

## **Course: Bachelor of Computer Application (BCA)**

**Course: Duration: 3 years**  
(As per latest revised GU-NEP 2020)

### **Program Objective:**

With the rapid advancement and integration of Computers and Information Technology into our daily lives, there is a growing demand for skilled professionals who can develop, maintain, and effectively utilize computing systems and software. One key factor behind the success of modern businesses is their transformation into information-enabled enterprises, where Information Technology serves not merely as an enabler, but as a critical driver of innovation and growth. IT is used extensively—from simple office automation to strategic decision support, business process re-engineering, and organizational transformation. To harness the immense capabilities of IT, there is a pressing need for a new generation of tech-savvy professionals and managers. The **Bachelor of Computer Applications (BCA)** programme, introduced by **Gauhati University** is designed to bridge this gap by producing industry-ready graduates equipped with the knowledge and skills required to thrive in the IT sector. The program covers the various essential concepts in Computer Science.

- The course lays a structured foundation of Computer fundamentals, Numerical methods, Data structure, and Algorithm and Complexity analysis, Software Engineering.
- Programming Concepts in various languages (C, C++, Java, Visual Basic etc.)
- The program covers the concept of Computer Networking, System Programming and Administration, Operating System, Digital Image Processing, Embedded systems, Computer Architecture, Microprocessor,
- It also provides detail knowledge PHP programming, Numerical methods, Combinatorial optimization, Computer Graphics and Database management system.
- An exceptionally broad range of topics covering current trends and technologies in computer science: Programming in Python, Cyber Security, Data mining, R-Programming, Data Sciences, Artificial Intelligence and Android Programming.
- Also, to carry out the hands on sessions in Computer lab using various Programming languages and tools to have a deep conceptual understanding of the topics to widen the horizon of students' self-experience.