

BADDI UNIVERSITY

OF EMERGING SCIENCES & TECHNOLOGY

INSTITUTE OF ENGINEERING & EMERGING TECHNOLOGIES

Department of Computer Applications

Course Structure for BCA

Bachelor of Computer Applications

1. Program Overview:

With all the growth opportunities in the sphere, India is placed at the right place w.r.t. to the manpower for the software industry. We churn out the highest number of Software professionals than any other country; still the IT industry seems to be at a shortage of quality software professional. There is an overwhelming flow of jobs for a software professional in the IT industry.

The Bachelor in Computer Application (BCA) program equips graduates with all of these skills, and the knowledge and attitudes necessary to work as effective and responsible Software Professionals in the fast changing modern organizational environment.

By developing an understanding of the role and contribution of information systems, BCA graduates will be able to drive and enable the achievement of business goals and objectives, and manage the vital information systems resource in organizations.

2. Program Objectives:

- The basic objective of this program is to open a channel of admission to Computer courses for students who have done the 10 + 2 and are interested in taking up Computers as a career.
- Prepares students to take up positions as system analysts, system designers, Programmers and managers in any field related to information technology.
- Impart comprehensive knowledge with equal emphasis on theory and practice p the students up-to-speed on all the latest and cutting edge technologies.
- After acquiring the Bachelor's degree at BUEST, there is a further educational opportunity to go for MCA at BUEST or pursue Master's Program at another University.

3. Graduate Profile:

In general, the graduates of the program:

- would be able to demonstrate advanced skills in the effective analysis, design, and realization of business systems utilizing contemporary information technology.
- would understand the need for, and importance of, information in a business context.
- would be able to identify, analyze and solve problems in one or more areas of technology by selecting and using either quantitative or qualitative techniques appropriate to the resolution of technological problems.
- would be able to apply a systems approach to problem solving and to the development of information technology applications.
- would be able to pursue further study options related to IT with total ease.
- would be able to practice in a disciplined and ethical manner required of Information Technology professionals.

4. Degree Nomenclature:

Bachelor of Computer Applications

5. Eligibility:

10+2 or its equivalent with Mathematics as a distinct subject with at least 50% Marks.

6. Admission Criteria:

As per the merit of 10 +2 exams.

7. Duration:

Three years degree course comprising six semesters.

8. Selection and Sequencing of courses:

8.1 List of Compulsory courses:

S. No.	Code	Subject	L	T	P	Credits
1.	UCA-011	Fundamentals of Information Technology	3	1	-	3.5
2.	UCA-013	Programming in C	3	1	-	3.5
3.	UCA-016	Software LAB – I (C Language)	-	-	6	3
4.	UCA-017	Software LAB –II (IT)	-	-	6	3
5.	UCA-021	Data Structures Using C	3	1	-	3.5
6.	UCA-023	Fundamentals Of Programming	3	1	-	3.5
7.	UCA-026	Software LAB – III (DS)	-	-	6	3
8.	UCA-027	LAB –IV(PC Hardware & Networking)	-	-	6	3
9.	UCA-031	Introduction To LINUX	3	1	-	3.5
10.	UCA-034	Management Information System	3	1	-	3.5
11.	UCA-035	Object Oriented Programming in C++	3	1	-	3.5
12.	UCA-036	Software LAB – V (Linux Lab.)	-	-	6	3
13.	UCA-037	Software LAB –VI (C++ LAB.)	-	-	6	3
14.	UCA-041	Operating System	3	1	-	3.5
15.	UCA-042	Database Management System	3	1	-	3.5
16.	UCA-043	Computer Networks	3	1	-	3.5
17.	UCA-044	System Analysis and Design	3	1	-	3.5
18.	UCA-045	Visual Programming	3	1	-	3.5
19.	UCA-046	Software LAB – VII (OS Lab.)	-	-	6	3
20.	UCA-047	Software LAB –VIII (VB Lab.)	-	-	6	3
21.	UCA-051	Introduction to Internet & Java	3	1	-	3.5
22.	UCA-052	Computer Graphics	3	1	-	3.5
23.	UCA-053	Computer Organization & Architecture	3	1	-	3.5
24.	UCA-055	Minor Project Lab			6	3
25.	UCA-056	Software LAB – IX (JAVA Lab.)	-	-	6	3
26.	UCA-057	Software LAB –X (Graphics LAB.)	-	-	6	3
27.	UCA-061	Software Engineering	3	1	-	3.5
28.	UCA-062	System Software	3	1	-	3.5
29.	UCA-065	LAB - XI General Proficiency	-	-	6	3
30.	UCA-066	LAB -XII Major Project Viva Voce	-	-	6	3

8.2 List of Supportive Courses:

S. No.	Code	Subject	L	T	P	Credits
1.	UCA-014	Basic Accounting	3	1	-	3.5
2.	UCA-015	Effective Communication Skills	3	1	-	3.5
3.	UCA-025	Business Economics	3	1	-	3.5
4.	UCA-032	Principles Of Management	3	1	-	3.5
5.	UCA-012	Mathematics-I	3	1	-	3.5
6.	UCA-022	Mathematics-II	3	1	-	3.5
7.	UCA-033	Mathematics-III	3	1	-	3.5

8.3 List of Elective Courses:

S. No.	Code	Subject	L	T	P	Credits
1.	UCA-E01	Artificial Intelligence	3	1	-	3.5
2.	UCA-E02	Mobile Computing	3	1	-	3.5
3.	UCA-E03	Advance C	3	1	2	4.5
4.	UCA-E04	E-Commerce	3	1	-	3.5
5.	UCA-E05	Web Designing	3	1	-	3.5
6.	UCA-E06	Business Organization & Mgmt.	3	1	-	3.5
7.	UCA-E07	Introduction to Microprocessors	3	1	-	3.5
8.	UCA-E08	Neural Networks				
9.	UCA-E09	Distributed Database Management Systems				

9. Semester wise Teaching Scheme:

SEMESTER: FIRST						
S. No.	Code	Subject	L	T	P	Credits
1.	UCA-011	Information Technology	3	1	6	6.5
2.	UCA-012	Mathematics – I	3	1	-	3.5
3.	UCA-013	Programming in C	3	1	6	6.5
4.	UCA-014	Introduction to financial Accounting & Accounting Packages	3	1	-	3.5
5.	UCA-015	Effective Communication Skills	3	1	-	3.5
Total Credits						23.5
SEMESTER: SECOND						
S. No.	Code	Subject	L	T	P	Credits
1.	UCA-021	Data Structures Using C	3	1	6	6.5
2.	UCA-022	Mathematics – II	3	1	-	3.5
3.	UCA-023	Fundamentals Of Programming	3	1	-	3.5
4.	UCA-024	Digital Circuits & Logic Design	3	1	-	3.5
5.	UCA-025	Seminar	3	1	-	3.5
Total Credits						20.5
SEMESTER: THIRD						
S. No.	Code	Subject	L	T	P	Credits
1.	UCA-031	Introduction To Operating System	3	1	-	3.5
2.	UCA-032	Principles Of Management and Introduction to ERP	3	1	-	3.5
3.	UCA-033	Mathematics –III	3	1	-	3.5
4.	UCA-034	Management Information System	3	1	-	3.5
5.	UCA-035	Object Oriented Programming in C++	3	1	6	6.5
Total Credits						20.5

SEMESTER: FOURTH

S. No.	Code	Subject	L	T	P	Credits
1.	UCA-041	Introduction to Linux	3	1	6	6.5
2.	UCA-042	Database Management System	3	1	-	3.5
3.	UCA-043	Computer Networks	3	1	-	3.5
4.	UCA-044	System Analysis and Design	3	1	-	3.5
5.	UCA-045	Visual Programming	3	1	6	6.5
Total Credits						23.5

SEMESTER: FIFTH

S. No.	Code	Subject	L	T	P	Credits
1.	UCA-051	Introduction to Internet Technologies and Web designing	3	1	6	6.5
2.	UCA-052	Object Oriented Programming with Java	3	1	6	6.5
3.	UCA-053	Computer Organization & Architecture	3	1	-	3.5
4.	UCA-054	Operation Research	3	1	-	3.5
5.	UCA-055	Minor Project Lab	-	-	6	3
Total Credits						23

SEMESTER: SIXTH

S. No.	Code	Subject	L	T	P	Credits
1.	UCA-061	Software Engineering	3	1	-	3.5
2.	UCA-062	System Software	3	1	-	3.5
3.	UCA-063	Computer Graphics	3	1	6	6.5
4.		Elective-II	3	1	-	3.5
5.	UCA-066	LAB -XII Major Project Viva Voce	-	-	6	3
Total Credits						20