

BACHELOR OF COMPUTER APPLICATIONS (BCA)

The broad objective of BCA degree is to prepare students for careers in software industry, understanding and skills related to the use of computer and its application.

- 1.To impart quality computer education to enhance logical computing and programming skills.
- 2.To implement innovative techniques and process in leading learning and evaluation.
- 3.To further creativity and pursuit of excellence in computer applications.

At the end of the three year BCA programme the students will be able to:

- Understand, analyse and develop computer programs in the areas related to algorithm, webdesign and networking for efficient design of computer based system.
- Work in the IT sector as system engineer, software tester, junior programmer, web developer,system administrator, software developer etc.
- Apply standard software engineering practices and strategies in software project development using open source programming environment to deliver a quality of product for business success.

Subjects

Semester 1	Semester2	Semester 3
1. Mathematical Foundations of Computer Science	1. Fundamentals of Probability and Statistics	1. Applied Mathematics
2. Digital Principles	2. Object Oriented Programming using CPP	2. Core Java Programming
3. Programming in C	3. Computer Architecture	3. Software Engineering
4. Introduction to Web Technology	4. Data Structures	4. Operating System Concepts
5. Effective Communication	5. Advance Computer Networks	5. Database Design
6. Programming in C Lab	6. Object Oriented Programming using CPP Lab	6. Core Java Programming Lab
7. Web Technology Lab	7. Data Structures Lab	7. Software Engineering Lab
8.IT Workshop	8.Communication Skills Lab	8. Database Design Lab

Semester 4	Semester 5	Semester 6
1. Distributed and Cloud Computing	1 Parallel Programming	1 Machine Learning/ Internet of Things/ Blockchain
2. Algorithm Design	2. Big Data Analytics	2. Information Retrieval Systems / Distributed Databases/ Cyber Security
3 Computer Networks	3. Software Quality and Testing	3. Human Relations at Work/ Ethics and Holistic Life/ Gender Sensitization

4 Data Science using Python	4 Environmental Science	4. Project Phase II
5. Artificial Intelligence	5 Advanced Java Programming / Programming using C# and ASP.NET / Internet Programming using PHP	
6. Data Science using Python Lab	6.Big Data Analytics Hadoop Lab	
7. Computer Networks Lab	7. Advanced Java Programming / Programming using C# and ASP.NET / Internet Programming using PHP LAB	
8. Technical Seminar	8. Project Phase I	