



(Shri Ramkrishna Seva Mandal's)
ANAND COMMERCE COLLEGE

An Autonomous College (2025-26 to 2034-35)

(Affiliated to Sardar Patel University)

NAAC ACCREDITED 'A' GRADE (3.04 CGPA)

ISO 9001:2015

Syllabus as per NEP 2020 with effect from the Academic Year 2026-27



BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04MABCA01	Title of the Course	Object-Oriented Programming using Java
Total Credit of Course	04	Hours Per Week	04

Course Objectives	1. To understand the fundamentals of Java programming and OOP concepts 2. To develop skills in class design, interfaces, and object creation 3. To apply inheritance, exception handling, and package concepts 4. To use core Java libraries and collections effectively 5. To gain basic knowledge of I/O operations, multithreading, and JDBC
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Java ➤ History and Features of Java ➤ OOP vs POP ➤ Basic Concepts of OOP ➤ Java Virtual Machine (JVM) and Java Features ➤ Structure of Java Program ➤ Tokens, Variables, Data Types, Scope and Type Casting ➤ Basic Operators ➤ Decision Making (if, switch) ➤ Looping (while, do-while, for, for-each) ➤ Break and continue ➤ Arrays (One-dimensional and Two-dimensional)	20%
2.	Classes, Objects, and Interfaces ➤ Defining Classes and Objects ➤ Members of Class (Variables and Methods) ➤ Access Specifiers (public, private, protected, default) ➤ Encapsulation ➤ Static vs Instance Members ➤ Constructors and Constructor Overloading ➤ Method Overloading ➤ Interfaces ➤ Abstract Classes and Methods	20%

3.	Inheritance, Packages, and Exception Handling ➤ Introduction to Inheritance ➤ this and super keywords ➤ Polymorphism ➤ Method Overriding ➤ Final Keyword (variables, methods, classes) ➤ Java Packages (API and User-defined) ➤ Exception Handling: try, catch, throw, throws, finally ➤ User-defined Exceptions	20%
4.	Core Java Libraries ➤ Autoboxing and Wrapper Classes ➤ Java.lang Package (String, StringBuffer, Comparable Interface) ➤ Basic Introduction to Collection Framework • Collection Interface • List and Set Interfaces • ArrayList and LinkedList • HashSet and TreeSet	20%
5.	I/O Management, Multithreading and JDBC I/O Management ➤ Introduction to I/O Streams ➤ Character Stream Classes Multithreading ➤ Basic Concept of Multithreading ➤ Thread Life Cycle ➤ Creating Threads ➤ Basic Thread Methods and Synchronization JDBC ➤ Introduction to JDBC ➤ JDBC Architecture	20%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks	25 Marks
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to	
CO1.	Understand and apply basic Java programming constructs including control structures and arrays.
CO2.	Develop programs using classes, objects, interfaces, and encapsulation principles.
CO3.	Apply inheritance, polymorphism, packages, and exception handling in Java programs.
CO4.	Utilize core Java libraries and collection framework for data handling.

CO5.	Demonstrate basic concepts of I/O streams, multithreading, and JDBC architecture.
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Suggested References:	
Sr.No.	Textbooks
1.	Balaguruswami, E. (2019). <i>Programming with Java: A primer</i> (5th ed.). McGraw-Hill Education.
2.	Schildt, H. (2019). <i>Java: The complete reference</i> (11th ed.). McGraw-Hill Education.
Sr.No.	Reference Books
1.	Zame, S. (1999). <i>Handbook of object technology</i> . CRC Press.
2.	Campione, M., & Walrath, K. (1998). <i>The java tutorial</i> (2nd ed.). Addison-Wesley.
3.	Holzner, S. (2005). <i>Java 2 programming black book</i> . Dreamtech Press.
4.	Sierra, K., & Bates, B. (2022). <i>Head first Java</i> (3rd ed.). O'Reilly Media.
5.	Horstmann, C. S. (2021). <i>Core Java volume I—fundamentals</i> (12th ed.). Pearson.
Digital Resources	
1.	Oracle Corporation. (n.d.). <i>Java documentation</i> . https://docs.oracle.com/javase/
2.	Oracle Corporation. (n.d.). <i>Java tutorials</i> . https://docs.oracle.com/javase/tutorial/
3.	National Programme on Technology Enhanced Learning (NPTEL). (n.d.). <i>Programming in java course</i> . https://nptel.ac.in/courses/106105191
4.	GeeksforGeeks. (n.d.). <i>Java programming</i> . https://www.geeksforgeeks.org/java/
5.	W3Schools. (n.d.). <i>Java tutorial</i> . https://www.w3schools.com/java/
6.	Coursera. (n.d.). <i>Java programming courses</i> . https://www.coursera.org/courses?query=java





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04MABCA02	Title of the Course	Operating System
Total Credit of Course	04	Hours Per Week	04

Course Objectives	1. Understand the basics of Operating Systems, types, and structure 2. Learn CPU scheduling, memory management, synchronization, and deadlocks 3. Gain practical skills using Linux commands and shell scripting 4. Apply OS concepts in real-world scenarios
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Operating System ➤ Introduction to OS and OS Services ➤ Types of Operating Systems: Real-time, Time-sharing, Distributed, Multiprogramming ➤ Simple comparison: Batch vs Time-sharing vs Real-time OS ➤ OS Structure: Simple Structure, Layered Approach, Microkernel ➤ Kernel and Shell overview	20%
2.	Process Management and CPU Scheduling ➤ Process and Process Control Block (PCB) ➤ Process States and State Transition Diagram ➤ Threads and Multithreading ➤ CPU Scheduling Algorithms: FCFS, SJF, Priority, Round Robin ➤ Context Switching ➤ Starvation and Aging	20%
3.	Memory Management ➤ Concept of Memory Management ➤ Basic Memory Allocation Techniques ➤ Swapping and Paging ➤ Fragmentation: Internal and External ➤ Concept of Page Fault ➤ Page Replacement Algorithms: FIFO, LRU, OPT ➤ Virtual Memory and Demand Paging	20%
4.	Process Synchronization and Deadlocks ➤ Cooperating Processes ➤ Process Synchronization ➤ Critical Section Problem ➤ Two-process solution ➤ Deadlock: Concept, Conditions, Characterization, Prevention, and	20%

	Avoidance	
5.	Linux Basics and Shell Scripting ➤ Introduction to Linux OS and Features • Basic Linux Commands: ○ Navigation: pwd, ls, cd, dir ○ File Management: mkdir, rmdir, cp, mv, rm, cat, rev, wc, echo ○ File Access Permissions (FAP) and chmod command ○ Wildcard usage and File Redirection ○ Searching/Processing: grep, cut, paste, find, sort ○ Environment Variables (basic) ○ Pipes () and Redirection (>, >>, <) • Shell Scripting: ○ Script Execution, Variables, expr, test commands ○ Control Structures: if, if..else, case ○ Iteration: while, for ○ Commands: break, continue, exit	20%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to	
CO1	Understand basic OS concepts, types, services, and OS structure.
CO2	Apply process management, CPU scheduling, and multithreading concepts.
CO3	Understand memory management, paging, virtual memory, and fragmentation.
CO4	Apply process synchronization and deadlock prevention techniques.
CO5	Use Linux commands and write basic shell scripts with control and iteration.

Suggested References	
Sr.No.	Textbooks
1.	Tanenbaum, A. S., & Woodhull, A. S. (2006). <i>Operating systems: Design and implementation</i> (3rd ed.). Prentice Hall.
2.	Silberschatz, A., Galvin, P. B., & Gagne, G. (2018). <i>Operating system concepts</i> (10th

	ed.). Wiley.
Sr.No.	Reference Books
1.	Pfaffenberger, B. (2001). <i>Linux commands instant reference</i> . BPB Publication.
2.	Das, S. (2017). <i>UNIX: Concepts and applications</i> (4th ed.). McGraw-Hill Education.
3.	Love, R. (2013). <i>Linux system programming</i> (2nd ed.). O'Reilly Media.
Digital Resources	
1.	The Linux Documentation Project. (n.d.). <i>Linux man pages and guides</i> . https://www.tldp.org/
2.	Linux Foundation. (n.d.). <i>Linux tutorials and training</i> . https://training.linuxfoundation.org/
3.	TutorialsPoint. (n.d.). <i>Operating system tutorial</i> . https://www.tutorialspoint.com/operating_system/
4.	GeeksforGeeks. (n.d.). <i>Operating system concepts and linux commands</i> . https://www.geeksforgeeks.org/operating-systems/
5.	Guru99. (n.d.). <i>Linux commands and shell scripting tutorials</i> . https://www.guru99.com/linux-tutorial.html
6.	IBM Developer. (n.d.). <i>Linux and shell scripting resources</i> . https://developer.ibm.com/technologies/linux/





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04MIBCA04	Title of the Course	Server-Side Web Programming Using PHP
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. Understand basics of PHP and server-side programming 2. Learn to create dynamic web pages using PHP 3. Connect PHP with databases (MySQL) and perform CRUD operations 4. Apply practical PHP programming in web applications
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to PHP ➤ Introduction to PHP and Server-Side Programming ➤ Features and Benefits of PHP ➤ PHP Syntax, Variables, Data Types, Constants ➤ Operators: Arithmetic, Relational, Logical, Assignment ➤ PHP Expressions and Precedence ➤ PHP Strings and String Functions ➤ PHP Arrays: Indexed, Associative, Multidimensional ➤ PHP Conditional Statements: if, if...else, switch ➤ PHP Loops: for, while, do...while, foreach	35%
2.	PHP Functions, Forms, and File Handling ➤ PHP Functions: User-defined, Built-in, Parameter Passing, Return Values ➤ PHP Include and Require ➤ Handling HTML Forms with PHP: GET and POST methods ➤ Form Validation Techniques ➤ File Handling in PHP: fopen, fread, fwrite, fclose ➤ File Uploading using PHP ➤ Introduction to Cookies and Sessions	35%
3.	PHP and Database Connectivity ➤ Introduction to MySQL and Database Concepts ➤ Connecting PHP with MySQL using mysqli and PDO ➤ Performing CRUD Operations (Create, Read, Update, Delete) ➤ Executing SQL Queries in PHP (SELECT, INSERT, UPDATE, DELETE)	30%

	➤ Handling Errors and Exceptions in PHP	
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Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to	
CO1	Understand PHP syntax, variables, arrays, operators, and control structures
CO2	Apply functions, forms, file handling, and manage sessions/cookies
CO3	Connect PHP to databases, perform CRUD operations, and handle errors

Suggested References	
Sr.No.	Textbooks
1.	Vaswani, V. (2010). <i>PHP: A beginner's guide</i> . McGraw-Hill Education.
2.	Park, J., Suehring, S., & Converse, T. (2013). <i>PHP and MySQL bible</i> (2nd ed.). Wiley.
Sr.No.	Reference Books
1.	Bayross, I. (2010). <i>Web-enabled commercial application development using html, javascript, dhtml, and php</i> . BPB Publication.
Digital Resources	
1.	PHP: Hypertext Preprocessor. (n.d.). <i>Official php documentation</i> . https://www.php.net/docs.php
2.	W3Schools. (n.d.). <i>Php tutorial</i> . https://www.w3schools.com/php/
3.	TutorialsPoint. (n.d.). <i>Php tutorial</i> . https://www.tutorialspoint.com/php/





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04AEBCA06	Title of the Course	Software Project Management and System Design Skills
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To provide basic understanding of system analysis and design concepts 2. To introduce fundamental principles of software project management 3. To develop knowledge of system modeling techniques and project planning
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to System Analysis ➤ Introduction to System and Information System ➤ Types of Information Systems ➤ Role of System Analyst ➤ System Development Life Cycle (SDLC) ➤ Feasibility Study (Technical, Economic, Operational) ➤ Requirement Gathering Methods (Interview, Questionnaire) ➤ Introduction to Software Project Management	35%
2.	System Design Concepts ➤ Overview of System Design ➤ Design Principles (Modularity, Coupling, Cohesion) ➤ Entity Relationship (ER) Diagram ➤ Introduction to UML (Use Case, Class Diagram) ➤ Input and Output Design	35%
3.	Software Project Management Concepts ➤ Introduction to Project Management ➤ Project Planning ➤ Role of Project Manager ➤ Introduction to Agile Methodology ➤ Software Testing Concepts (Unit & Integration) ➤ Project Documentation	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to

CO1	Describe the basic concepts of system analysis, SDLC, and requirement gathering techniques.
CO2	Understand system design principles and modeling techniques such as DFD and ER diagrams
CO3	Describe fundamental concepts of software project management, including planning and documentation.

Suggested References:

Sr.No.	Textbooks
1.	Parthasarthy, S., & Khalkar, B. W. (2012). <i>System analysis & design</i> (1st ed.). Master Ed. Cons., Nashik.
2.	Hughes, B., Cotterell, M., & Mall, R. (2017). <i>Software project management</i> (6th ed.). Tata McGraw Hill.
Sr.No.	Reference Books
1.	Senn, J. A. (1989). <i>Analysis and design of information systems</i> (2nd ed.). McGraw-Hill International.
2.	Rajaraman, V. (2018). <i>Analysis and design of information systems</i> . Prentice Hall of India.
3.	Wysocki, R. K. (2019). <i>Effective software project management</i> . Wiley.
4.	Royce, W. (1998). <i>Software project management</i> . Addison-Wesley.
5.	Ramesh, G. (2013). <i>Managing global software projects</i> (14th reprint). McGraw Hill Education (India).
Digital Resources	
1.	National Programme on Technology Enhanced Learning (NPTEL). (n.d.). <i>Software engineering and project management courses</i> . https://nptel.ac.in
2.	SWAYAM. (n.d.). <i>Online courses on software engineering and related subjects</i> . https://swayam.gov.in
3.	TutorialsPoint. (n.d.). <i>System analysis and design tutorial</i> . https://www.tutorialspoint.com
4.	GeeksforGeeks. (n.d.). <i>Software engineering tutorials</i> . https://www.geeksforgeeks.org





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04SEBCA07A	Title of the Course	Digital Literacy and social media marketing
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To develop foundational understanding of digital literacy concepts, ethics, and challenges. 2. To understand the role of social media in influencing consumer behavior and engagement. 3. To equip students with skills to design and evaluate effective social media marketing strategies.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Digital Literacy ➤ Basics of Digital Literacy and its Types ➤ Digitizing Information ➤ Values and Ethics of Digital Literacy ➤ Significance of Digital Literacy ➤ Characteristics of Digital Literacy ➤ The Role of Language in Digital Literacy ➤ Challenges in Digital Literacy	35%
2.	Social Media and Consumer Engagement ➤ Use of Social Media by Organizations ➤ Use of Social Media by Consumers ➤ Social Feedback Cycle ➤ Open Access to Information ➤ Social Business ➤ The Connected Customer ➤ Social Web and Engagement ➤ Engagement Process ➤ The Operations and Marketing Connection	35%
3.	Social Media Marketing Plan ➤ Creating a Social Media Marketing Plan ➤ Social Media Planning Cycle ➤ Social Listening	30%

	➤ Assessing Social Media Presence ➤ Assessing Brand Sentiment ➤ Social Media Competitive Analysis ➤ Social Media Goals ➤ Social Media Strategy	
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Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learners will be able to

1.	Explain digital literacy, its importance, and associated challenges.
2.	Analyze social media platforms and their impact on consumer engagement.
3.	Create and assess a comprehensive social media marketing plan.

Suggested References:

Sr.No.	References
1.	Kotler, P., Kartajaya, H., & Setiawan, I. (2017). Marketing 4.0: Moving from traditional to digital. John Wiley & Sons.
2.	Ryan, D. (2016). Understanding digital marketing: Marketing strategies for engaging the digital generation (4th ed.). Kogan Page.
3.	Tuten, T. L., & Solomon, M. R. (2020). Social media marketing (3rd ed.). Sage Publications.
4.	Chaffey, D., & Ellis-Chadwick, F. (2019). Digital marketing: Strategy, implementation and practice (7th ed.). Pearson.
5.	Belshaw, D. (2014). The essential elements of digital literacies. Self-published.

Digital Resources

1. https://ebooks.lpude.in/newscheme/computer_application/msc/sem_3/DEMKT505_DIGITAL_AND_SOCIAL_MEDIA_MARKETING.pdf
2. https://www.msuniv.ac.in/images/distance%20education/learning%20materials/ug%20pg%202023/ug%202021/JSEN22_II_Sem_Digital_Literacy_and_Concepts.pdf





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04SEBCA07B	Title of the Course	Fundamentals of Entrepreneurship
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To develop conceptual understanding of entrepreneurship, its types, functions, and its role in economic development. 2. To build awareness of entrepreneurial mindset and understand motivational factors and theories influencing entrepreneurial behaviour. 3. To enable students to identify business ideas and opportunities using appropriate techniques and basic opportunity analysis.
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Course Content		
Unit	Description	Weightage* (%)
1.	Basics of Entrepreneurship ➤ Concept and meaning of entrepreneur and entrepreneurship ➤ Characteristics of an entrepreneur ➤ Functions of an entrepreneur ➤ Types/Classification of entrepreneurs ➤ Entrepreneur vs Manager ➤ Role of entrepreneurship in economic development	35%
2.	Entrepreneurial Mindset and Motivation ➤ Entrepreneurial Mindset: Meaning and characteristics ➤ Entrepreneurial Motivation: Concept and meaning ➤ Motivating factors ➤ Motivation theories • Maslow's need hierarchy theory • McClelland's Theory of Needs (Achievement Motivation)	35%
3.	Business Idea Generation and Opportunity Identification ➤ Meaning and importance of business ideas ➤ Sources of business ideas ➤ Methods/Techniques of idea generation ➤ Opportunity identification: meaning and concept ➤ Sources of business opportunities ➤ Opportunity analysis	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Learning Outcomes: Having completed this course, the learners will be able to	
1.	Explain the concepts of entrepreneur and entrepreneurship, and describe their characteristics, types, functions, and role in economic development.
2.	Develop an entrepreneurial mindset, explain motivation theories, and relate motivational factors to entrepreneurial behaviour.
3.	Identify and analyze business ideas and opportunities using appropriate techniques and perform basic opportunity analysis.

Suggested References:	
Sr.No.	References
1.	Desai, V. (2011). The dynamics of entrepreneurial development and management (6th ed.). Himalaya Publishing House.
2.	Baporikar, N. (2024). Entrepreneurship development and project management (Text and cases) (4th ed.). Himalaya Publishing House.
3.	Gupta, C. B., & Srinivasan, N. P. (2022). Entrepreneurship development in India. Sultan Chand & Sons.
4.	Hattangadi, V. (2007). Entrepreneurship: Need of the hour. Himalaya Publishing House.
5.	Appannaiah, H. R., Madhu, S., & Bhaskar, H. A. (2024). Entrepreneurship and startups ecosystem. Himalaya Publishing House.
6.	Khanka, S. S. (2019). <i>Entrepreneurship development</i> (Revised ed.). S. Chand Publishing.
Digital Resources	
https://icmai.in/upload/Students/Syllabus2022/Final_Stdy_Mtrl/P20C.pdf	
https://onlinecourses.nptel.ac.in/noc26_mg11/preview	
https://onlinecourses.swayam2.ac.in/e-learning/preview/ntr26_ed06	





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04SEBCA07C	Title of the Course	FINANCE FOR EVERYONE
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1) To develop a basic understanding of financial literacy, financial planning, and budgeting for effective personal financial management. 2) To familiarize students with different financial services and equip them with knowledge of popular services such as banking systems, insurance products, and post office schemes. 3) To enable students to understand the fundamental concepts of stock markets and investments.
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Course Content		
Unit	Description	Weightage* (%)
1.	Financial Planning and Budgeting ➤ Meaning and importance of financial literacy ➤ Role of financial literacy in economic well-being ➤ Financial Planning: Meaning, importance, need, Steps/process of financial planning: ➤ Overview of Financial Institutions ➤ Budgeting: Meaning and Types of budgets - Personal budget, Family budget, Business budget, National budget ➤ Budget preparation process	35%
2.	Financial Services ➤ Meaning of financial services, Scope and importance in daily life i) Banking Services ➤ Types of banks (commercial, cooperative, etc.) ➤ Banking products and services ➤ Deposit Accounts: Savings Account, Current Account, Term Deposit (FD), Recurring Deposit (RD) ➤ Digital Payment Systems ATM, Debit/Credit Cards Net banking and mobile banking Digital payment systems: RTGS, NEFT, IMPS, ECS, App-based payments ii) Financial Services by Post Office ➤ Savings schemes: Savings Account, RD, TD, Monthly Income Scheme, PPF, NSC, Kisan Vikas Patra, Sukanya Samriddhi Yojana Senior	35%

	Citizen Savings Scheme ➤ India Post Payments Bank ➤ Money transfer services: Money Order, e-Money Order, International transfers (Western Union, MoneyGram), Indian Postal Order iii) Insurance Services ➤ Meaning and importance of insurance, Types of insurance ➤ Life Insurance and Health Insurance – Need and features	
3.	Stock Markets ➤ Introduction to Stock Markets ➤ Meaning and functions of Stock Markets ➤ Primary vs Secondary markets ➤ Market Indices: SENSEX and NIFTY ➤ Market instruments: Equity shares, Preference shares and Debentures ➤ Corporate actions: Dividend, Bonus shares, Stock split, Buyback ➤ Market Operations (Concept only): IPO, FPO, OFS, Block deals ➤ Trading process: Pre-opening session, trading session, Opening and closing price, Business days ➤ Concept of Market value, face value and Market capitalization ➤ Blue-chip and defensive stocks ➤ Risk and Trading Basics ➤ Bull and bear markets ➤ Risk and return ➤ Stop loss ➤ Holding period ➤ Introduction to Derivatives ➤ Short-term capital gains (STCG) and Long-term capital gains (LTCG)	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internaland/orExternalExaminationEvaluation

Sr.No.	DetailsoftheEvaluation/ExamPattern	50Marks (%)	25Marks (%)
1	ClassTest(atleastone)	15 (30%)	10 (40%)
2	Quiz(atleastone)	15 (30%)	05 (20%)
3	ActiveLearning	05 (10%)	----
4	HomeAssignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
TotalInternal(%)		50 (100%)	25 (100%)
College External Examination(%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learners will be able to	
1.	Explain key concepts of financial literacy, budgeting, financial institutions, and financial services.
2.	Apply financial planning tools and analyze various banking, insurance, and investment options for personal financial decisions.
3.	Evaluate stock market instruments and financial products based on risk, return, and suitability for different financial goals.

Suggested References:	
Sr.No.	References
1.	Murali, S., & Subbakrishna, K. R. (2017). <i>Personal financial planning (wealth management)</i> . Himalaya Publishing House.
2.	Gitman, L. J., Joehnk, M. D., & Billingsley, R. S. (2016). <i>Personal financial planning</i> (14th ed.). Cengage Learning.
3.	Mittra, S., Rai, S. K., Sahu, A. P., & Starn, H. J. (2011). <i>Financial planning: Theory and practice</i> . Sage Publications.
4.	Gordon, E., & Natarajan, K. (2023). <i>Financial markets and services</i> (12th ed.). Himalaya Publishing House.
5.	Madura, J. (2025). <i>Personal finance</i> (8th ed.). Pearson.
6.	Devindra Kumar Anand (2020), <i>Finance for Everyone</i> , Vikas Publication House Pvt. Ltd.
Digital Resources	
1.	https://www.lpude.in/SLM/Master%20of%20Business%20Administration/Sem_4/DMGT515_PERSONAL_FINANCIAL_PLANNING.pdf
2.	https://www.sultanchandandsons.com/images/BookImages/Chapters/674_TC%201312_Booklet.pdf
3.	https://ncfe.org.in/wp-content/uploads/2023/12/Personal-Finance-for-School-Students.pdf





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BACHELOR OF COMPUTER APPLICATION BCA Semester – IV

Course Code	UCA04SEBCA07D	Title of the Course	Statistical Methods
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. Define and explain the concepts of correlation and measure the relationship between variables using appropriate methods. 2. Explain the concept of regression and apply regression lines and coefficients for prediction and analytical purposes. 3. Describe the concept and construction of index numbers, including price index and cost of living index, and apply them in practical situations.
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Course Content		
Unit	Description	Weightage* (%)
1.	Correlation ➤ Introduction and meaning, interpretation and types of correlation. ➤ Method to study Correlation: Scatter Diagram, Karl Pearson's Product Moment Methods, Spearman's Rank correlation. ➤ Properties of Correlation and Example based on Probable Error.	35%
2.	Regression ➤ Introduction and meaning of Regression. ➤ Regression Lines, Regression Coefficients, Regression Equations ➤ Properties of Regression co-efficient, examples based on regression line equations, ➤ regression co-efficient.	35%
3.	Index Numbers ➤ Introduction, Meaning, Importance and uses of Index Numbers. ➤ Fix based method and chain-based method ➤ Examples of Laspeyre's, Paasche's, Fisher's, Dorbish & Bowley's and Marshall Edgeworth ➤ Time Reversal Test and Factors Reversal Test ➤ Cost of Living Index Number and related examples by	30%

	1. Family Budget Method 2. Total Expenditure Method.	
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Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learners will be able to	
1.	Understand and calculate correlation using Scatter Diagram, Karl Pearson's method, and Spearman's rank correlation, and interpret the relationship between variables.
2.	Apply regression analysis by finding regression coefficients, forming regression equations, and using regression lines for estimation and prediction.
3.	Construct and interpret index numbers, including wholesale price index and cost of living index, and verify them using Time Reversal and Factor Reversal tests.

Suggested References:	
Sr.No.	References
1.	Sancheti, D. C., & Kapoor, V. K. (2010). <i>Statistics: Theory, methods and applications</i> . Sultan Chand & Sons.
2.	Kapoor, V. K. (2012). <i>Business mathematics: Theory and applications</i> . Sultan Chand & Sons.
3.	Gupta, S. P. (2019). <i>Statistical methods</i> . Sultan Chand & Sons.
4.	Trivedi, K., & Trivedi, P. (2014). <i>Business mathematics</i> . Pearson India Limited.
5.	Kapoor, V. K., & Gupta, S. C. (2014). <i>Fundamentals of statistics</i> . Sultan Chand & Sons.
Digital Resources	
https://www.youtube.com/watch?v=-hHEUp57DBE	
https://www.youtube.com/watch?v=SJyhSU8PsTk	
https://www.youtube.com/watch?v=OxoCJRdFXfU	





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BACHELOR OF COMPUTER APPLICATION BCA Semester – IV

Course Code	UCA04SEBCA07E	Title of the Course	Soft Skills for Business-II
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To understand the nature, scope, and significance of emotional intelligence and strategies to enhance it. 2. To understand the concept, objectives, and importance of corporate relationships and public relations practices. 3. To understand different behavioral styles and strategies for developing assertive behavior.
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Course Content		
Unit	Description	Weightage* (%)
1.	Emotional Intelligence: ➤ Nature and Significance of Emotional Intelligence ➤ Scope and Types of Emotional Intelligence ➤ Correlates of Emotional Intelligence ➤ Strategies to Enhance Emotional Intelligence	35%
2.	Corporate Relationship: ➤ Introduction Objective of CR ➤ The Need for CR ➤ The 'Publics' of PR Internal & External PR ➤ The Public Relations Society of India (PRSI) Image Building ➤ Use of Mass & Social Media for CR	35%
3.	Assertiveness: ➤ Introduction ➤ Four Different Life Style ➤ Positive and Negative Thinking ➤ Strategies for Assertive Behaviour	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learners will be able to	
1.	Apply emotional intelligence strategies to manage emotions and improve interpersonal relationships.
2.	Analyze and apply public relations strategies for effective corporate image building and communication.
3.	Demonstrate assertive communication skills in personal and professional situations.

Suggested References:	
Sr.No.	References
1.	Kaul, A. (2002). <i>Business communication</i> . Prentice Hall of India Pvt. Ltd.
2.	Kaul, A. (2009). <i>Effective business communication</i> . Prentice Hall (Economy Edition).
3.	Pal, R., & Korlahalli, J. S. (2011). <i>Essentials of business communication</i> . Sultan Chand & Sons.
4.	Pradhan, H., & Pradhan, N. S. (2005). <i>Business communication</i> (4th ed.). Himalaya Publishing House.
5.	Raman, M., & Singh, P. (2009). <i>Business communication</i> (13th ed.). Oxford University Press.
6.	Rai, U. S., & Rai, S. M. (2012). <i>Business communication</i> . Himalaya Publishing House.
7.	Sharma, R. P., & Mohan, K. (2002). <i>Business communication and report writing</i> . Tata McGraw-Hill.
8.	Alex, K. (2010). <i>Soft skills</i> . S. Chand & Sons.
9.	Chaturvedi, P. D., & Chaturvedi, M. (2011). <i>Business communication: Concepts, cases, and applications</i> (2nd ed.). Pearson Education India.
10.	Verma, S. (2013). <i>Enhancing employability @ soft skills</i> . Pearson India.
11.	Wadkar, A. (2016). <i>Life skills for success</i> . SAGE Publications India Pvt. Ltd.
Digital Resources	
https://www.skillsyouneed.com/ps/emotional-intelligence.html	

https://www.mindtools.com/pages/main/newMN_TCS.htm

<https://instituteforpr.org>





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BACHELOR OF COMPUTER APPLICATION BCA Semester – IV

Course Code	UCA04SEBCA07F	Title of the Course	Information and Cyber Security
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. Provide fundamental knowledge of information security principles 2. Introduce theoretical concepts of cyber threats and protection mechanisms 3. Develop understanding of legal, ethical, and social issues in cyber security
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Course Content		
Unit	Description	Weightage* (%)
1.	Fundamentals of Information Security ➤ Introduction to Information Security ➤ Need and Importance of Cyber Security ➤ Basic Concepts: Confidentiality, Integrity, Availability (CIA Triad) ➤ Types of Information Systems and Security Needs ➤ Types of Cyber Threats and Attacks ➤ Classification of Malware	35%
2.	Security Mechanisms and Cryptography ➤ Introduction to Security Mechanisms ➤ Authentication and Authorization ➤ Basics of Cryptography ➤ Encryption and Decryption Concepts ➤ Symmetric and Asymmetric Cryptography ➤ Digital Signatures and Certificates ➤ Firewalls and Intrusion Detection Systems	35%
3.	Cyber Laws, Ethics and Security Issues ➤ Introduction to Cyber Law ➤ Overview of IT Act (India) ➤ Cyber Crimes: Types and Classification ➤ Cyber Ethics and Professional Responsibility ➤ Privacy Issues in Information Systems ➤ Social and Legal Challenges in Cyber Security	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to

CO1	Describe fundamental concepts of information security and types of cyber threats.
CO2	Explain theoretical aspects of security mechanisms and cryptographic techniques.
CO3	Discuss cyber laws, ethics, and issues related to cyber security.

Suggested References

Sr.No.	Textbooks
1.	Stamp, M. (2011). <i>Information security: Principles and practice</i> (2nd ed.). Wiley.
2.	Graham, J., Olson, R., & Howard, R. (2017). <i>Cyber security essentials</i> . CRC Press.
Sr.No.	Reference Books
1.	Stallings, W. (2017). <i>Cryptography and network security: Principles and practice</i> (7th ed.). Pearson.
2.	Godbole, N., & Belapure, S. (2011). <i>Cyber security: Understanding cyber crimes, computer forensics and legal perspectives</i> . Wiley India.
3.	Stallings, W. (2014). <i>Network security essentials: Applications and standards</i> (5th ed.). Pearson.
Digital Resources	
1.	National Programme on Technology Enhanced Learning (NPTEL). (n.d.). <i>Cyber security courses</i> . https://nptel.ac.in
2.	SWAYAM. (n.d.). <i>Online cyber security courses</i> . https://swayam.gov.in
3.	TutorialsPoint. (n.d.). <i>Cyber security tutorial</i> . https://www.tutorialspoint.com
4.	GeeksforGeeks. (n.d.). <i>Cyber security tutorials</i> . https://www.geeksforgeeks.org
5.	Guru99. (n.d.). <i>Cyber security and software testing tutorials</i> . https://www.guru99.com





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04VABCA08 A	Title of the Course	Climate Change and Sustainable Development
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To develop understanding of sustainable development concepts, environmental sustainability principles, and their importance in addressing environmental issues. 2. To analyze environmental challenges such as pollution, climate change, and resource depletion, along with their causes, effects, and control measures. 3. To promote practical awareness and responsibility among students regarding environmental protection, resource management, and community participation in sustainable practices.
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Course Content		
Unit	Description	Weightage * (%)
1	Environmental Sustainability ➤ Concept and Meaning of Sustainable Development ➤ Framework of Sustainable Development: pillars (environmental, economic, social) with focus on environmental pillar ➤ Environmental Goals: conservation of natural resources, pollution control, climate mitigation, biodiversity protection ➤ Environmental Sustainability Principles: sustainable use of air, water, soil, energy, and ecosystems ➤ Challenges in Environmental Sustainability: human activity, industrialization, urbanization, and resource depletion ➤ Case Study: National or local environmental sustainability initiative	35%
2.	Pollution and Environmental Challenges ➤ Air Pollution: causes, effects, and control measures ➤ Water Pollution: sources, impacts, and mitigation ➤ Soil Pollution: causes and remediation ➤ Marine Pollution: causes and ecosystem impacts ➤ Noise Pollution: sources, effects, and prevention ➤ Linkages to Climate Change: how pollution contributes to Acid rain and ozone depletion ➤ Case Study: Urban air pollution management	35%

3	Climate Change, Water Resource Management, and Community Action ➤ Climate Change and Global Warming: causes, impacts, mitigation strategies ➤ Water Management: rainwater harvesting, watershed management, urban water conservation ➤ Role of Individuals and Communities in environmental protection ➤ Slum-Specific Environmental Problems and mitigation strategies ➤ Disaster Management: floods, earthquakes, landslides	30%
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Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and / or External Examination Evaluation

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to	
1.	Explain the concept and principles of sustainable development, understand environmental goals, and identify challenges in sustainability, enabling them to apply environmentally responsible practices..
2.	Analyze various types of pollution, their causes, effects, and mitigation measures, and understand the linkages between pollution and climate change, contributing to environmental protection initiatives.
3.	Evaluate climate change issues, implement resource management strategies like water conservation and watershed management, and participate in community-based environmental protection and disaster preparedness activities.

Suggested References:	
Sr.No.	References
1.	Dhameja, S. K. (n.d.). <i>Environmental studies</i> . SK Kataria & Sons. New Delhi, India.
2.	Sharma, C. K. (n.d.). <i>Introduction to environmental studies</i> . Vrinda Publications Pvt. Ltd. New Delhi, India.
3.	Bharucha, E. (n.d.). <i>Textbook of environmental studies for undergraduate courses</i> . University Grants Commission / Universities Press.
4.	Malik, A., & Grohmann, E. (Eds.). (2012). <i>Environmental protection strategies for sustainable development</i> . Springer.
5.	Fulekar, M. H., Pathak, B., & Kale, R. K. (Eds.). (2014). <i>Environment and sustainable development</i> . Springer India.
Digital Resources	
https://www.niti.gov.in/sites/default/files/2024-07/SDG_India_Index_2023-24.pdf?	
Hussain, S. (2024). <i>Environmental pollution: A global challenge</i> . <i>Environmental Pollution & Climate Change</i> , 8(4), 398. Retrieved from https://www.omicsonline.org/open-access-pdfs/environmental-pollution-a-global-challenge.pdf	
Schütte, P. (2024). <i>Sustainable development overview</i> . <i>Environment, Development and Sustainability</i> .	





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04VABCA08B	Title of the Course	Financial Literacy
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To explain and apply fundamental concepts of financial literacy and financial planning in managing personal finances. 2. To identify and demonstrate the use of various financial products and digital payment systems with appropriate safety measures. 3. To analyze and apply basic investment principles and personal tax planning techniques for informed financial decisions.
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Course Content		
Unit	Description	Weightage* (%)
1.	Financial literacy and Financial Planning ➤ Concept, Definition, Benefits of Financial literacy ➤ Key concepts of personal finance ➤ Concept of Time value of Money ➤ Financial Goals - Meaning and Need ➤ Concept, Steps, benefits of Financial Planning ➤ Management of spending and financial discipline.	35%
2.	Financial Products and Digital Payment ➤ Concept and types of different financial products ➤ Digitization of financial transactions: Debit Cards (ATM Cards) and Credit Cards.Net banking and UPI, digital wallets ➤ Security and precautions against Ponzi schemes and online frauds.	35%
3.	Investment Management and Personal Tax Planning ➤ Concept, meaning, Objectives of Investment ➤ Risk and Return- Concept ➤ Portfolio Management- Meaning and Process ➤ Personal Tax : Introduction , Need for tax planning, basic Tax Structure in India for personal taxation; Exemptions and deductions for individuals; e-filing.	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and/or External Examination Evaluation

Sr. No.	Details of the Evaluation/Exam Pattern	50Marks (%)	25Marks (%)
1	Class Test(at least one)	15 (30%)	10 (40%)
2	Quiz(at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal(%)		50 (100%)	25 (100%)
College External Examination(%)		50 (100%)	25 (100%)

Course Learning Outcomes: Having completed this course, the learners will be able to	
1.	Apply financial literacy concepts to prepare a basic personal financial plan with goals and budgeting.
2.	Identify and use appropriate financial products and demonstrate secure digital payment practices.
3.	Analyze investment options and apply basic tax planning methods, including demonstrating e-filing procedures.

Suggested References:	
Sr.No.	References
1.	Khan, M. Y., & Jain, P. K. (2019). <i>Financial management: Text, problems and cases</i> (8th ed.). McGraw-Hill Education.
2.	Madura, J. (2020). <i>Personal finance</i> (6th ed.). Pearson Education.
3.	Kapoor, J. R., Dlabay, L. R., & Hughes, R. J. (2017). <i>Personal finance</i> (13th ed.). McGraw-Hill Education.
4.	Chandra, P. (2017). <i>Investment analysis and portfolio management</i> (5th ed.). McGraw-Hill Education.
5.	Agarwal, S. K. (2021). <i>A guide to financial planning</i> . Taxmann Publications.
6.	Bhalla, V. K. (2020). <i>Investment management</i> (19th ed.). S. Chand Publishing.
7.	Singhania, V. K., & Singhania, M. (2023). <i>Students' guide to income tax</i> . Taxmann Publications.
Digital Resources	
Reserve Bank of India (RBI) https://www.rbi.org.in (Financial literacy, banking, digital payments awareness)	
Securities and Exchange Board of India (SEBI) https://www.sebi.gov.in (Investor education, portfolio management, risk-return concepts)	
National Institute of Securities Markets (NISM) https://www.nism.ac.in (Free certification material, investment basics)	
Income Tax Department of India https://www.incometax.gov.in (E-filing, tax structure, deductions, personal taxation)	
Investopedia https://www.investopedia.com (Easy explanations of financial concepts like TVM, portfolio, risk)	
National Centre for Financial Education (NCFE) https://www.ncfe.org.in (Financial literacy programs and study materials)	





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BACHELOR OF COMPUTER APPLICATION
BCA Semester – IV

Course Code	UCA04VABCA08C	Title of the Course	National Service Scheme - II
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To develop awareness among students about health, hygiene, and environmental sustainability, and encourage their active participation in promoting a healthy lifestyle and clean surroundings. 2. To enable students to understand community development processes and foster a sense of social responsibility and active citizenship. 3. To equip students with knowledge and skills for disaster preparedness, response, and community service during emergencies.
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Course Content		
Unit	Description	Weightage* (%)
1.	Health, Hygiene and Environment ➤ Concept of health and hygiene ➤ Importance of sanitation and clean environment ➤ Awareness of communicable and non-communicable diseases ➤ Environmental conservation and sustainable development ➤ Role of youth in promoting health and environmental awareness	35%
2.	Community Development and Social Responsibility ➤ Meaning and importance of community development ➤ Role of youth in rural and urban development ➤ Social responsibility and civic sense ➤ Participation in government and social welfare programs ➤ Awareness of social issues: poverty, illiteracy, gender equality	35%
3.	Disaster Management and Social Service ➤ Meaning and types of disasters (natural and man-made) ➤ Disaster preparedness and safety measures ➤ Role of volunteers during emergencies ➤ First aid and basic life-saving techniques	30%

	➤ Rehabilitation and community support after disasters	
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Teaching-Learning Methodology	Lecture-cum-discussion, Group Discussion, Presentations, Seminars, Tutorials, Research Exercises
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Internal and/or External Examination Evaluation

Sr.No.	Details of the Evaluation/Exam Pattern	50Marks (%)	25Marks (%)
1	ClassTest (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	HomeAssignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Learning Outcomes: Having completed this course, the learners will be able to	
1.	Adopt and promote healthy, hygienic, and environmentally sustainable practices in daily life.
2.	Actively participate in community development activities with a sense of social responsibility and civic awareness.
3.	Respond effectively during disasters by applying basic safety measures, first aid, and volunteer skills.

Suggested References:	
Sr.No.	References
1.	Panwar, J. D. S. (2016). National Service Scheme: A youth volunteers programme for undergraduate students as per UGC guidelines. Astral International Pvt. Ltd.
2.	Jain, A. K., Rathi, B. K., & Panwar, J. D. S. (2025). National Service Scheme: A youth volunteers programme (UGC guidelines). Daya Publishing House.
3.	Sonwani, H. P., & Baghel, M. (2025). National service scheme. Bharat Global Publications.
4.	Kothari, M. (2024). The ultimate guide to National Service Scheme (NSS): Empowering youth for community development and social change. Amazon KDP.
5.	Saiyidain, K. G. (1961). National Service Scheme: A report. Ministry of Education, Government of India.
Digital Resources	
National Digital Library of India (NDLI) Visit NDLI Portal	
National Service Scheme (NSS) Official Website Visit NSS Official Website	
National Portal of India Visit National Portal of India	
NASSDOC (National Social Science Documentation Centre) Visit NASSDOC	





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An Autonomous College (2025-26 to 2034-35)

(Affiliated to Sardar Patel University)

NAAC ACCREDITED 'A' GRADE (3.04 CGPA)

ISO 9001:2015

Syllabus as per NEP 2020 with effect from the Academic Year 2026-27



Bachelor of Computer Application
BCA Semester – IV

Course Code	UCA04VABCA08D	Title of the Course	National Cadet Corps II
Total Credit of Course	02	Hours Per Week	02

Course Objectives	1. To develop an understanding of social service and inspire NCC cadets to actively participate in community welfare and nation-building activities. 2. To create awareness about disasters and equip NCC cadets with basic knowledge to respond effectively during emergency situations. 3. To develop discipline, coordination, and leadership among cadets through the understanding and practice of drill.
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Course Content		
Unit	Description	Weightage* (%)
1.	Social Service & Community Development: ➤ Meaning and importance of Social Service, ➤ Role of NCC Cadets in Social Service, ➤ Advantages of major Social Service Activities {Cleanliness Drives (Swachh Bharat), Blood Donation Awareness, Literacy Campaigns, Rural Development Programs} ➤ Field visits and community service activities {Cleanliness Drives (Swachh Bharat), Blood Donation Awareness, Literacy Campaigns, Rural Development Programs}	35%
2.	Disaster Management: ➤ Meaning of disaster and disaster management ➤ Types of disaster - Natural Disasters (Earthquakes, Floods, Droughts) Man-Made Disasters (Industrial accidents, Road accidents) ➤ Role of NCC Cadets in Disaster Management ➤ Phases of Disaster Management	35%
3.	Drill: ➤ Meaning of drill ➤ Objectives of Drill ➤ Types of Drill {Foot Drill (Without Arms), Drill with Arms (Weapon Drill), Ceremonial Drill (Guard of Honour)} ➤ Importance of drill ➤ Words of Command	30%

Teaching-Learning Methodology	Lecture-cum-discussion, Demonstration method, Audio-visual aids and presentations, Field visits and community service activities
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Internal and/or External Examination Evaluation

Sr. No.	Details of the Evaluation/Exam Pattern	50Marks (%)	25Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
College External Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learners will be able to

1.	Demonstrate social responsibility by actively participating in community service and welfare activities.
2.	Apply basic knowledge of disaster management to respond effectively during emergency situations.
3.	Perform basic drill movements with discipline, coordination, and confidence.

Suggested References:

Sr.No.	References
1.	Gupta, H. K. (n.d.). Disaster management.
2.	Madan, G. R. (n.d.). Community organization and development.
3.	Directorate General, National Cadet Corps. (n.d.). Cadet's handbook (common subjects). Ministry of Defence, Government of India.
4.	Gupta, R. K., & Ghosh, K. K. (n.d.). NCC handbook.
5.	Indian Red Cross Society. (n.d.). First aid manual.

Digital Resources

<https://indiancc.nic.in>

<https://www.redcrossindia.org>

YouTube Educational Channels (NCC Training / Drill / Disaster Management)

