

Sheth NKTT College of Commerce and Sheth JTT College of Arts,

Thane

(Autonomous)

(Affiliated to University of Mumbai)

Credit Structure as per NEP-2020 (w.e.f. 2024-25)

F. Y. B.Sc. (Computer Application)

	Semester I Subjects	Credits		Semester II Subjects	Credits
Major BCF101 BCC102	1. Fundamentals of Computer	2	BCO201	1. Object Oriented Programming with C++	2
	2. Programming with C	2	BCD202	2. Database Management System	2
BCFCP103	Fundamentals of computer and Programming with C Practical	2	BCODP203	Object Oriented Programming with C++ and Database Management Practical	2
Minor		-	BCB204	Business Statistics	2
BCA104	OE 1: Fundamentals of Accounting	4	BCF205	OE1: Financial Market	4
BCW105	VSC: Web Design - I	2	BCF206	1. VSC: Digital Computer Fundamental	2
BCWP106	SEC: Web Design - I Practical	2	BCFP207	2. SEC: Digital Computer Fundamental Practical	2
BCC107	AEC: Corporate communication-I	2	BCC208	1. AEC: Corporate communication-II	2
BCD108	VEC:: Discrete Maths	2	BCG209	2. VEC: Green Technology-II	2
BCE109	IKS: Evolution of IT	2			
BCS1010 BCL1010 BCP1010	CC: NSS/ Sports/ Cultural/ Yoga	2	BCS2010 BCL2010 BCP2010	1. CC : NSS/ Sports/ Cultural/ Yoga	2
	Total	22			22

Sheth T. J. Education Society's
Sheth N.K.T.T College of Commerce and
Sheth J.T.T College of Arts, Thane (W)

Programme Name: F.Y.B.Sc(Computer Application) Semester: I	
Course Category/Vertical: Major	
Name of the Dept: B.Sc(Computer Application)	
Course Title: Fundamentals of Computer	
Course Code: BCF101	Course Level:4.5
Type: Theory	
Course Credit: 2 credits	
Hours Allotted: 30 Hours	
Marks Allotted: 50 Marks	
Course Objectives(CO):	
<ol style="list-style-type: none"> 1. Describe the fundamental of Computer and Operating System. 2. To gain a comprehensive understanding of how computers work, including their hardware, software, and basic principles of operation. This knowledge forms the foundation for further exploration and specialization in various areas of computer science and technology. 	
Course Outcomes (OC):	
OC 1. Acquire the knowledge of fundamentals of Computer and Operating System.	
OC 2. Develop problem solving skill through algorithms and flowcharts.	
OC 3. Understand the basics of computer networking and internet	
Description the course:	Understanding the basic components of a computer system, such as the CPU, memory, input/output devices, and storage. and Learning about the software that manages computer hardware and provides services for other software applications.

Syllabus: NEP 2020 w.e.f 2024-25

Unit No.	Content	Hours
I	<p>Computer Fundamentals:</p> <p>History & generation of computer, Block diagram of computer system, Types of computers Definition- Software, Hardware, Compiler, Interpreter, Characteristics & applications of Computer, Data Representation: Introduction to Number system: decimal, binary, octal and hexadecimal, Conversion in Number System, Character representation: ASCII</p> <p>Operating System</p> <p>Definition, Need and Function of an operating system, Types of operating system, Comparative study of various operating systems (DOS, Linux and Windows)</p> <p>Memory Management Concept</p> <p>Types of Memory Primary– RAM, ROM, PROM, EPROM, Secondary– Magnetic Disk, Hard Disk and CD Definitions and Concept – Paging, Segmentation, Deadlock</p>	15
II	<p>Networking and Internet</p> <p>What is Computer network? Types of Networks: LAN, MAN, WAN, Topologies: Star, Tree, Bus, Ring, Mesh, Fully Connected, Wireless Networks, Working of Internet, Use of Internet, Applications of Internet, Study of Web Browsers, Search Engines, Creating an E-mail Account, Sending & Receiving E-mail (with attachment).</p> <p>Office Automation</p> <p>Basic Concepts, MS-Word- demonstration of text formatting, tables, shapes, smart-arts, charts, Spreadsheets- Functions- (Aggregate function) , Macros. Presentation Tool Design Slides (using Text, images, charts, clipart), Slide Animation, Template and theme creation</p>	15
	Total Hours	30

References:

1. V.RajaRaman, “Fundamentals of computer” (PHI Publication) ISBN 10: 8120340116
2. Roger Hunt and John Shelley, “Computer and common sense” (PHI Publication) ISBN 10: 0131646737
3. Andrew S. Tanenbaum, “Computer Networks” – Fourth Edition. ISBN number 0130661023
4. Hurwitz Judith S. and Daniel Kirsch, “Cloud Computing for Dummies”. ISBN
5. Godbole Achyut and Kahate Atul, “Web Technologies: TCP/IP, Web/ Java Programming, and Cloud Computing, ”, 3e Tata McGraw-Hill Education ISBN: 9332900914, 9789332900912.

Sheth T. J. Education Society's
Sheth N.K.T.T College of Commerce and
Sheth J.T.T College of Arts, Thane (W)

Programme Name: FY.B.Sc(Computer Application)		Semester:I
Course Category: Major		
Name of the Dept: B.Sc. (Computer Application)		
Course Title: Programming with C		
Course Code: BCC102	Course Level: 4.5	
Type: Theory		
Course Credit: 2		
Hours Allotted: 30 Hours		
Marks Allotted: 50 Marks		
Course Objectives:		
<ol style="list-style-type: none"> 1. To develop the logical ability and basic concepts to be cleared using suitable examples of the students 2. To handle the errors and find suitable solution. 		
Course Outcomes:		
OC1. Learn the basic principles of programming and develop of logic using algorithm and flowchart.		
OC 4. Acquire the information about data types.		
OC3. Understanding of input and output functions.		
Description the course:	Explore the foundational principles of programming using the C language in this comprehensive course. From basic syntax to advanced concepts, gain hands-on experience in problem-solving, algorithm development, and code optimization. Build a strong foundation for understanding programming logic, memory management through practical exercises and projects.	

Syllabus: NEP 2020 w.e.f 2024-25

Unit No.	Content	Hours
I	<p>1. Introduction: Algorithms, Structure of C Program. Program Characteristics, Compiler, Linker and preprocessor, pseudo code statements and flowchart symbols, Desirable program characteristics. Compilation and Execution of a Program, C Character Set, identifiers and keywords, data types and sizes , constants and its types, variables, Character and character strings, typedef, typecasting</p> <p>2. Type of operators: Arithmetic operators, relational and logical operators, Increment and Decrement operators, assignment operators, the conditional operator, Assignment operators and expression,</p> <p>Control Flow: Statements and Blocks, If-Else, Else-If, Switch, Loops- While and For Loops Do-while, Break and Continue, Goto and Labels</p>	15
II	<p>1. Functions and Program Structure: Basics of functions. User defined and Library functions, Function parameters, Return values, Recursion, Scope Rules, Standard Input and Output, Formatted Output-printf() and Formatted Input- scanf(), Line Input and Output</p> <p>2. Pointer and Arrays: Pointers and Functions, Multidimensional Array, Command-line Arguments, Pointers to Functions</p> <p>3. Structures: Basics of structures, Structures and Functions, Arrays of Structures, Unions,</p> <p>File management in C: Defining and Opening file, Closing a file, Input / Output operations on file, Error handling in C, Random access to files</p>	15
	Total Hours	30

References:

1. Programming Language, Brian W.Kernighan and Denis M.Ritchie, PHI 2nd Edition 1998
2. Mastering C K R, Venugopal, Tata McGrawHill , 6th Edition, 2007
3. Programming with C , K R Venugopal, Tata McGrawHill, 6th Edition 2007
4. Let us C, Yashwant P. Kanetkar, BPB Publication
5. Programming in ANSI C, E.Balagurusamy, Tata McGrawHill, 7th Edition , 1982

Sheth T. J. Education Society's
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Programme Name: FYB.Sc(Computer Application) Semester: I	
Course Category/Vertical: Major	
Name of the Dept: B.Sc. (Computer Application)	
Course Title: Fundamentals of Computer and Programming with C Practical	
Course Code: BCFCP103	Course Level: 4.5
Type: Theory	
Course Credit: 2 credits	
Hours Allotted: 60 Hours	
Marks Allotted: 50 Marks	
Course Objectives(CO): <ol style="list-style-type: none">1. Describe the basic DOS Command2. Describe the basic concept of Office Automation3. To develop the logic of the student.4. Describe loops and Practical use of operators.	
Course Outcomes (OC): (List the course outcomes) OC1. Students can able to understand the installation of operating system and understand basic DOS command, and different browser. OC2. Student understand different platforms, Internet, mails and can also learn text formatting and table formatting and capable to design power point presentation, tables, shapes, smart arts and charts OC3. Develop applications. OC4. Understand the differences between syntax errors, runtime errors, and logic errors	

Sr. No	Content	Hours
1	<ol style="list-style-type: none"> 1. Installation of Operating System (Linux and Windows). 2. Run different commands of MS DOS – CD, DIR, COPY, REN, CLS, MD, RD, etc. 3. Study different web Browsers- Internet Explorer, Fire fox, downloading of files 4. Connect the Internet- open any website of your choice and download the WebPages. 5. Study different platforms – Hardware, Software, Server and Cloud. 6. Create your E-Mail ID on any free E-Mail Server. 7. Login through your E-Mail ID and do the following: <ol style="list-style-type: none"> a. Read your mail b. Compose a new Mail c. Send the Mail to one person d. Send the same Mail to various persons e. Forward the Mail f. Delete the Mail g. Send file as attachment 8. Create and demonstrate of text formatting, tables, shapes, smart-arts, charts. 9. Create a spreadsheet which will demonstrate use of aggregate function. 10. Create and demonstrate power point presentation with animation 	15
2	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Write an algorithm and draw flowchart for Area of circle. b. Write an algorithm and draw flowchart to print the given no. is even or odd. c. Write an algorithm and draw flowchart to print 1 to 10 numbers. d. Write an algorithm and draw flowchart for sum of 1 to 5 numbers. 2. <ol style="list-style-type: none"> a. Write a program using while loop to reverse the digits of a number. b. Write a program to calculate the factorial of a given number. c. Write a program to find the roots of quadratic equation. d. Write a program to print the Fibonacci series. 	15

3.
 - a. Write a program in C to check entered character vowel or consonant b.
Write a program to C program to print day name of week using switch-case.
 - c. Write a program to read three values from keyboard and print out the largest of them without using if statement.
4.
 - a. Write a program to print the pattern of asterisks as shown below
*
* *
* * *
* * * *

b. Write a program to print the pattern of asterisks as shown below :
* * * *
* * *
* *
*

c. Write a program to print Floyd's Triangle.
5.
 - a. Write a program to print area of square using function.
 - b. Write a program using recursive function.
 - c. Write a program to square root, abs() value using function.
 - d. Write a program using goto statement.
6.
 - a. Write a program to print rollno and names of 10 students using array. b.
Write a program to read a matrix of size m*n.
 - c. Write a program to sort the elements of array in ascending or descending order.
7.
 - a. Write a program to extract the portion of a character string and print the extracted part.
 - b. Write a program to find the given string is palindrome or not.
 - c. Write a program to using strlen(), strcmp() function.
8.
 - a. Write a program to display the values using different data types and its address using pointer.
 - b. Write a program to perform addition and subtraction using pointer.
9.
 - a. Write a program to copy the contents of the file from one file into other.

	<p>b. Write a program to print the structure using</p> <ul style="list-style-type: none">• Title• Author• Subject• Book ID <p>Print the details of two students.</p> <p>10. Create a mini project on “Bank management system” . The program should be menu driven</p>	
	Total Hours	60

Sheth T. J. Education Society's
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Programme Name: F.Y.B.Sc(Computer Application)		Semester:I
Course Category: Open Elective		
Name of the Dept: B. Sc (Computer Application)		
Course Title: Fundamentals of Accounting		
Course Code: BCA104	Course Level: 4.5	
Type: Theory		
Course Credit: 4		
Hours Allotted: 60 Hours		
Marks Allotted: 100 Marks		
Course Objectives:		
<ol style="list-style-type: none"> 1. To understand fundamental concepts of financial accounting. 2. To understand the basics of cost accounting. 3. To maintain and record financial transactions in books of accounts. 4. To prepare final accounts of sole proprietary business. 		
Course Outcomes: OC1 - Understand The Principles and of Financial and Cost Accounting OC2 - Explore about maintenance and Preparation of Final Accountancy		
Description the course:	Participants will Learn the fundamentals of Accounting, types, Principle and structures, and functions, enabling them to clear, concise, and efficient Knowledge in account maintenance. Through hands-on exercises and projects, students will develop Interpretation skills and gain confidence in solving real-Accounting problems and Preparation of books of accountancy .it enable them to understand Inventory Valuation.	

Unit No.	Content	Hours
I	Unit 1 – Introduction to Accounting :(theory only) 1.1 Meaning and definition of Financial Accounting. 1.2 Objectives and scope of Financial Accounting, 1.3 Meaning and use of Book Keeping 1.4 Accounting v/s Book Keeping 1.5 Advantages and Limitations of Financial Accounting.	15
II	Unit 2 - Basics of Accounting (theory only)	
	2.1 Types of Accounting 2.2 Golden Rules of Accounting. 2.3 Double entry system in Accounting 2.4 Terms used in accounting : Debtors, Creditors, Bill Receivable, Bills Payable, Credit Note ,Debit Note ,Petty Cash ,Contra Entry ,Trade Discount ,Cash Discount, Suspense A/c 2.5 Users of accounting information	15
III	Unit 3 –Fundamentals of Book Keeping, Stock Valuation & Recording of transactions (Practical Problems)	
	3.1 Concept and Format of Journal 3.2 Recording of transactions in Journal 3.3 Meaning and Format of Ledger 3.4 Posting of transactions in Ledgers 3.5 Rectification of Errors 3.6 Introduction of Inventory Valuation and its Method (LIFO and Weighted Average Method)	15
IV	Unit 4 – Preparation of Final Accounts of Sole Proprietorship Business (Practical Problems)	
	4.1 Meaning, Importance & Objectives of Final Accounts 4.2 Preparation of Trial Balance 4.3 Preparation of Trading A/c., Manufacturing A/c. 4.4. Preparation of Profit & Loss A/c. 4.5 Preparation of Balance Sheet- Adjustments- Outstanding Expenses, Prepaid Expenses, Accrued Incomes, Depreciation	15

References:

1. Introduction to Accountancy by T.S. Gerwal, S.C. Gupta- S.Chand Publication-
2. Financial Accounting by Bhushan Kumar Goyal, H.N.Tiwari- International Book House Pvt.
3. Fundamentals of Accounting by Dr. S.N. Maheshwari, Dr.S.K. Maheshwari- Vikas
4. Accounting for Management by T. Vijaykumar, - (2010) – Tata McGraw Hill

Sheth T. J. Education Society's

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Programme Name: FYB.Sc(Computer Application)		Semester:I
Course Category/Vertical: Vocational Skill Course		
Name of the Dept: B.Sc. (Computer Application)		
Course Title: Web Design – I		
Course Code: BCW105	Course Level: 4.5	
Type: Theory		
Course Credit: 2 credits		
Hours Allotted: 30 Hours		
Marks Allotted: 50 Marks		
Course Objectives (CO): <ol style="list-style-type: none">1. Describe the basic structure of HTML files.2. To become familiar with the concept of CSS and frames		
Course Outcomes (OC): <p>OC1. Students will able to Acquainted with elements, Tags and basic structure of HTML files.</p> <p>OC2. Students will implement effective use of List and Tables and effective web page navigation.</p> <p>OC3. Students will capable to design web page layout and implement use of style sheet.</p>		
Description the course: .	Through this course learners will explore the core concepts and Technologies including HTML, CSS and Frames. Participants will gain hands on experience in creating Web applications in incorporating multimedia content.	

Syllabus: NEP 2020 w.e.f 2024-25

Unit No.	Content	Hours
I	Introduction to Web Introduction to Internet, Advantages of Internet, Working of Internet, World Wide Web (WWW), Hypertext Transfer Protocol (HTTP), Universal Resource Locator (URL), Introduction to Web Browser and Web server, Introduction to Web page, Static and Dynamic Web page, Fundamentals of HTML Introduction to HTML, Basic structure of HTML document, Formatting Text, Font Tags and Attributes, Headings Tags, Image Tag and Attributes, Background Color and Background Images, Inserting Audio and Video Files, Marquee Tag and Attributes List, Hyper link and Table List Tag - Ordered List, Unordered List, Definition List, Introduction to Hyperlink, Internal and External Hyperlink, Image Link, Table Tags & Attributes, Cell Spacing, Cell Padding, Row Span, Col Span	15
II	Frame, Frameset and Form Frame, Frameset, Creating Framesets, Target Frameset, Form Tag and Attributes, Form Elements - Textbox, Text Area, List Box, Radio Button, Checkbox, Submit and Reset Button Introduction to CSS Basic of CSS, Advantages of CSS, Role of CSS in Web Designing, CSS Structure and Syntax, Internal CSS, Inline CSS, External CSS, Font Properties of CSS CSS Selectors Selectors and declarations, Element Selector, Class Selector, ID Selector, Child Selector, Universal Selector, Group Selector	15
	Total Hours	30

References:

3. Textbook of Web Designing By Joel Sklar, Cengage Learning Publication 2009
4. Web designing in Nut Shell (Desktop Quick Reference) by Jennifer Niederst Publication – O'Reilly publication
5. Designing web navigation by James Kalbach Publication – O'Reilly publication
6. Textbook of Web Designing By Joel Sklar, Cengage Learning Publication 2009 ISBN, 1423901940

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Programme Name: FYB.Sc(Computer Application) Semester: I	
Course Category/Vertical: Skill Enhancement Course	
Name of the Dept: B.Sc. (Computer Application)	
Course Title: Web Design – I Practical	
Course Code: BCWP106	Course Level:4.5
Type: Theory	
Course Credit: 2 credits	
Hours Allotted: 60 Hours	
Marks Allotted: 50 Marks	
Course Objectives (CO): (List the course objectives)	
1. Course will provide students with an overview of Web Design.	
2. Students will learn about topics such HTML Basics, CSS, Multimedia and Frame structure	
Course Outcomes (OC): (List the course outcomes)	
OC1. Understand the basic of HTML	
OC2. Design and Styling of Web Pages using HTML elements with CSS, Multimedia and Frames	
Description the course:	Participants will gain hands on experience in creating Web applications in corporating multimedia content.

Syllabus: NEP 2020 w.e.f 2024-25

Unit No.	Content	Hours
	<ol style="list-style-type: none">1. Create web page using basic HTML tags.2. Create web page using Different Formatting tag.3. Create Web page with different Images.4. Create web page using Marquee Tag5. Create a web page using different List tag.6. Create web page using Anchor Tag (Internal Link and External Link)7. Create web page to design time table of your college using Table tag.8. Create web page inserting audio and video files.9. Design a web page using Frames and Frameset Tag.10. Design webpage of College Admission Form.11. Design a web page using Inline and Internal CSS12. Demonstrate the use of External CSS13. Create web page to set background color using CSS.	
	Total Hours	60

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Programme Name: FYB.Sc(Computer Application) Semester: I	
Course Category/Vertical: Ability Enhancement Course	
Name of the Dept: FY (Computer Application)	
Course Title: Corporate Communication - I	
Course Code: BCC107	Course Level:4.5
Type: Theory	
Course Credit: 2 credits	
Hours Allotted: 30 Hours	
Marks Allotted: 50 Marks	
Course Objectives (CO):	
<ol style="list-style-type: none"> 1. To inculcate the knowledge of basic communication skills in learners and make learners aware of how non-verbal communication impacts daily communication. 2. To inculcate effective business writing skills in learners and create awareness about ethics in information 	
Course Outcomes (OC):	
OC1: Learners would develop their basic communication skills and gain knowledge of how verbal and non-verbal communication impacts the business world.	
OC2: Develop effective business writing skills	
Description the course:	The course introduces learners to the basic concepts of communication required in personal and professional lives. It will assist them in making effective use of both verbal and non-verbal methodologies of communication. The course will inculcate effective writing skills in learners enabling them to overcome the communication challenges they may face in the corporate world. With these skills they can turn out to be communication experts and PR experts as well.

Syllabus: NEP 2020 w.e.f 2024-25

Sr. No.	Content	Hours
1	<p>Fundamentals of Technical Communication Fundamentals of Technical Communication: Introduction, The process of communication, Language as tool of communication, levels of communication, The flow of communication, Communication Networks, The importance of technical communication Barriers to communication: Definition of Noise, classification of Barriers Non-verbal Communication: Introduction, Definition, significance of nonverbal, forms of non-verbal communication, types of non-verbal communication The Seven Cs of Effective Communication: Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness Meeting and conferences: Introduction, Purpose of Meeting, planning a meeting, Meeting Process, Leading effective meeting, evaluating meeting, planning conference, teleconferencing. Group Discussion and team presentation: Introduction, Benefits of GD, Workplace GD guidelines, Functional and non-functional roles in GD, Improving group performance, Assessment of group discussion, Team presentation. Email communication: Introduction, Advantages of email, problems in email communication, Email etiquettes, Techniques of writing Effective Email</p>	15
2	<p>Business Writing and Visual Aids Business writing: Introduction, Importance of written Business, Five main strategies of writing business messages Business correspondence: Business letter writing, common component of Business letter, Strategies for writing body of a letter, Types of Business letter, writing memos. Business reports and proposal: What is a report? Steps in writing routine Business report, parts of reports, corporate reports and Business proposals Careers and Resume: Introduction to career building, resume format, traditional, electronic and video resumes, sending resume, follow-up letters and online recruitment process. Creating and Using Visual Aids: Object, Models, Handouts, Charts and Graphs, Text Visuals, Formatting Computer generated charts, graphs and visuals.</p>	15
	Total Hours	30

Sheth T. J. Education Society's
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Programme Name: FYB.Sc(Computer Application)		Semester: I
Course Category/Vertical: VEC		
Name of the Dept: B.Sc. (Computer Application)		
Course Title: Discrete Mathematics		
Course Code: BCD108	Course Level:4.5	
Type: Theory		
Course Credit: 2 credits		
Hours Allotted: 30 Hours		
Marks Allotted: 50 Marks		
Course Objectives (CO): (List the course objectives)		
3. Course will provide students with an overview of discrete mathematics.		
4. Students will learn about topics such as logic and proofs, sets, Relation and functions, techniques of counting, graph theory, Binary trees and other important discrete math concepts.		
Course Outcomes (OC): (List the course outcomes)		
OC1. Understand the basic principles of sets, operations in sets and different types of relations. Analyze mathematical properties using mathematical induction methods. Understand different counting techniques and method of Solving Recurrence relation.		
OC2. Understand graphs and Binary trees and its various applications		
Description the course:	It provided the basic techniques to solve the problems. This course provided the foundation for many computer science Courses including data structures, algorithm, operation system.	

Syllabus: NEP 2020 w.e.f 2024-25

Unit No.	Content	Hours
I	<p>Sets, Relation and Function</p> <p>Definition Sets and Elements, Subsets, Venn Diagrams, Set Operations, Algebra of Set, Power Sets, Mathematical Introduction , Relations on sets, Reflexivity, Symmetric and Transitivity, Equivalence Relations, Functions Define on general sets, One-to-One, Onto, and Invertible Function, composition of functions and Cardinality with application to Computability.</p> <p>Techniques of Counting</p> <p>Basic Counting Principles, Permutations, Combinations, the Pigeonhole Principle, The Inclusion–Exclusion Principle, Recurrence Relations, Linear Recurrence Relations with Constant Coefficients, Solving Second Order Homogeneous Linear Recurrence Relations.</p> <p>Probability: Basics of Probability, Addition Rule</p>	15
II	<p>Graph Theory:</p> <p>Graph Definition and basic properties, Sub graphs, Matrix representation of graph , Isomorphism of Graphs, Paths, Connectivity, Traversable and Eulerian Graphs, Labeled and Weighted Graphs, Complete, Regular, and Bipartite Graphs, Planar Graphs, Representing Graphs in Computer Memory, Graph Algorithms, Traveling-Salesman Problem, Introduction, Directed Graphs, Sequential Representation of Directed Graphs, , Shortest Paths, Linked Representation of Directed Graphs, Graph Algorithms: Depth-First and Breadth-First Searches Algorithm for Shortest Path.</p> <p>Trees and Binary Trees:</p> <p>Definition and properties of tree, Spanning tree and shortest path. Definition Binary Trees, Complete Binary Trees, Traversing Binary Trees, Binary Search Trees, Huffman’s Algorithm.</p>	15
	Total Hours	30

References:

- 1 Discrete Mathematics and its Applications Kenneth H. Rosen Tata MCGraw Hill
8th 2019
- 2 Discrete Mathematics, Schaum's Outline Series Seymour Lipschutz, Marc Lipson
Tata MCGraw Hill 3rd 2007
- 3 Discrete Mathematics and its Applications Sussana S.Epp Cengage Learning 5th
2018
- 4 Discrete Mathematical Structures B Kolman RC Busby, S Ross PHI
- 5 Discrete structures Liu Tata MCGraw Hill

Sheth T. J. Education Society's
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Programme Name: FYB.Sc(Computer Application)		Semester:I
Course Category: Indian Knowledge System		
Name of the Dept: B.Sc (Computer Application)		
Course Title: Evolution of Information Technology		
Course Code: BCE109		Course Level:4.5
Type: Theory		
Course Credit: 2		
Hours Allotted: 30 Hours		
Marks Allotted: 50 Marks		
Course Objectives: <ol style="list-style-type: none"> 1. Make aware to Basics of Computer and various storage devices 2. Concept of Hardware, Software and Networking devices. 3. To study IT Act 2000 		
Course Outcomes: OC1 - Study generations of Computer and basics of Internet and it applications OC2 - Understand various software types and Basics of I.T. Act 2000		
Description the course:	Through this course, learners will embark on a fascinating exploration of the historical milestones, key innovations, and transformative trends that have shaped the IT landscape. From early mechanical computing devices to the advent of the internet, mobile computing, and artificial intelligence, participants will gain valuable insights into how IT has revolutionized communication, commerce, and daily life.	

Syllabus: NEP 2020 w.e.f 2024-25

Unit No.	Content	Hours
I	<p>Computer Generation and its classification: Introduction, what is Computer, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Generations of Computers.</p> <p>Storage Devices: Primary Vs Secondary Storage, Data storage & retrieval methods. Primary Storage: RAM ROM, PROM, EPROM, EEPROM. Secondary Storage: Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives</p> <p>Software: Software and its needs, Types of S/W. System Software: Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language, advantages & disadvantages of programming language. Application S/W and its types</p>	15
II	<p>Communication: Introduction, Communication Types (modes), Data Transmission Medias, Modem and its working, characteristics, Types of Networks, Topologies, Computer Protocols.</p> <p>Internet and the World Wide Web: What is Internet? Evolution of Internet, Internet service providers, Internet and its applications, E-mail, Telnet, FTP, domain name server, Internet address, World Wide Web (WWW): World Wide Web uniform resource locator (URL), Browsers–Internet Explorer, Netscape Navigator, Opera, Firefox, Chrome, Mozilla.</p> <p>I.T. Act 2000: Introduction of IT Act 2000, Offences in IT Act 2000, Various provisions of IT Act 2000.</p>	15
	Total Hours	30

References:

1. Fundamentals of Computers V. Rajaraman and Neeharika A. PHI Learning Sixth 2015
2. Data communication and networking Behrouz. Forouzan Tata McGraw Hill 5th edition 2013
3. Cyber law simplified Vivek Sood Tata McGraw Hill

Scheme of Examination

Course with Credit	External Examination	Internal Examination	Total
Credit 4	60 marks	40 marks	100 marks
Credit 2	30 marks	20 marks	50 marks

Internal Examination Structure(Theory)

Internal examination	40 marks	20 marks
Project Presentation/Case Study /Quiz/Group Discussion	10 marks	5 marks
Assignment /Active class Participation/Attendance	10 marks	5 marks
Class test	20 marks	10 marks
Total	40 marks	20 marks

Structure for Class Test

For 10 marks	
Q1. Answer the following (Attempt any 2) a. b. c. d.	10 Marks

External Examination (For 60 Marks)

Q. No.	External	Marks: 60
Q.1 (From Module 1)	Answer the following questions (Any 3) A B C D E F	15 Marks
Q. 2 (From Module 2)	Answer the following questions (Any 3) A B	15 Marks

	C D E F	
Q. 3 (From Module 3)	Answer the following questions (Any 3) A B C D E F	15 Marks
Q. 4 (From Module 4)	Answer the following questions (Any 3) A B C D E F	15 Marks

External Examination (For 30 Marks)

Q. No.	External	Marks: 30
Q.1 (From Module 1)	Answer the following questions (Any 3) A B C D E F	15 Marks
Q. 2 (From Module 2)	Answer the following questions (Any 3) A B C D E F	15 Marks

Practical Evaluation Internal: 20 marks

1	Problem Solving	10
2	Lab Work/Performance	5
3	Viva	5

Practical External Exam: 30 marks

A Certified copy journal is essential to appear for the practical examination.

1	Practical Question 1	10
2	Practical Question 1	10
3	Journal	5
4	Viva Voce	5

OR

1	Practical Question 1	20
2	Journal	5
3	Viva Voce	5

Members of Department of Science and Technology (B.Sc. IT)

Name	Designation	Signature
1. Dr. Yogeshwari Patil	Chairperson	
2. Dr. Hiren Dand	Expert nominated by Vice Chancellor	
3. Prof. Mohan Bonde.	Subject experts from outside the parent university nominated by the Academic Council	
4. Ms. Manasi Vaidya	Subject experts from outside the parent university nominated by the Academic Council	
5. Mr. Vikesh Jha	Representative from the industry	
6. Mr. Hrushikesh Jadhav.	Member of College Alumni	
7. Dr. Manisha Nehete.	Member	

8. Ms. Sonali A. Saraf	Member	
9. Ms. Vrushali Ghodke	Member	
10.Mr. Kiran More.	Member	
11.Mrs. Sneha Gupta	Member	
12.Ms. Aafreen Shaikh.	Member	
13.Mr. Shravan Mishra	Member	
14.Ms. Nayana Lagade	Member	
15.Mr. Nilesh Pandey	Member	
16.Ms. Priyanka Rajput	Member	