

The Following are the main TIPS-g Job oriented courses (2 yr - divided in 6 semesters for Blockchain, Data analysis, Machine Learning/Artificial intelligence and cyber security), (2 yr - 4 sem for cloud computing, network engineer ,)and last yr paid internship)

**1. Bachelors's in Computer Application (BCA) :
Specialization in Blockchain (BCA in Blockchain)**

6 semesters in tota for bca blockchain

Overview (BCA Blockchain Course)

The acronym BCA, denoting Bachelor of Computer Applications, encompasses a spectrum of disciplines such as Software Engineering, Network Administration, Computer Hardware, Operating Systems, Software Testing, User Interface, Multimedia Applications, and Internet Technology. These diverse fields equip individuals to secure positions in IT companies and embark on careers as IT professionals.

A BCA degree serves as a stepping stone to thriving in the technology domain. In contemporary times, it is regarded as a pathway to advanced studies like Master of Computer Applications, Master of Business Administration (MBA), or Master of Technology in specialized fields.

For those seeking lucrative opportunities, specializing in "Blockchain" can be a game-changer. The BCA Blockchain Degree is meticulously crafted to enhance students' skill sets. It delves into a well-known technology that facilitates and secures transactions of goods, incorporating cutting-edge technologies and advanced methods. Proficiency in blockchain technology is crucial for understanding its intricate workings, including smart contracts, digital signatures, cryptocurrencies, and more.

However, a successful study of the BCA Blockchain Degree requires a solid foundation in blockchain technology. Explore this blog to delve into the course's objectives, eligibility criteria, fees, career prospects, job opportunities, scope, syllabus, and more, unlocking the potential of blockchain technology in your educational journey.

BCA Blockchain Course Objectives

- Provide learners with high-quality technical and skill-based training in information and technology.
- Impart knowledge of blockchain methods and being able to deliver the concepts systematically.
- Engage in ongoing education to adopt the newest innovations in the rapidly expanding field of computer applications.
- To prepare multifunctional computing experts with worldwide competence.
- To systematically evaluate blockchain applications.
- Excel is a morally upright person with compassion for societal needs

Semester wise BCA Blockchain Plan/ Syllabus for BCA Blockchain:

- First Semester:
 - Introduction to Web 3.0 and Blockchain Technology
 - Web 3.0 Architecture
 - Basics of Blockchain Technology
 - Cryptography and Security
- SECOND SEMESTER
 - Ethereum Platform
 - Smart Contracts and Decentralized Applications
 - Web 3.0 Development Tools and Frameworks
 - Interoperability and Scalability
- THIRD SEMESTER
 - Solidity Programming Language
 - DApp Development using Truffle
 - Consensus Algorithms and Mining Distributed Systems
- FOURTH SEMESTER
 - Blockchain and Cybersecurity
 - Cryptocurrency and ICOs

- Hyperledger Fabric
- Blockchain Applications
- FIFTH SEMESTER
 - Ethereum Development Frameworks
 - Smart Contract Design and Optimization IPFS and Filecoin
 - Blockchain Governance and Legal Issues
- SIXTH SEMESTER
 - Blockchain Integration with Web 2.0 Applications
 - Blockchain Deployment and Management
 - Blockchain Use Cases and Case Studies
 - Blockchain and Future Technologies

BCA Course Benefits

1. BCA courses focus on the study of Computers & IT for three years which helps to gain skills and knowledge and make a career in Computer & IT-related fields.
2. BCA course offers multiple job opportunities in the field of IT and computers.
3. BCA course graduates get opportunities from both the public and private sectors.
4. BCA is mostly a software-oriented course, with no or little stress on the hardware. Thus it demands no physical effort and allows you to have a stress-free work environment.
5. BCA course is offered in various specializations such as BCA Computer Science, BCA Data Science, etc for the students.

Bachelors's in Computer Application (BCA) Specialization in Data Analysis

6 semesters total in BCA Data analysis

Overview

Explore the 3-year undergraduate course, Bachelor of Computer Applications (BCA), delving into computer applications and information technology subjects such as C++, JAVA, Networking, Data Structures, Statistics, Numerical Techniques, and Algorithm Design. This program ensures alignment with BTech/BE courses in computer application and IT areas.

Discover the comprehensive syllabus of data analytics and Bachelor's degree in data science within BCA, equipping students with a deep understanding of programming languages and preparing them for a thriving professional life in Information Technology. Uncover the essentials of GPRS (General Packet Radio Service), SAS (Statistical Analysis Software), and HTTP (Hypertext Transfer Protocol) in the expansive realm of BCA.

Semester wise BCA Blockchain Plan/ Syllabus for BCA Data analysis:

- FIRST SEMESTER
 - Introduction to Computer Science
 - Mathematics for Computing
 - Programming Fundamentals
 - Statistics for Data Science
 - Data Structures and Algorithms
- SECOND SEMESTER
 - Operating Systems
 - Database Management Systems
 - Object-Oriented Programming
 - Web Technologies
 - Data Analysis and Visualization
- THIRD SEMESTER
 - Machine Learning Fundamentals
 - Big Data Technologies
 - Data Mining and Warehousing
 - Business Analytics
 - Programming with Python
- Fourth Semester
 - Deep Learning and Neural Networks
 - Cloud Computing
 - Natural Language Processing
 - Time Series Analysis

- Data Science Project Management
- FIFTH SEMESTER
 - Recommender Systems
 - Data Ethics and Privacy
 - Data Science for IoT
 - Social Media Analytics
 - Data Science Capstone Project
- SIXTH SEMESTER
 - Data Science for Finance
 - Data Science for Healthcare
 - Data Science for Marketing
 - Data Science for E-commerce
 - Advanced Data Science Techniques

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Bachelors's in Computer Application (BCA) Specialization in CyberSecurity

6 semester course in total- bca cyber security

Overview of BCA Cyber Security

In the ever-evolving landscape of Information Technology, the surge in cyber-attacks necessitates specialized training. Consequently, the field of computer science has introduced a dedicated set of modules within a sub-stream course.

Embark on the three-year BCA Cyber Security and Analytics program, delving into the intricacies of protocols, tools, and software associated with Cyber Security and Data Analytics. Students undergoing this period of study acquire the skills and knowledge essential for safeguarding against cyber-attacks targeting networks, data, and computer operating systems.

The Data Analytics subject within the curriculum focuses on the analysis of data and the examination of available information, utilizing specialized systems and software. Industries leverage data analytics for commercial operations, facilitating informed business decisions and scientific research reporting.

In India, the realm of Cyber Security courses offers various specializations, allowing candidates to choose based on their aptitude in computer science. Explore the diverse cyber security training courses to stay ahead in the dynamic IT landscape.

Semester wise BCA Blockchain Plan/ Syllabus for BCA Cyber Security:

- FIRST SEMESTER
 - Fundamentals of Computer (Python Programming)
 - Basic Computer Operations
 - Basics of Networking
 - Understanding of Operating System
 - System architecture
 - Design Systems"
- SECOND SEMESTER
 - Operating Systems
 - Database Management Systems
 - Object-Oriented Programming
 - Web Technologies
 - Cyber Security Threats and Vulnerabilities
- THIRD SEMESTER
 - Computer Networks
 - System Analysis and Design
 - Information Security Management
 - Cryptography and Network Security
 - Programming with Python"

- **FOURTH SEMESTER**
 - Mobile Application Development
 - Cloud Computing
 - Data Analytics and Visualization
 - Ethical Hacking
 - Web Application Security

- **FIFTH SEMESTER**
 - Cyber Forensics and Incident Response
 - Wireless and Mobile Security
 - Network Penetration Testing
 - Cyber Security Law and Ethics
 - Project Management

- **SIXTH SEMESTER**
 - IoT Security
 - Machine Learning for Cyber Security
 - Blockchain Technology and Cryptocurrencies
 - Cyber Security Audit and Compliance Major Project

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Bachelors's in Computer Application (BCA) Specialization in Network Engineering

4 semester in total for BCA network engineering

Overview (BCA Network Engineering Course)

Bachelor of Computer Applications Network and Server Administration is a three-year undergraduate program over six semesters.

The curriculum is designed to bridge the gap between IT industries and academic institutions by incorporating the latest network technologies in the curriculum and giving a complete understanding to the students within a structured framework.

The curriculum supports students to acquire a theoretical foundation and adequate programming, networking and server configuration, and administration practices and also includes interdisciplinary courses and electives to widen domain expertise. The state-of-the-art infrastructure provides an excellent learning environment to enhance students' knowledge.

Through this course, you will have a strong foundation in computer science fundamentals and applications, networking, and server administration for employment and further study post-graduation.

The BCA Networking course offered by TIPS -G will further empower the students with competencies in creative thinking and problem-solving, interpersonal communication, and managerial skills. Facilitate a holistic understanding of technological developments with legal and ethical issues. Equip students with professional solutions to networking and client-server environment problems.

Semester wise BCA Plan/ Syllabus for BCA Network Engineering:

- First Semester
 - Fundamentals of IT Programming
 - Understanding PC and
 - Troubleshooting
 - Introduction to C,C++, HTML, DHTML
 - Graphics Designing
- Second Semester
 - Web Designing
 - Data Structures and Algorithms

- Object Oriented Programming using C++, Java
- UI/UX Research and Designing
- Third Semester
 - Database Management Systems (DBMS)
 - Web Development
 - Application Development
 - Python Programming
 - Hosting
- Fourth Semester
 - Full Stack MERN Developer
 - Full Stack Android Developer
 - Introduction to C, C++, HTML, DHTML
 - Machine Learning & AI and Internet Of Things (IOT)
 - Game Development
 - Cyber Security expert
 - Cloud Administrator/ DevOps

Bachelors's in Computer Application (BCA) Specialization in Cloud Architecture

4 semester in total for bca cloud architecture

Overview (BCA Cloud Architecture Course)

A bachelor's degree in BCA Cloud Computing can lead to various job roles. This course, apart from the basic knowledge required for BCA, the program will train you in the latest trends and technologies shaping the business world.

Apart from the traditional subjects of BCA, this course will give you practical exposure to the field. The growing demand for cloud computing professionals makes this degree program different from other degree programs.

BCA Cloud Computing is a three-year undergraduate course. Cloud computing is a web-based registration. The program, therefore, aims to provide potential competitors with expertise in a broad spectrum of uses, strategies, and methods that seek to deliver different administrations, for example, servers, stockpiling, and the PCs and gadgets of an association using the web app.

This course essentially manages the operations of registering servers, caching, databases, systems administration, and programming, and so the sky is the limit from there – on the web, using a system of remote servers on the web.

Semester wise BCA Plan/ Syllabus for BCA Cloud Architecture:

- First Semester
 - Fundamentals of IT Programming
 - Understanding PC and
 - Troubleshooting
 - Introduction to C,C++, HTML, DHTML
 - Graphics Designing
- Second Semester
 - Web Designing
 - Data Structures and Algorithms
 - Object Oriented Programming using C++, Java
 - UI/UX Research and Designing
- Third Semester
 - Database Management Systems (DBMS)
 - Web Development
 - Application Development
 - Python Programming
 - Hosting
- Fourth Semester
 - Full Stack MERN Developer
 - Full Stack Android Developer
 - Introduction to C,C++, HTML, DHTML
 - Machine Learning & AI and Internet Of Things (IOT)
 - Game Development
 - Cyber Security expert
 - Cloud Administrator/ DevOps

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Bachelors's in Computer Application (BCA) Specialization in Machine Learning/Artificial intelligence Course

6 semesters in total for BCA AI/ML course

Overview (BCA Machine Learning/Artificial intelligence Course)

Before diving into machine learning and artificial intelligence (AI) forecasting in e-learning, it is essential to understand the necessity of these technology-based approaches. First things first: Machine learning is a sub-division of artificial intelligence.

It includes algorithms that predict possible outcomes based on user data. The system identifies specific patterns and trends, then learns from the data to provide more personalization. Every new piece of information the program receives makes it more comfortable.

The entire process happens autonomously, from extracting data sets from the Learning Management System and evaluating them to predicting what online learners need to be based on their past performance.

Bachelor of Computer Applications (BCA) specializing in Artificial Intelligence and Machine Learning is a professional course that equips students with all the essential technologies required to become a competent AI and Machine Learning specialist.

TIPS -G has recently launched BCA Artificial Intelligence & Machine Learning in Jaipur. This newly updated course provides the latest Artificial Intelligence and Machine Learning techniques. This course introduces students to the basic concepts of AI, machine learning, algorithms, and their practical implementation in theory and practice. Students learn AI through a range of creative methods and techniques

Key Highlights: Online BCA in Artificial Intelligence & Machine Learning

1. The curriculum of the program is designed by industry experts.
2. The program provides both theoretical and practical understanding to students.
3. The program covers the essential topics of Artificial Intelligence & Machine Learning and is designed to provide insights into the industry.
4. The average fee of the online BCA in AI & ML is between Rs. 1,00,000 and Rs. 2,00,000.

Semester wise map/Plan - BCA ML/AI Plan/ Syllabus for BCA ML/AI:

- FIRST SEMESTER
 - Fundamentals of Computer (Python Programming)
 - Basic Computer Operations
 - Basics of Networking
 - Understanding of Operating System
 - System architecture
 - Design Systems
- SECOND SEMESTER
 - OOPS Programming using C++ / C
 - Web Dev using HTML/CSS
 - JavaScript
- THIRD SEMESTER
 - Logical Thinking PHP/Laravel Node JS
 - Introduction to RDBMS MySQL Mongo DB
- Fourth Semester
 - Project Based Learning
 - Dev Tools (docker, github, Kubernetes, AWS, GCP & Azure) Working with Rest APIs API Development & Implementation Exception handling
- FIFTH SEMESTER
 - Project Based Learning
 - Full Stack based projects

- Implementation & Deployment Cloud Handling / File Management Global Coding Standards (GCS)
- SIXTH SEMESTER
 - User Experience Design
 - Prototype to Code
 - Framework Standards

Some 6 month certification programs are also here:

1. **User Experience Design:** Crafting intuitive and engaging digital experiences.
2. **Course on React Native:** Build stunning cross-platform mobile apps with ease.
3. **Digital Marketing:** Unleash the power of online marketing strategies.
4. **Course on Cybersecurity:** Safeguarding your digital world against threats
5. **Getting Started with DevOps:** Streamlining software development and deployment.
6. **Fullstack Development:** Master the art of end-to-end web development.
7. **AWS Cloud Associate and Security:** Unlock the potential of cloud computing with AWS.
8. **React JS Frontend Development:** Elevate your web development skills with React.
9. **Getting Started with Python:** Unlocking the power of Python from basics to advanced. (Python 6 month course)