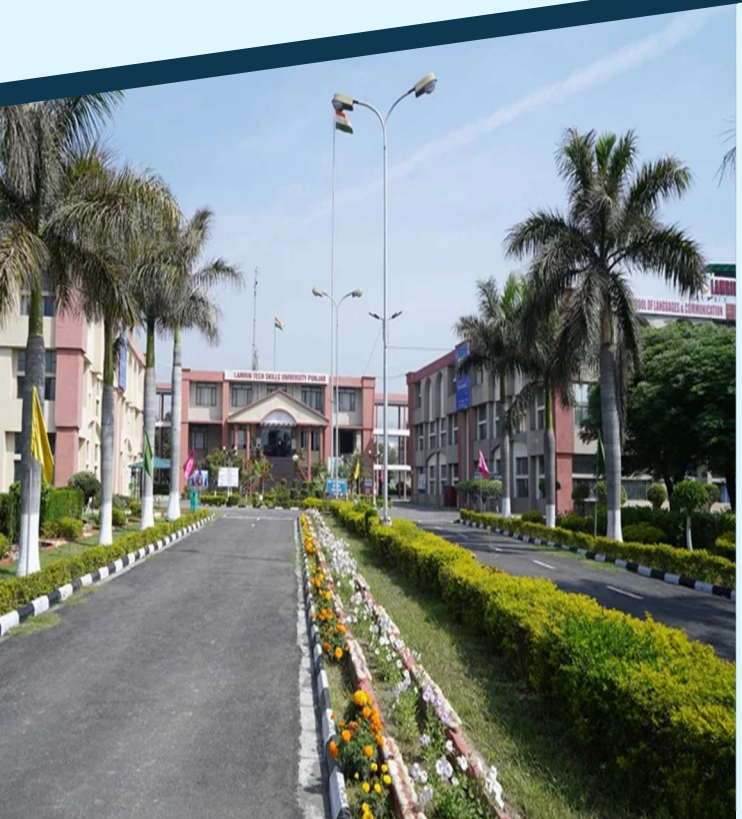
"Every line of code you write builds the future; every vulnerability you secure protects it. You aren't just learning to navigate the digital world—you are learning to defend it."



Shape the Future with cyber security

"From algorithms to firewalls. From writing logic to fighting threats. Decode your potential with a BCA in Cyber Security."

Address- Lamrin Tech Skills University Punjab

Chandigarh- Jalandhar National Highway (NH344A)

Postal Code-144533

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Contact us- +91 98554 28846, +91 83602 50986

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Email- office.usoc@ltsu.ac.in

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Website- https://www.ltsu.ac.in/university-school-of-computing



Lamrin Tech Skills University Punjab

BCA Cyber Security

Study Scheme

University School of Computing

Batch 2025 & 2026

Contact Here for admission-
+91 98554 28846, +91 83602 50986

OBJECTIVES

- Formulate logical algorithms and implement structured, object-oriented programming solutions using standard C++ syntax.
- Apply discrete mathematical structures, Boolean algebra, and computational logic to solve algorithmic problems.
- Deploy defensive security countermeasures, firewall configurations, and vulnerability assessments within active lab environments.
- Integrate digital ethics, environmental sustainability principles, and green computing methodologies into technical practices.

Course Curriculum Overview: Year I

Welcome to a curriculum engineered to build the next generation of tech leaders and security experts. This program merges core programming principles and systems engineering with an early, intensive specialization in Cyber Security and cloud infrastructure.

Through a precise balance of theoretical lecture frameworks and hands-on laboratory modules, you will master the software, hardware, and Défense protocols required by today's digital enterprises.

"Don't just run applications—secure the infrastructure that powers them. Decode logic, master networks, and fortify the digital horizon."

Semester- I

- Introduction to Programming and Problem-Solving using C++ & Lab
- Introduction to Cyber Security and Data Protection
- Mathematics for Computing
- Linux Administration & Lab
- Professional Ethics and Civic Moral
- Environmental Science
- Computer Fundamentals (Applications and Hardware) & Lab
- Certification-I (MOOC)

Semester- II

- Data Structures and Algorithms using C++ & Lab
- Cyber Security Fundamentals & Lab
- Data Base Management System & Lab
- Computer Networks
- Computer Organization & Architecture
- Fundamental of Information Technology
- Certification-II (CS0-003).



PROGRAMME OUTCOMES

- Advanced Technical Proficiency
- Mathematical Optimization and Problem-Solving:
- Network Infrastructure & Protocols.
- Modern Web Paradigms.
- Proficiently design and develop robust software applications using high-level languages like C, C++, Java, and Python.
- Oversee the entire software engineering lifecycle, including systematic design, continuous testing, and application maintenance.
- Analyze computer architecture components to optimize hardware performance and functional engineering efficiency.
- Manage operating system resources, focusing on process scheduling, memory allocation, and hardware abstraction layers.
- Architect scalable relational databases utilizing data normalization techniques to ensure system integrity.
- Author complex Structured Query Language (SQL) statements for optimized data retrieval and manipulation.

Course Curriculum Overview: Year II

Take your technical expertise to the next level. This phase of the curriculum shifts focuses toward full-stack development, modern networking, data intelligence, and the cognitive skills required by today's leading tech employers.

Through intensive Project-Based Learning (PBL), hands-on lab experiments, and professional certifications, you will transition from a student to an industry-ready engineer capable of designing complex digital solutions.



Semester- III

- Artificial Intelligence and Machine Learning & lab
- Web Technologies PBL & Lab
- Relationship Database Management System using SQL & Lab
- Data Privacy Laws and Standards
- Design Thinking
- Summer Internship
- Certification-III (SC-200)

Semester- IV

- Fundamentals of Application Development
- Cyber Security and Forensics Fundamental
- Ethical Hacking & Penetration Testing & lab
- Network Security Fundamentals & lab
- Cryptography & Information Security & lab
- Employability & Soft Skills
- Mini-Project (Industry-Aligned)
- Certification-IV(ACE)

INDUSTRY & SKILLING PARTNERS

Course Curriculum Overview: Year III

This final phase represents the peak of your academic journey. It is designed to transition you from the classroom directly into the global tech workforce or advanced research.

Rather than standard lectures, this period focuses entirely on independent execution, real-world corporate experience, and thought leadership. You will apply everything you have learned—programming, system architecture, security, and design thinking—into concrete deliverables that prove your readiness to the industry.



Semester- V

- Career-Ready Verbal and Aptitude Skills
- Industry Internship
- Capstone Project-I
- Summer Internship

Semester- VI

- Industry Internship
- Capstone Project-II
- Certification (MOOC)-Course