# Shri Vaishnav Vidyapeeth Vishwavidyalaya

## Bachelor of Technology (CSE with specialization in Information and Cyber Security)

## Choice Based Credit System (CBCS) 2018-19

## SEMESTER I

| COURSE CODE | CATEGORY | COURSE NAME | TEACHING & EVALUATION SCHEME | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | THEORY | | | PRACTICAL | | Th | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | |
| **BTMACS101** | **UG** | **MATHEMATICS - I** | 60 | 20 | 20 | - | - | 3 | 1 | - | 4 |

**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. To introduce the students with the Fundamentals of the Differential, Integral, Vector Calculus and Numerical Analysis.

**Course Outcomes:**

Upon completion of the subject, students will be able to:

1. Understand and apply the basics of the differential calculus.
2. Know the fundamental principles of the integral calculus and apply them.
3. Apply the techniques in the numerical analysis.
4. Know the numerical solution of the system of linear algebraic equations.
5. 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's theorem, 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.

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**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 Eigen vector.

**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


**Reference Books:**


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. Stoer and R. Bulirsch, Introduction to Numerical Analysis, 2nd Edition, Texts in Applied Mathematics, Vol. 12, Springer Verlag, 2002.
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-Hill 2008.

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| **BTPH 101** | **UG** | **APPLIED PHYSICS** | 60 | 20 | 20 | 30 | 20 | 3 | 1 | 2 | 5 |

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***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 develop the comprehensive understanding of laws of physics.
2. To develop ability to apply laws of physics for various engineering applications.
3. To develop the experimental skills, ability to analyze the data obtained experimentally to reach substantiated conclusions.

**Course Outcomes:**

1. Student will be able to comprehend laws of physics.
2. Student will be able to apply laws of physics for various engineering applications.
3. Student will be able to determine physical parameter experimentally and will be able to analyze the data obtained experimentally to draw substantiate conclusions.

**Syllabus:**

**UNIT I**

**Quantum Physics:** Introduction to Quantum hypothesis, Matter wave concept, Wave Group and Particle velocity and their relations, Uncertainty principle with elementary proof and applications to microscope and single slit, Compton Effect, Wave function and its physical significance. Development of time dependent and time independent Schrodinger wave equation, Applications of time independent Schrodinger wave equation.

**UNIT II**

**Solid State Physics:** Free electron model, Qualitative Analysis of Kronig Penney Model, Effective mass, Fermi level for Intrinsic and Extrinsic semiconductors, P-N junction diode, Zener diode, Tunnel diode, Photodiode, Solar- cells, Hall Effect, Introduction to Superconductivity, Meissner effect, Type I & II Superconductors.

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**UNIT III**

**Nuclear Physics**: Nuclear Structure & Properties Nuclear models: Liquid drop with semi-empirical mass formula & shell model. Particle accelerators: Cyclotron, Synchrotron, Betatron. Counters and Detectors: Giger-Muller counters, Bainbridge Mass Spectrograph and Auston Mass Spectrograph.

**UNIT IV**

**Laser & Fiber Optics:** Stimulated and Spontaneous Emission, Einstein's A&B Coefficients, Population Inversion, Pumping, Techniques of Pumping, Optical Resonator, Properties and Applications of Laser, Ruby, Nd:YAG, He-Ne lasers.

Introduction to Optical fibre, Acceptance angle and cone, Numerical Aperture, V- Number, Ray theory of propagation through optical fibre, Pulse dispersion , applications of optical fibre.

**UNIT V**

**Wave Optics:** Introduction to Interference, Fresnel's Bi-prism, Interference in Thin films, Newton's rings experiment, Michelson's interferometer and its application, Introduction to Diffraction and its Types, Diffraction at single slit, double slit, resolving power, Rayleigh criterion, Resolving power of grating, Concept of polarized light, Double refraction, quarter and half wave plate, circularly & elliptically polarized light.

**Textbook and Reference Books:**


1. Engineering Physics by Dr. S. L. Gupta and Sanjeev Gupta, Dhanpat Rai Publication, New Delhi.
2. Engineering Physics by Navneet Gupta, Dhanpat Rai Publication, New Delhi.
3. Engineering Physics by H. J. Sawant, Technical Publications, Pune, Maharastra.
4. Engg Physics by M.N. Avdhanulu & P.G. Kshirsagar, S.Chand & Co.Edition (2010).
5. Fundamentals of Physics by Halliday, Wiley, India.
6. Concepts of Modern Physics by Beiser, TMH, New Delhi.
7. Solid State Physics by Kittel,Wiley India.
8. Atomic and Nuclear physics by Brijlal and Subraminiyan.
9. LASERSs and Electro Optics by Christopher C. Davis, Cambridge Univ. Press (1996).
10. Optroelectronics an Introduction by J. Wilson & J.F.B.Hawkes, "" Prentice-Hall II Edition.
11. LASER theory and applications by A. K. Ghatak & Tyagarajan, TMH (1984).
12. Optics by Ghatak, TMH.


**List of Practical's:**

1. Measurement of radius of curvature "R" of convex lens by Newton's ring experiment.
2. Measurement of Numerical aperture of fiber by LASER.
3. Determination of Energy band gap 'Eg' of Ge using Four Probe method.
4. Measurement of Frequency of A.C. mains by electrically maintained vibrating rod.
5. Measurement of Resolving Power of Telescope.

6. Measurement of "λ" of LASER light source using Diffraction Grating.
7. Determination of Planck's constant by using photocell.
8. Determination of Energy band gap (Eg) using PN Junction Diode.
9. To determine the mass of cane sugar dissolved in water using half shade polarimeter.
10. To study forward and reverse characteristics of Zener diode.
11. To study forward and reverse characteristics of P-N diode.
12. To study characteristics of Photo diode.
13. To study characteristics of LDR.
14. μ and ω of given prism using spectrometer.
15. Measuring height of a given object using Sextant.

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | THEORY | | | PRACTICAL | | Th | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | |
| BTCS 102 | UG | INTRODUCTION TO COMPUTER SCIENCE & ENGINEERING | 60 | 20 | 20 | - | 50 | 3 | 1 | 2 | 5 |

**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 introduce the fundamentals concepts of Computer System.
2. Understanding the basic concepts and features of various kinds of Operating Systems.
3. Learning the Concepts of Office Automation Tools (Like Word, Excel, Power-point, etc.)
4. To provide knowledge of Networking, Internet, Communication and Security.

**Course Outcomes**:

Upon completion of the subject, Students will be able to:

1. Understand the basic terminologies of Computer System.
2. Gain knowledge about various kinds of Operating Systems and their features.
3. Learn the Concepts of Office Automation Tools (Like Word, Excel, Power-point, etc.)
4. Understand Networking, Internet, Communication and Security.

**Syllabus:**

**UNIT I**

Introduction to Computer Fundamentals: Introduction: What is Computer, Objectives, Hardware and software, Block Diagram of The Computer, Functions of the different Units, CPU(Central Processing Unit), Input unit, Output unit, Memory, Storage Devices, Representation of data and information, Computer Languages, Machine language, Assembly language, High level language, Number System and Conversion, Classification of Computers, History and Generations of Computer, Types of Computers, Characteristics of Computers, Introduction to Free and Open Source Software, Definition of Computer Virus, Types of Viruses, Use of Antivirus software. Applications of Computers: Home, Education and Training, Entertainment, Science, Medicine, Engineering etc.

**UNIT II**

The Operating System: The Graphical User Interface (GUI), Definition of Operating System, Objective, Types and functions of Operating Systems, Windows Operating System, Installing MS-Windows, Working with Windows Operating System, System Tools and Applications in

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windows, MS-DOS (Disk Operating System), Basic DOS commands, Switching Between DOS and Windows, Comparison of DOS and Windows, System Tools and Applications in MS-DOS, Other Operating Systems Unix, Linux etc.

**UNIT III**

Office Automation Tools-I: Word Processing Basics, Elements of word Processing and Working, MS-Office (Word, Access, Outlook, Front page etc), Objectives, Starting MS-Word, MS-Word Screen and its Components, Working with MS-Word, Menu Bar, Creating Documents, Using Templates, Saving a documents, Working with documents, Setting up pages of a document, Printing Documents with different options, Using Tables and Columns, Object Linking and Embedding, Hyperlink, Envelopes & Label Creation, Grammar & Spell Check, Mail Merge, Macro Creation, Previewing and Printing Documents.

**UNIT IV**

Office Automation Tools-II: Spread Sheet: Introduction to MS-Excel, Starting MS-Excel, Basics of Workbook and Spread sheet, MS-Excel Screen and Its Components, Features of Excel, Elementary Working with MS-Excel, Manipulation of cells, Formatting of Spread sheet and Cells, Formulas and Functions, Spread sheets for Small accountings, Previewing and Printing a Worksheet.

Power-point: Introduction to MS-PowerPoint, Starting MS-PowerPoint, Basics of PowerPoint, MS-PowerPoint Screen and Its Components, Features of PowerPoint, Elementary, Elementary Working with MS-PowerPoint, Preparation of Slides, Creation of Presentation, Providing aesthetics, Slide Manipulation and Slide Show, Presentation of the Slides

**UNIT V**

Computer Communication and Internet: Computers and Communication: Introduction to Computer Networks, Internet and World Wide Web, Communication and Collaboration(Electronic Mail), Basic of electronic mail, Web Browsers and Servers, Introduction to HTML, Use of Computer in Commerce, Internet Applications, Electronic Data Interchange, Electronic Payment System, Internet Security, Privacy, Ethical Issues & Cyber Law.

**Text Books:**

1. Fundamentals of Computers: E Balagurusamy, TMH
2. Basic Computer Engineering: Silakari and Shukla, Wiley India
3. Fundamentals of Computers: V Rajaraman, PHI
4. Information Technology Principles and Application: Ajoy Kumar Ray & Tinku Acharya PHI.
5. Fundamentals of Computers: PK Sinha.

**References**:

1. J. P. Tremblay and R.B. Bunt, “An Introduction of Com puter Science –An Algorithmic Approach”, TMH.
2. Raja Raman V., "Fundamental of Computers" (4th edition.), Prentice Hall of India, New Delhi.

3. Trainer T., et al, "Computers", McGraw Hill.
4. Norton, Peter, "Introduction to Computers, Mc-Graw-Hill.
5. S. Jaiswal, "Fundamental of Computer & IT", Wiley dream tech India.

**List of Practical's:**

1. Change the date and time of computer system using MS-DOS.
2. Creates the "test" directory in the directory you are currently in using MS-DOS.
3. Create a new user and give it Administrator privilege for Microsoft window OS.
4. Create a MS-Word .doc file contain yours complete biodata.
5. Create a MS-Excel .xls file contain mark sheet of 10th and 12th Standards.
6. Display the student's result into a chart using MS-Excel.
7. Create a MS-Power Point Presentation .ppt file covers the topic "Computer's Evolution".
8. Create a MS-Power Point Presentation .ppt file covers the topic "social responsibility".
9. Create a MS-Access database .mdb file to store the results of students.
10. Delete history from web browser in MS windows.

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | THEORY | | | PRACTICAL | | Th | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | |
| BTEC 104 | UG | DIGITAL LOGIC & CIRCUIT DESIGN | 60 | 20 | 20 | 30 | 20 | 3 | 1 | 2 | 5 |

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***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 / Quine McCluskey method.

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## SEMESTER I

**UNIT III**

**Combinational logic:** Arithmetic circuits- Half adder, Full adder, half subtractor, 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, Vikas Publishing 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, Zvanko Vranesic, "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 full adder.
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 3code converter.
8. Design a Multiplexer/ Demultiplexer
9. Analysis of various flip flops with Preset and Clear capability.

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10. Design of Johnson and Ring counter.
11. Design of synchronous and asynchronous up/down counters.

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| **BTCS 104** | **UG** | **PRINCIPLES OF 'C' LANGUAGE** | 60 | 20 | 20 | - | - | 3 | 1 | - | 4 |

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***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. To familiarize with basic concepts of computer programming and developer tools.
2. To present the syntax and semantics of the "C" language as well as data types offered by the language
3. To allow the student to write their own programs using standard language infrastructure regardless of the hardware or software platform
4. To introduce the fundamental concepts of computer programming.
5. To design programs in C involving different data types, decision structures, loops and functions, arrays and pointers.

**Course Outcomes:**

Upon completion of the subject, students will be able to:

1. Understand the basic terminologies used in computer programming.
2. Be 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, flow charts.

**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: 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. Programming in C - Gottfried B.S., TMH
2. The ‘C’ programming language - B.W.Kernighan, D.M.Ritchie, PHI

**References:**

1. Programming in ANSI C - Balaguruswami, TMH
2. C The Complete Reference - H.Sohildt, TMH
3. Let us C - Y.Kanetkar, BPB Publications
4. A Structured Programming Approach using C – B.A. Forouzan & R.F. Gillberg, THOMSON Indian Edition
5. Computer fundamentals and programming in C – Pradip Dey & Manas Ghosh, OXFORD

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| **BTCS 108** | **UG** | **PROGRAMMING SKILLS WITH 'C'** | - | - | - | 30 | 20 | - | - | 2 | 1 |

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**Course Objectives:**

The student will have ability to:

1. To familiarize with basic concepts of computer programming and developer tools.
2. To present the syntax and semantics of the "C" language as well as data types offered by the language
3. To allow the student to write their own programs using standard language infrastructure regardless of the hardware or software platform
4. To introduce the fundamental concepts of computer programming.
5. To design programs in C involving different data types, decision structures, loops and functions, arrays and pointers.

**Course Outcomes:**

Upon completion of the subject, students will be able to:

1. Understand the basic terminologies used in computer programming.
2. Be 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.

**List of Practical's**

1. Study of procedural programming paradigm and object-oriented programming paradigm.
2. To demonstrate use of data types.
3. Write a program on operators (Arithmetic Operator, Relational Operators and Conditional Operators etc.).

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4. Write a program using decision making statements (switch case, if and if-else, nested structures).
5. Write a program using simple loops and nested loops.(For, While, Do-While Loop)
6. Write a program to user defined functions using C.
7. Write a program for recursive functions.
8. Write a program for array and multidimensional array (2-d arrays).
9. Write a program of pointers and strings (strings and pointers).
10. Write a program of dynamic memory allocation nusingcalloc(), malloc() and realloc().
11. Write a program on structure and union.
12. Write a program in C using (i) if-then-else (ii) loops
13. Write a program illustrate Function in C
14. Write a program for nested function call.
15. Write a program of call by value using C
16. Write a program of call by reference using C
17. Write a program on file handling using C

**Text Books:**

1. Programming in C - Gottfried B.S., TMH
2. The 'C' programming language - B.W.Kernighan, D.M.Ritchie, PHI

**References:**

1. Programming in ANSI C - Balaguruswami, TMH
2. C The Complete Reference - H.Sohildt, TMH
3. Let us C - Y.Kanetkar, BPB Publications
4. A Structured Programming Approach using C – B.A. Forouzan & R.F. Gillberg, THOMSON Indian Edition
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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | THEORY | | | PRACTICAL | | Th | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | |
| BTIT307 | UG | WEB DEVELOPMENT LAB – I (HTML & XML) | - | - | - | 60 | 40 | - | - | 4 | 2 |

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*__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. This module introduces the concepts of web development and gives the students the opportunity to learn about different tools and techniques used in web designing and practically apply some of the tools.

**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**

**Basics of HTML:** What is HTML, HTML Documents, 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, input etc.)

**UNIT II**

**HTML5**: Introduction of HTML5, HTML Media Tags: Inserting audio files, Inserting video files, Screen control attributes, Media control attributes, HTML Object.

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**UNIT III**

**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, Tree, Syntax, Elements, Attributes, Namespaces, XPath, DTD, Applications, XHTML.

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**UNIT V**

**Java Script:** Introduction to client side scripting, Java Script Syntax, Variables and Functions, Operators, Comparisons, Events and Objects.

**References:**


1. Java- Head First 2nd edition Kathy Sierra , Bert Bates.
2. Steven M. Schafer, "HTML, XHTML, and CSS Bible", 5ed, Wiley India
3. John Duckett,"Beginning HTML, XHTML, CSS, and JavaScript ",Wiley India
4. Ian Pouncey, Richard York, "Beginning CSS: Cascading Style Sheets for Web Design,Wiley India


**List of Practical's:**

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 text boxes.
6. Create a Web Page that has a button in the center of the page. Using mouse events change the Message in the status bar.
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

   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.