TITLE

"BASICS OF COMPUTER SCIENCE"

A Welcome Message from the Principal

Dear Students,

It is with great pleasure and enthusiasm that I extend a warm welcome to all of you as we embark on an exciting new journey with the introduction of the add-on course "Basics of Computer Science," offered by the Department of Computer Science here at Nalbari College, Nalbari.

In today's digital age, understanding the fundamentals of computer science is not just advantageous but essential. This course has been meticulously designed to provide you with a solid foundation in computer science principles, equipping you with the skills and knowledge necessary to thrive in a technology-driven world. Whether you aspire to delve deeper into the field of computer science or simply wish to enhance your proficiency in this indispensable area, this course will serve as a valuable stepping stone towards your academic and professional growth.

I commend the Department of Computer Science for their dedication and effort in curating this course. Our esteemed faculty members, with their vast experience and expertise, are committed to delivering a comprehensive and engaging learning experience. They will guide you through the intricacies of computer science, ensuring that you not only understand the theoretical concepts but also gain practical insights and hands-on experience.

As you embark on this new academic endeavour, I encourage you to approach the course with curiosity and enthusiasm. Embrace the opportunity to learn, explore, and challenge yourself. Remember, the skills you acquire here will open doors to numerous possibilities and career pathways.

I am confident that this add-on course will be a significant milestone in your educational journey, enriching your knowledge and broadening your horizons. On behalf of the entire college community, I wish you all the best. May your journey through the "Basics of Computer Science" be enlightening, rewarding, and filled with success.

Welcome aboard, and happy learning!

Sincerely,

Sd/-
Principal
Nalbari College, Nalbari

Introduction to Basics of Computer Science

This introductory course is designed to provide you with a solid foundation in computer science, preparing you for further study and practical application in this dynamic field. Here, we will explore the fundamental concepts that underpin the digital world we live in today.

What is Computer Science?

Computer Science is the study of computers and computational systems. It involves understanding the theory, development, and application of software and systems that run on computers. This field encompasses a wide range of topics, from algorithms and data structures to artificial intelligence and human-computer interaction.

Course Objectives

- ✓ **Duration:** 30 Hours
- ✓ **Start Dates:** 16-08-2018

The main objectives of this course are:

- ❖ Understanding the Basics: Grasp the foundational concepts of computer science, including hardware, software, and networks.
- ❖ Problem Solving and Algorithms: Learn how to approach problem-solving using logical and structured thinking, and how to translate solutions into algorithms.
- ❖ Programming Fundamentals: Get introduced to programming languages and write simple programs.
- ❖ Data Management: Understand how data is stored, managed, and manipulated.
- ❖ Computer Systems: Gain insights into the functioning of computer systems, including operating systems and computer architecture.
- ❖ Applications and Impact: Explore the various applications of computer science in real-world scenarios and its impact on society.

Key Topics

- ➢ Introduction to Computers
    - History and evolution of computers
    - Components of a computer system: CPU, memory, input/output devices
- ➢ Operating Systems
    - Role of operating systems
    - Basic functions and types of operating systems

- Programming Basics

  - Introduction to programming languages (e.g., Python, C++)
  - Writing and executing simple programs
  - Understanding syntax, variables, data types, and control structures

- Algorithms and Data Structures

  - Introduction to algorithms: Definition and importance
  - Basic data structures: Arrays, lists, stacks, and queues
  - Simple searching and sorting algorithms

- Data Management

  - Basics of databases
  - Introduction to SQL and data retrieval
  - Data storage and file systems

- Networks and Internet

  - Basics of computer networks
  - Understanding the internet and its protocols
  - Cybersecurity fundamentals

- Software Development

  - Software development life cycle
  - Introduction to software engineering principles

- Applications of Computer Science

  - Overview of fields such as artificial intelligence, machine learning, and data science
  - Impact of computer science on various industries

Course Outcomes

By the end of this course, you should be able to:

- ✓ Understand the fundamental concepts of computer science.
- ✓ Write and debug simple programs.
- ✓ Explain the role and functions of an operating system.
- ✓ Develop algorithms for basic problems.
- ✓ Describe the structure and functioning of computer networks.
- ✓ Understand the basics of databases and data management.

Course Modules

- **Module 1:**
  - Introduction to Computers
  - History and Evolution
  - Components of a Computer System
  - CPU, Memory, Input/output Devices
  - Basic Computer Operations
- **Module 2:**
  - Operating Systems
  - Functions and Types of Operating Systems
  - Process Management
  - Memory Management
- **Module 3:**
  - Programming Basics
  - Introduction to Programming Languages (e.g., Python)
  - Syntax and Semantics
  - Variables and Data Types
  - Control Structures (if, loops)
- **Module 4:**
  - Algorithms and Data Structures
  - Introduction to Algorithms
  - Basic Data Structures
  - Arrays, Lists, Stacks, Queues
  - Simple Searching and Sorting Algorithms
- **Module 5:**
  - Data Management
  - Introduction to Databases
  - SQL Basics
  - Data Storage and File Systems
- **Module 6:**
  - Networks and Internet
  - Basics of Computer Networks
  - Internet Protocols
  - Cybersecurity Fundamentals

- **Module 7:**
  - Software Development
  - Software Development Life Cycle
  - Introduction to Software Engineering Principles
- **Module 8:**
  - Applications of Computer Science
  - Artificial Intelligence and Machine Learning Overview
  - Data Science Basics
  - Impact of Computer Science on Various Industries

Programme Features:

- **Comprehensive Curriculum**: Covers computer fundamentals, programming, algorithms, data structures, databases, and networks.
- **Hands-On Learning**: Includes regular coding assignments, lab sessions, and practical projects.
- **Experienced Faculty**: Taught by knowledgeable faculty from the Computer Science department.
- **Interactive Environment**: Features discussion forums, guest lectures, and seminars.
- **Modern Facilities**: Access to advanced computer labs with the latest technology.
- **Assessment and Feedback**: Regular quizzes, tests, and continuous feedback.
- **Support and Resources**: Study materials, tutoring support, and library access.
- **Career Guidance**: Career counselling and assistance with internships and job placements.
- **Flexible Learning Options**: Evening/weekend classes and online resources.

Admissions and Requirements:

Admissions

- Eligibility: Open to all Nalbari College students; basic math understanding is helpful.
- Application: Submit the form available at the Computer Science Department or online; adhere to deadlines.
- Selection: First-come, first-served; priority to science/tech backgrounds.

Course Requirements

- Attendance: Minimum 75%.
- Assignments: Complete all tasks and projects on time.
- Examinations: Periodic quizzes and a final exam.
- Participation: Engage in class discussions and projects.
- Grading: Based on assignments, quizzes, participation, and final exam.

Costs and Financial Aid:

- **Costs**
  - Course Fee: Free of cost
  - Materials Fee: Free of cost
  - Lab Fee: Free of cost

- **Financial Aid:** No Scheme at Present

Contact Information:

- **Course Coordinator:** Mr. Ankur Baishya
- **Website:** www.nalbaricollege.ac.in

Conclusion:

After completion of the course the student will gain foundational knowledge in computer science, problem-solving skills, technical proficiency, critical thinking ability, collaboration, and communication skills. These skills open doors to various career opportunities in technology.

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What is Computer Science?

Computer Science is the study of computers and computational systems. It involves understanding the theory, development, and application of software and systems that run on computers. This field encompasses a wide range of topics, from algorithms and data structures to artificial intelligence and human-computer interaction.

Course Objectives

- ✓ **Duration:** 30 Hours
- ✓ **Start Dates:** 14-10-2019

The main objectives of this course are:

- ❖ Understanding the Basics: Grasp the foundational concepts of computer science, including hardware, software, and networks.
- ❖ Problem Solving and Algorithms: Learn how to approach problem-solving using logical and structured thinking, and how to translate solutions into algorithms.
- ❖ Programming Fundamentals: Get introduced to programming languages and write simple programs.
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Key Topics

- ➢ Introduction to Computers
    - History and evolution of computers
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  - Writing and executing simple programs
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  - Introduction to algorithms: Definition and importance
  - Basic data structures: Arrays, lists, stacks, and queues
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- Data Management

  - Basics of databases
  - Introduction to SQL and data retrieval
  - Data storage and file systems

- Networks and Internet

  - Basics of computer networks
  - Understanding the internet and its protocols
  - Cybersecurity fundamentals

- Software Development

  - Software development life cycle
  - Introduction to software engineering principles

- Applications of Computer Science

  - Overview of fields such as artificial intelligence, machine learning, and data science
  - Impact of computer science on various industries

Course Outcomes

By the end of this course, you should be able to:

- ✓ Understand the fundamental concepts of computer science.
- ✓ Write and debug simple programs.
- ✓ Explain the role and functions of an operating system.
- ✓ Develop algorithms for basic problems.
- ✓ Describe the structure and functioning of computer networks.
- ✓ Understand the basics of databases and data management.

Course Modules

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  - Components of a Computer System
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  - Introduction to Databases
  - SQL Basics
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  - Networks and Internet
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- **Module 7:**
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  - Artificial Intelligence and Machine Learning Overview
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Programme Features:

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- **Costs**
  - Course Fee: Free of cost
  - Materials Fee: Free of cost
  - Lab Fee: Free of cost

- **Financial Aid:** No Scheme at Present

Contact Information:

- **Course Coordinator:** Mr. Ankur Baishya
- **Website:** www.nalbaricollege.ac.in

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Course Objectives

- ✓ **Duration:** 30 Hours
- ✓ **Start Dates:** 07-02-2022

The main objectives of this course are:

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- ❖ Problem Solving and Algorithms: Learn how to approach problem-solving using logical and structured thinking, and how to translate solutions into algorithms.
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- Software Development

  - Software development life cycle
  - Introduction to software engineering principles

- Applications of Computer Science

  - Overview of fields such as artificial intelligence, machine learning, and data science
  - Impact of computer science on various industries

Course Outcomes

By the end of this course, you should be able to:

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Course Modules

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- Participation: Engage in class discussions and projects.
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Costs and Financial Aid:

- **Costs**
  - Course Fee: Free of cost
  - Materials Fee: Free of cost
  - Lab Fee: Free of cost

- **Financial Aid:** No Scheme at Present

Contact Information:

- **Course Coordinator:** Mr. Ankur Baishya
- **Website:** www.nalbaricollege.ac.in

Conclusion:

After completion of the course the student will gain foundational knowledge in computer science, problem-solving skills, technical proficiency, critical thinking ability, collaboration, and communication skills. These skills open doors to various career opportunities in technology.

Title: “Ethical Hacking”

A Welcome Message from the Principal

Dear Students,

It is with great pleasure that I extend a warm welcome to each of you considering embarking on the journey of ethical hacking. As the Principal of Nalbari College, I am delighted to see your interest in exploring this dynamic and critical field of cyber security.

In today's digital age, where technology permeates every aspect of our lives, the importance of cyber security cannot be overstated. With the increasing frequency and sophistication of cyber threats, organizations across all sectors are seeking skilled professionals who can protect their systems, networks, and data from malicious actors.

Ethical hacking, or penetration testing, stands at the forefront of this defense. It is not merely about breaking into systems; rather, it is about understanding vulnerabilities, anticipating threats, and fortifying defenses. Ethical hackers play a pivotal role in safeguarding our digital infrastructure by identifying weaknesses before they can be exploited by cybercriminals.

By choosing to pursue an ethical hacking course, you are not only investing in your own future but also contributing to the collective security of our digital world. Whether you aspire to become a cyber security professional, enhance your technical skills, or simply broaden your knowledge, this course offers a wealth of opportunities for growth and development.

At Nalbari College, we are committed to providing you with the highest quality education and training in ethical hacking. Our experienced faculty, state-of-the-art facilities, and hands-on learning approach ensure that you receive the practical skills and knowledge needed to excel in this field.

I encourage you to seize this opportunity to embark on a rewarding and impactful journey. Together, let us embrace the challenges and possibilities of ethical hacking, as we strive to create a safer and more secure cyberspace for generations to come.

Once again, welcome to Nalbari College, where we empower minds to innovate, lead, and make a difference.

Warm regards,

Sd/-
Principal
Nalbari College
Nalbari

Introduction to Ethical Hacking

Ethical hacking, also known as penetration testing or white-hat hacking, is the practice of intentionally testing computer systems, networks, and applications to identify vulnerabilities and weaknesses. Unlike malicious hackers (black-hat hackers) who exploit these vulnerabilities for personal gain or malicious intent, ethical hackers use their skills to improve security measures and protect against cyber threats.

Key Concepts:

Purpose: The primary goal of ethical hacking is to proactively identify and address security weaknesses before they can be exploited by malicious actors. By simulating real-world cyber attacks, ethical hackers help organizations strengthen their defense mechanisms and mitigate potential risks.

Methodology: Ethical hackers employ a variety of tools and techniques to assess the security posture of systems and networks. This may include reconnaissance, vulnerability scanning, penetration testing, social engineering, and more. The approach varies depending on the scope and objectives of the assessment.

Scope: Ethical hacking engagements can range from testing specific applications or networks to conducting comprehensive security assessments of entire organizations. It's essential to define clear boundaries and objectives before initiating any testing activities to ensure legality and ethical conduct.

Ethical Guidelines: Ethical hackers adhere to strict ethical guidelines and legal frameworks while performing their assessments. This includes obtaining proper authorization, respecting privacy and confidentiality, and obtaining consent from stakeholders before conducting any testing activities.

Benefits: Ethical hacking plays a crucial role in improving cyber security posture and fostering a culture of proactive risk management. By identifying and addressing vulnerabilities, organizations can enhance their resilience to cyber threats, protect sensitive data, and maintain customer trust.

Programme Overview:

- **Objectives:** The objectives of an Ethical Hacking course typically revolve around equipping individuals with the knowledge and skills to identify vulnerabilities and weaknesses in computer systems and networks, with the ultimate goal of enhancing security.
- **Duration:** 30 Hours
- **Start Dates:** 14-10-2022

Here are some common objectives:

Understanding Cyber security Fundamentals: Students should gain a solid understanding of cyber security principles, including common threats, attack vectors, and defense mechanisms.

Learning Legal and Ethical Considerations: It's crucial for ethical hackers to operate within legal and ethical boundaries. Courses often cover laws and regulations related to hacking, as well as ethical guidelines and professional codes of conduct.

Mastering Tools and Techniques: Ethical hacking courses typically teach students how to use a variety of tools and techniques commonly employed by hackers, such as network scanning, vulnerability assessment, and penetration testing tools.

Identifying Vulnerabilities: Participants should learn how to identify and exploit vulnerabilities in various systems and applications, including operating systems, web applications, and databases.

Implementing Security Measures: Understanding vulnerabilities is only half the battle. Ethical hackers should also learn how to recommend and implement security measures to mitigate risks and protect against potential attacks.

Performing Penetration Testing: Penetration testing, or pen testing, involves simulating real-world attacks to assess the security of a system or network. Ethical hacking courses often include hands-on labs and exercises to give students practical experience in conducting penetration tests.

Securing Networks and Systems: Beyond finding vulnerabilities, students should learn how to secure networks and systems effectively by implementing best practices in areas such as access control, encryption, and network segmentation.

Risk Assessment and Management: Ethical hackers need to understand the concept of risk assessment and management. This involves evaluating the potential impact of security threats and prioritizing actions to address the most critical risks.

Continued Learning and Adaptation: The field of cyber security is constantly evolving, with new threats and vulnerabilities emerging regularly. Ethical hacking courses should instill a mindset of continued learning and adaptation to stay current with the latest trends and techniques in cyber security.

By addressing these objectives, an Ethical Hacking course aims to provide students with the necessary expertise to ethically and effectively assess and enhance the security posture of organizations and individuals.

Course Overview:

Introduction to Cyber security: Get acquainted with the fundamentals of cyber security, understanding the importance of protecting digital assets and the evolving threat landscape.

Ethical Hacking Ethics and Laws: Explore the legal and ethical considerations surrounding ethical hacking, including relevant laws, regulations, and professional codes of conduct.

Foot printing and Reconnaissance: Learn how hackers gather information about their targets through foot printing and reconnaissance techniques, and discover how to defend against such reconnaissance.

Scanning and Enumeration: Dive into network scanning and enumeration techniques used to identify vulnerabilities and weaknesses in target systems, and learn how to mitigate these risks.

Vulnerability Assessment and Exploitation: Master the art of identifying, assessing, and exploiting vulnerabilities in various systems and applications, and explore methods for responsibly disclosing vulnerabilities to vendors.

Web Application Security: Explore common vulnerabilities found in web applications, such as SQL injection, cross-site scripting (XSS), and CSRF attacks, and learn how to secure web applications against these threats.

Wireless Network Security: Understand the security risks associated with wireless networks, including Wi-Fi and Bluetooth, and explore techniques for securing wireless networks and detecting intrusions.

Penetration Testing: Delve into the world of penetration testing, learning how to plan, execute, and report on penetration tests to assess the security of systems and networks.

Incident Response and Handling: Explore strategies and best practices for incident response and handling, including how to detect, contain, eradicate, and recover from security incidents effectively.

Security Tools and Technologies: Familiarize yourself with a range of security tools and technologies used by cyber security professionals, including penetration testing frameworks, network monitoring tools, and intrusion detection systems.

Cyber security Policies and Procedures: Learn how to develop, implement, and enforce cyber security policies and procedures within organizations to promote a culture of security and compliance.

Continued Learning and Professional Development: Discover resources and strategies for staying current with the latest trends and developments in cyber security, and explore pathways for further professional development and specialization.

Curriculum:

- Module 1: Introduction to Ethical Hacking
- Module 2: Foot printing and Reconnaissance
- Module 3: Scanning Networks
- Module 4: Enumeration and System Hacking
- Module 5: Malware Threats and Countermeasures
- Module 6: Cryptography and Encryption Techniques
- Module 7: Penetration Testing and Reporting

Programme Features:

- **Hands-on Training:** Practice real-world scenarios in a simulated environment.
- **Expert Faculty:** Learn from cyber security professionals with industry experience.
- **Career Advancement:** Gain a competitive edge with practical skills highly sought after by employers.

Admissions and Requirements:

- Eligibility: Basic knowledge of computer systems and networking.
- Application Process: Offline
- Requirements: A variety of tools will be utilized during the engagement, including:
    - Nmap
    - Metasploit
    - Burp Suite
    - Wireshark

- Nessus
- OWASP ZAP

Costs and Financial Aid:

- Tuition Fee: Free of Cost
- Financial Aid: No Scheme at Present

Contact Information:

•Course Coordinator: Mr. Hirakjyoti Barman
•Website: www.nalbaricollege.ac.in

Conclusion:

In conclusion, an ethical hacking course offers invaluable knowledge and skills for individuals aspiring to enter the field of cyber security or enhance their existing expertise. Through a structured curriculum and hands-on practical exercises, participants gain a deep understanding of cyber security concepts, methodologies, and tools used by ethical hackers to identify and mitigate security vulnerabilities.

Ethical hacking courses typically cover a wide range of topics, including network security, web application security, penetration testing, cryptography, incident response, and legal and ethical considerations. By mastering these areas, students are equipped with the necessary skills to assess the security posture of organizations, identify potential threats and vulnerabilities, and recommend effective countermeasures to enhance cybersecurity defenses.

Moreover, ethical hacking courses emphasize the importance of ethical conduct and compliance with legal and regulatory requirements. Participants learn to conduct ethical hacking engagements in a responsible and professional manner, respecting the confidentiality and privacy of sensitive information and adhering to industry standards and best practices.

The benefits of completing an ethical hacking course extend beyond individual skill development. Organizations also benefit from employing certified ethical hackers who can help them proactively identify and address security vulnerabilities, protect sensitive data, comply with regulatory requirements, and mitigate the risks associated with cyber threats.

In summary, an ethical hacking course provides individuals with the knowledge, skills, and ethical framework necessary to succeed in the dynamic field of cyber security. By investing in education and training in ethical hacking, individuals and organizations can contribute to a safer and more secure digital environment for all.

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TITLE

"BASICS OF COMPUTER SCIENCE"

A Welcome Message from the Principal

Dear Students,

It is with great pleasure and enthusiasm that I extend a warm welcome to all of you as we embark on an exciting new journey with the introduction of the add-on course "Basics of Computer Science," offered by the Department of Computer Science here at Nalbari College, Nalbari.

In today's digital age, understanding the fundamentals of computer science is not just advantageous but essential. This course has been meticulously designed to provide you with a solid foundation in computer science principles, equipping you with the skills and knowledge necessary to thrive in a technology-driven world. Whether you aspire to delve deeper into the field of computer science or simply wish to enhance your proficiency in this indispensable area, this course will serve as a valuable stepping stone towards your academic and professional growth.

I commend the Department of Computer Science for their dedication and effort in curating this course. Our esteemed faculty members, with their vast experience and expertise, are committed to delivering a comprehensive and engaging learning experience. They will guide you through the intricacies of computer science, ensuring that you not only understand the theoretical concepts but also gain practical insights and hands-on experience.

As you embark on this new academic endeavour, I encourage you to approach the course with curiosity and enthusiasm. Embrace the opportunity to learn, explore, and challenge yourself. Remember, the skills you acquire here will open doors to numerous possibilities and career pathways.

I am confident that this add-on course will be a significant milestone in your educational journey, enriching your knowledge and broadening your horizons. On behalf of the entire college community, I wish you all the best. May your journey through the "Basics of Computer Science" be enlightening, rewarding, and filled with success.

Welcome aboard, and happy learning!

Sincerely,

Sd/-
Principal
Nalbari College, Nalbari

Introduction to Basics of Computer Science

This introductory course is designed to provide you with a solid foundation in computer science, preparing you for further study and practical application in this dynamic field. Here, we will explore the fundamental concepts that underpin the digital world we live in today.

What is Computer Science?

Computer Science is the study of computers and computational systems. It involves understanding the theory, development, and application of software and systems that run on computers. This field encompasses a wide range of topics, from algorithms and data structures to artificial intelligence and human-computer interaction.

Course Objectives

- ✓ **Duration:** 30 Hours
- ✓ **Start Dates:** 21-02-2023

The main objectives of this course are:

- ❖ Understanding the Basics: Grasp the foundational concepts of computer science, including hardware, software, and networks.
- ❖ Problem Solving and Algorithms: Learn how to approach problem-solving using logical and structured thinking, and how to translate solutions into algorithms.
- ❖ Programming Fundamentals: Get introduced to programming languages and write simple programs.
- ❖ Data Management: Understand how data is stored, managed, and manipulated.
- ❖ Computer Systems: Gain insights into the functioning of computer systems, including operating systems and computer architecture.
- ❖ Applications and Impact: Explore the various applications of computer science in real-world scenarios and its impact on society.

Key Topics

- ➢ Introduction to Computers
    - History and evolution of computers
    - Components of a computer system: CPU, memory, input/output devices
- ➢ Operating Systems
    - Role of operating systems
    - Basic functions and types of operating systems

- Programming Basics

  - Introduction to programming languages (e.g., Python, C++)
  - Writing and executing simple programs
  - Understanding syntax, variables, data types, and control structures

- Algorithms and Data Structures

  - Introduction to algorithms: Definition and importance
  - Basic data structures: Arrays, lists, stacks, and queues
  - Simple searching and sorting algorithms

- Data Management

  - Basics of databases
  - Introduction to SQL and data retrieval
  - Data storage and file systems

- Networks and Internet

  - Basics of computer networks
  - Understanding the internet and its protocols
  - Cybersecurity fundamentals

- Software Development

  - Software development life cycle
  - Introduction to software engineering principles

- Applications of Computer Science

  - Overview of fields such as artificial intelligence, machine learning, and data science
  - Impact of computer science on various industries

Course Outcomes

By the end of this course, you should be able to:

- ✓ Understand the fundamental concepts of computer science.
- ✓ Write and debug simple programs.
- ✓ Explain the role and functions of an operating system.
- ✓ Develop algorithms for basic problems.
- ✓ Describe the structure and functioning of computer networks.
- ✓ Understand the basics of databases and data management.

Course Modules

- **Module 1:**
  - Introduction to Computers
  - History and Evolution
  - Components of a Computer System
  - CPU, Memory, Input/output Devices
  - Basic Computer Operations
- **Module 2:**
  - Operating Systems
  - Functions and Types of Operating Systems
  - Process Management
  - Memory Management
- **Module 3:**
  - Programming Basics
  - Introduction to Programming Languages (e.g., Python)
  - Syntax and Semantics
  - Variables and Data Types
  - Control Structures (if, loops)
- **Module 4:**
  - Algorithms and Data Structures
  - Introduction to Algorithms
  - Basic Data Structures
  - Arrays, Lists, Stacks, Queues
  - Simple Searching and Sorting Algorithms
- **Module 5:**
  - Data Management
  - Introduction to Databases
  - SQL Basics
  - Data Storage and File Systems
- **Module 6:**
  - Networks and Internet
  - Basics of Computer Networks
  - Internet Protocols
  - Cybersecurity Fundamentals

- **Module 7:**
  - Software Development
  - Software Development Life Cycle
  - Introduction to Software Engineering Principles
- **Module 8:**
  - Applications of Computer Science
  - Artificial Intelligence and Machine Learning Overview
  - Data Science Basics
  - Impact of Computer Science on Various Industries

Programme Features:

- **Comprehensive Curriculum**: Covers computer fundamentals, programming, algorithms, data structures, databases, and networks.
- **Hands-On Learning**: Includes regular coding assignments, lab sessions, and practical projects.
- **Experienced Faculty**: Taught by knowledgeable faculty from the Computer Science department.
- **Interactive Environment**: Features discussion forums, guest lectures, and seminars.
- **Modern Facilities**: Access to advanced computer labs with the latest technology.
- **Assessment and Feedback**: Regular quizzes, tests, and continuous feedback.
- **Support and Resources**: Study materials, tutoring support, and library access.
- **Career Guidance**: Career counselling and assistance with internships and job placements.
- **Flexible Learning Options**: Evening/weekend classes and online resources.

Admissions and Requirements:

Admissions

- Eligibility: Open to all Nalbari College students; basic math understanding is helpful.
- Application: Submit the form available at the Computer Science Department or online; adhere to deadlines.
- Selection: First-come, first-served; priority to science/tech backgrounds.

Course Requirements

- Attendance: Minimum 75%.
- Assignments: Complete all tasks and projects on time.
- Examinations: Periodic quizzes and a final exam.
- Participation: Engage in class discussions and projects.
- Grading: Based on assignments, quizzes, participation, and final exam.

Costs and Financial Aid:

- **Costs**
  - Course Fee: Free of cost
  - Materials Fee: Free of cost
  - Lab Fee: Free of cost

- **Financial Aid:** No Scheme at Present

Contact Information:

- **Course Coordinator:** Mr. Ankur Baishya
- **Website:** www.nalbaricollege.ac.in

Conclusion:

After completion of the course the student will gain foundational knowledge in computer science, problem-solving skills, technical proficiency, critical thinking ability, collaboration, and communication skills. These skills open doors to various career opportunities in technology.