(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 2025-2026

Bachelor of Computer Applications

BCA Semester – I

Course Code	UCA01SEBCA09	**Title of the Course**	Foundations of Computing and Modern Technologies
Total Credits of the Course	2	**Hours per Week**	2

Course Objectives	1. To understand the evolution, components, and types of computer hardware and software. 2. To gain knowledge of number systems, binary arithmetic, and code conversions used in computing. 3. To learn about programming language translators like assemblers, compilers, and interpreters. 4. To explore modern communication technologies such as email, blogging, video conferencing, and the use of LCD projectors.

Course Content		
Unit	**Description**	**Weightage* (%)**
1.	**Fundamental of Computer-** Evolution of Computers, Block Diagram of Computers, Generation of Computers, Software, Types of Software, Hardware, Commonly Used Hardware, Anatomy of the CPU – RAM, ROM, Processor. **Translator-** Assemblers, Compilers, Interpreters	**35%** **11 Hr.**
2.	**Number Systems –** What Is Number System (Positional and Non-Positional), Representation of Integers (Signed and Magnitude, 1"S Complement, 2"S Complement, Excess Notion) Character Code (ASCII, EBCDIC, UNICODE, GRAY CODE). **Conversion Of Numbers:** Binary To Decimal and Decimal to Binary and Binary to Octal and Binary to Hexa Decimal, Addition and Subtraction of Binary Numbers.	**35%** **11 Hr.**

3.	**Modern Technology-** Definition and Examples of Modern Technology **Technology in Communication** Different Communication Mechanisms, E-Mail: Writing E-Mails to Single and Multiple Users, Attaching A File, marketing CC and BCC, Creating Exclusive Communication Groups, LCD Projectors: Using LCD Projectors for Making an Audiovisual Presentation, Tele / Video Conferencing, Blogging And chatting.	**30%** **08 Hr.**

Teaching-Learning Methodology	Material For This Course Will Be Presented Using Multiple Teaching Approaches: Lecture And Discussion, Exploration and Inquiry, Cooperative Group Work, Demonstrations, And Presentations

Course Outcomes: Having Completed This Course, The Learner Will Be Able To	
CO1	To Gain Foundational Knowledge of Computer Systems, Including Hardware, Software, And Translator.
CO2	To Understand the Role and Function of Translators and To Perform Basic Binary Arithmetic and Number Conversions.
CO3	To Explore Modern Communication Technologies and Effectively Use Tools Like Email, Blogging, Video Conferencing, And LCD Projectors.

Suggested References	
Sr.No.	**References**
1.	Computer Fundamentals" by P.K. Sinha & Priti Sinha
2.	Fundamentals of Computers" by V. Rajaraman
3..	Digital Logic and Computer Design" by M. Morris Mano
Digital resources to be used if available as reference material	
Digital Resources	
https://www.tutorialspoint.com/computer_fundamentals	
Computer Fundamentals – NPTEL or Easy Engineering Classes	

Chairman
BOS of Computer Science
Anand Commerce College

Academic Coordinator
Anand Commerce College

Principal
Anand Commerce College