Pointer Arrays.

UNIT IV

Top-Down Approach of Problem Solving: Modular Programming and Functions, Standard Library of C Functions, Prototype of a Function: Foo1lal Parameter List, Return Type, Function Call, Block Structure, Passing Arguments to a Function: Call by Reference, Call by Value, Recursive Functionsand Arrays as Function ArgumentsStructure Variables, Initialization, Structure Assignment, Nested Structure, Structures and Functions, Structures and Arrays: Arrays of Structures, Structures Containing Arrays,Unions

UNIT V

Concept of Files: File Opening in Various Modes and Closing of a File, Reading from a File, Writing onto a File.

Text Books:
1. .Tennence W.Pratt, "Programming languages design and implementation", Prentice Hall of India.

2. Allen B. Tucker, "Programming Languages", Tata McGraw Hill.

3. Gottfried BS – Programming with C, TMH publications.

4. Balagurusamy:,"Programming with C++", ANSI C TMH

Reference Books:
1. Roosta- Foundation of Programming Languages,Vikas
2. Jeyapoovan- A First Course in Prog with C, Vikas 8. Programming In C++, Y.I. Shah and M.H. Thaker, ISTE/EXCEL BOOKS
3. Fundamentals of Programming Languages, R. Bangia,Cyber Tech .
4. Kanetkar, Yashvant – Understanding Pointers in C- 2nd Edn. BPB

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SEMESTER I

COURSE CODE	CATEGORY	COURSE NAME	L	T	P	CREDITS	TEACHING & EVALUATION SCHEME				
							THEORY			PRACTICAL	
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BTCS108	UG	Programming Skills with 'C'	-	-	2	1	-	-	-	30	20

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/
Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
The student will have ability to:
1. Understand and use the basic programming constructs of C
2. Manipulate various C datatypes, such as arrays, strings, and pointers
3. Isolate and fix common errors in C programs
4. Use memory appropriately, including proper allocation/deallocation procedures
5. Apply object-oriented approaches to software problems in C
6. Write small-scale C programs using the above skills

Course Outcomes:
1. Demonstrate a thorough understanding of modular programming by designing programs that require the use of programmer-defined functions.
2. Demonstrate a thorough understanding of arrays by designing and implementing programs that search and sort arrays.
3. Demonstrate a thorough understanding of the object-oriented programming concepts of encapsulation, data abstraction and composition by designing and implementing classes including the use of overloaded functions and constructors.
4. Demonstrate a thorough understanding of the concept of pointers and dynamic memory allocation by designing and implementing programs using pointers and dynamic memory allocation.
5. Demonstrate a thorough understanding of the implementation of programmer-defined functions and classes by writing code, performing unit testing and debugging of multiple complex programs.

Syllabus

UNIT I
Introduction to Programming:
Concept of algorithms, Flow Charts, Data Flow diagrams etc., Introduction to the Editing tools such as vi or MS-VC editors, Concepts of the finite storage, bits bytes, kilo, mega and gigabytes. Concepts of character representation, Number Systems & Binary Arithmetic.

UNIT II

Programming using C

The emphasis should be more on programming techniques rather than the language itself. The C Programming language is being chosen mainly because of the availability of the compilers, books and other reference materials.

Example of some simple C program. Concept of variables, program statements and function calls from the library (Printf for example)

C data types, int, char, float etc., C expressions, arithmetic operation, relational and logic operations, C assignment statements, extension of assignment of the operations. C primitive input output using getchar and putchar, exposure to the scanf and printf functions, C Statements, conditional executing using if, else. Optionally switch and break statements may be mentioned.

UNIT III

Iterations and Subprograms

Concept of loops, example of loops in C using for, while and do-while. Optionally continue may be mentioned. One dimensional arrays and example of iterative programs using arrays, 2-d arrays Use in matrix computations. Concept of Sub-programming, functions Example of functions. Argument passing mainly for the simple variables.

UNIT IV

Pointers and Strings

Pointers, relationship between arrays and pointers Argument passing using pointers Array of pointers. Passing arrays as arguments. Strings and C string library. Structure and Unions. Defining C structures, passing strings as arguments Programming examples.

UNIT V

Exception handling: Throwing an exception, catching an exception: The try block, Exception handlers, Termination vs. Resumption, Exception specification, re throwing an exception, uncaught exceptions, Standard exceptions, Programming with exceptions.

TEXT BOOKS:

1.Tennence W.Pratt, "Programming languages design and implementation", Prentice Hall of India.

2. Allen B. Tucker, "Programming Languages", Tata McGraw Hill.

3. Gottfried BS – Programming with C, TMH pub.

4. Balagurusamy:ANSI C TMH

5. Kanetkar, Yashvant – Understanding Pointers in C- 2nd Edn. BPB

REFERENCE BOOKS:

1. Roosta- Foundation of Programming Languages,Vikas

2. Jeyapoovan- A First Course in Prog with C, Vikas 8. Programming In C, Y.I. Shah and M.H. Thaker, ISTE/EXCEL BOOKS

3. Fundamentals of Programming Languages, R. Bangia,Cyber Tech

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LIST OF EXPERIMENTS: (At least 10 based on Syllabus)

1. Write a program for multiplication of two matrices using OOP.

2. Write a program to perform addition of two complex numbers using constructor overloading. The first constructor which takes no argument is used to create objects which are not initialized, second which takes one argument is used to initialize real and imag parts to equal values and third which takes two argument is used to initialized real and imag to two different values.

3. Write a program to find the greatest of two given numbers in two different classes using friend function. Write a program using decision making statements (switch case, if and if-else, nested structures).

4. Create a class called LIST with two pure virtual function store() and retrieve().To store a value call store and to retrieve call retrieve function. Derive two classes stack and queue from it and override store and retrieve.

5. Write a program to define the function template for calculating the square of given numbers with different data types.

6. Write a program to demonstrate the use of special functions, constructor and destructor in the class template. The program is used to find the bigger of two entered numbers. Write a program of dynamic memory allocation using calloc(), malloc() and realloc().

7. Write a program to perform the deletion of white spaces such as horizontal tab,   vertical tab, space ,line feed ,new line and carriage return from a text file and store   the   contents   of the file without the white spaces on another file.

8. Write a program to read the class object of student info such as name , age ,sex   ,height and weight from the keyboard and to store them on a specified file using   read() and write() functions. Again the same file is opened for reading and   displaying the contents of the file on the screen.

9. Write a program to raise an exception if any attempt is made to refer to an element whose index is beyond the array size

10. Write a program to overload unary increment operator .

11. Write a program to overload less than (<) operator

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| COURSE CODE | CATEGORY | COURSE NAME | L | T | P | CREDITS | THEORY | | PRACTICAL | |
							END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*
BTIT307	UG	Web Development Lab- I(HTML & XML)	-	-	4	2	-	-	-	60	40

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical;   **C** - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
1. Students will use a variety of design software to organize, create, publish, and manage a web site.
2. This course also puts emphasis on basic concepts of web design
3. Provide you the conceptual and technological developments in the field of Internet and web designing.
4. Course content includes creating a variety of graphic elements including video, animations, rollover effects, backgrounds, and page images

Course Outcomes:
1. Create an HTML Documents, and establish adequate formatting for presentation purposes.
2. Import, insert and modify images.
3. Insert and manipulate tables.
4. Establish and maintain internal and external link to available resources.
5. Use special effect to make the expressive, evocative documents.
6. Insert and manipulate multi-media objects.

Syllabus:

UNIT I
Introduction to HTML: What is HTML, HTML Documents, SGML, Basic structure of an HTML document, creating an HTML document, Headers tags, Body tags, Paragraphs formatting, Text Elements, Tag Elements, Special Character elements, Image tags, HTML Table tags and lists: Numbered list, Non- Numbered lists, Definition lists, Anchor tag, Name tag, Hyperlinks – FTP/HTTP/HTTPS, Links with images and buttons, Links to send email messages, Text fonts and styles, background colors/images, Marquee Behavior, Forms related tags. (Action, method, name, inputetc.)

UNIT II
HTML5: Introduction of HTML5, Browser suppots, Migration from HTML4 to HTML5, New Elements in HTML5, HTML5 different parts layout of a web page, HTML5 Graphics: Canvas, SVG, HTML Media Tags: Inserting audio files, Inserting video files, Screen control attributes, Media control attributes, HTML Object.

UNIT III

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CSS: Introduction of CSS, CSS Syntax CSS Id & Class. CSS Styling: styling Backgrounds, styling Text, styling Fonts, styling Links, styling Lists, styling Tables. CSS Box Model: Border, Outline, Margin, Padding. CSS Advanced: Grouping/Nesting, Dimension, Display, Positioning, Floating, Align, Pseudo-class, Pseudo-element, Navigation Bar, Image Gallery, Image capacity, Image Sprites, Media Types, and Attribute Selectors.

UNIT IV
XML: Introduction of XML, Cross scripting of XML, XML as intermediate language, Difference between XML and HTML, XML DOM, Tree, Syntax, Elements, Attributes, Namespaces, XPath, XML DTD, Applications, XQuery, XML Schema, XML Parser, XHTML: Introduction of XHTML, XHTML rules over the HTML, conversation HTML to XHTML.

UNIT V
Java Script: Introduction to client side scripting, Server side scripting, Java Script Syntax, Variables and Functions, Operators: JavaScript Arithmetic Operators, JavaScript Assignment Operators, JavaScript Popup Boxes, JavaScript Window, Events and Objects, JavaScript Function Call, Validation in webpages, Introduction of AJAX.

Text Books:
1. Jennifer Niederst Robbins. Learning Web Design, Fifth Edition, O'Reilly Media, Inc, May 2018.
2. Frain and Ben. Responsive Web Design with HTML5 and CSS3, Second Edition, 2015.
3. Nicholas c.Zakas. Java Script for Web Developers, Third edition, 2012.
4. George Q. Huang, K. L Mak. Internet Applications in Product Design and Manufacturing, ISBN: 3540434658, 2003 edition, springer, 2012.

References:-
1. Steven M. Schafer, "HTML, XHTML, and CSS Bible", Fifth Edition, WileyIndia, 2010.
2. John Duckett,"Beginning HTML, XHTML, CSS, and JavaScript ",WileyIndia, 2010.
3. Ian Pouncey, Richard York, "Beginning CSS: Cascading Style Sheets for Web Design",3rd edition, Wiley India, 2011.
4. Achyut S. Godbole, Atul Kahate, Web Technologies, ISBN: 9781259062681,3rd edition, TMH, 2013.

List of Practicals:
1. Design a Web Page, Insert an image on to the web page such that image is of height 300 and width 300 pixels. The image should have an ALT text in it.
2. Create a Web page that holds a bulleted list of the names of your friends. Make sure that the bullets are in plain circle.
3. Create a Frame which would hold both the web page that was created earlier. The frame should be split row-wise into equal halves.
4. Create a Web Page to display the marks you got in all subjects of last semester using table.
5. Create a Form having two boxes with labels as First Name and Last Name. The User should not be allowed to enter the names directly in the text boxes. The input has to be given in the prompt box and then entered values should be given in the textboxes.
6. Create a Web Page that has a button in the center of the page. Using mouse events change the Message in the statusbar.

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7. Design a Web page that accepts Username and Password. Opens a new window when the password corresponds to a particular value is set by the developer
8. Design a Web page that consists of 2 text boxes. When the page is first loaded set the focus to the first textbox. The user should not be allowed to leave the box unless enters a value in it.
9. To convert the HTML code to XHTML code.
10. To study the XML tree.
11. To study of Dreamweaver Tool.
12. To study of a Flash Animation TooL.

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