Computer Science Engineering - NorthCap University

M.Tech CSE - Cyber Security and Forensics

About

“There are only two types of companies: those that have been hacked, and those that will be”

by Robert Muelier, FBI Director clearly states the requirement of Cyber Security in day-to-day lives. M.Tech CSE with specialization in Cyber Security expands your knowledge in a specific field while increasing your earning potential. The comprehensive curriculum involves a solid foundation in key technology including penetration testing, network security, cryptography, risk analysis and assessment, etc. Further, it includes a research thesis project as part of the program gives you a chance to focus on a specific area of interest.

Market Trends of Cyber Security & Forensics:

- The growth of enterprise spending on information security in India will continue to grow unabated to **reach over US$2 billion in 2020. (Gartner)**
- The **majority (51%) of organizations do not believe they are ready** or would respond well to a cyber-attack or breach event. **(FireEye)**
- The number of **cyber security job postings has grown 94%** in just six years. **(Burning Glass)**

Unique Selling Points of the Specialization:

- The MTech program is designed for those who want to extend their technical and programming skills to handling cyber security and forensics challenges.
- Learn to stay updated on rapidly changing technology, adapt and control to new threats and anticipate potential cyber-attacks.
- Real-life case studies to cover the various aspects of digital forensics, including investigating network intrusions and mobile forensics to obtain data related to computer crimes.
- Hands-on sessions to enhance their knowledge and skills to apply penetration testing to exploit and investigate vulnerable systems, secure coding practices, etc
- In-depth analysis of modern malware samples using Static and Dynamic analysis techniques to break down potential malware threats, create solutions to combat them, and protect against malware in the future.
- Include the process of network security, including intrusion detection, collect evidence of network intrusions, test networks and systems for vulnerabilities

- Learn key principles of risk analysis, risk assessment and risk mitigation for information security using both qualitative and quantitative methodologies.
- Industry aligned curriculum, designed by Industry Experts
- Well-trained and qualified faculty
- Research Guidance & Mentoring by doctoral faculties and renowned academicians
- Blended Learning 24 * 7

APPLY NOW!

Programme Educational Objectives (PEOs)

- To provide technical expertise in Computer Science & Engineering and infuse soft skills in our students to facilitate them professionally.
- To transform graduates into industry-ready professionals and competent researchers.
- To imbibe high standard of ethical and professional conduct, positive attitude, team spirit and societal responsibilities.
- To up skill our students and tune them for performing efficiently in various roles of their social, professional and ethical obligations.

Programme Outcomes (POs)

- Scholarship of Knowledge: Acquire in-depth knowledge of specific discipline or professional area, including wider and global perspective, with an ability to discriminate, evaluate, analyse and synthesise existing and new knowledge, and integration of the same for enhancement of knowledge.
- Critical Thinking: Analyse complex engineering problems critically, apply independent judgement for synthesising information to make intellectual and/or creative advances for conducting research in a wider theoretical, practical and policy context.
- Problem Solving: Think laterally and originally, conceptualise and solve engineering problems, evaluate a wide range of potential solutions for those problems and arrive at feasible, optimal solutions after considering public health and safety, cultural, societal and environmental factors in the core areas of expertise.
- Research Skill: Extract information pertinent to unfamiliar problems through literature survey and experiments, apply appropriate research methodologies, techniques and tools, design, conduct experiments, analyse and interpret data, demonstrate higher order skill and view things in a broader perspective, contribute individually/in group(s) to the development of scientific/technological knowledge in one or more domains of engineering.
- Usage of Modern Tools: Create, select, learn and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities with an understanding of the limitations.
- Collaborative and Multidisciplinary Work: Possess knowledge and understanding of group dynamics, recognise opportunities and contribute positively to collaborative-multidisciplinary scientific research, demonstrate a capacity for self-management and teamwork, decision-making based on open-mindedness, objectivity and rational analysis in order to achieve common goals and further the learning of themselves as well as others.
- Project Management and Finance: Demonstrate knowledge and understanding of engineering and management principles and apply the same to one’s own work, as a member and leader in a team, manage projects efficiently in respective disciplines and multidisciplinary environments after consideration of economical and financial factors.
- Communication: Communicate with the engineering community, and with society at large, regarding complex engineering activities confidently and effectively, such as, being able to comprehend and write effective reports and design documentation by adhering to appropriate standards, make effective presentations, and give and receive clear instructions.

- Life-long Learning: Recognise the need for, and have the preparation and ability to engage in life-long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously.
- Ethical Practices and Social Responsibility: Acquire professional and intellectual integrity, professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes on professional practices and an understanding of responsibility to contribute to the community for sustainable development of society.
- Independent and Reflective Learning: Observe and examine critically the outcomes of one's actions and make corrective measures subsequently, and learn from mistakes without depending on external feedback.

APPLY NOW!

Programme Specific Outcomes

PSO 1 Acquire deep knowledge of Computer Science & Engineering with specialized areas of Data Science and Cyber Security.

PSO 2 Identify research areas and provide solutions to complex engineering problems for the advancement of society.

PSO 3 Enable the students for premium National/International jobs, pursue research career, entrepreneurship and to become responsible global citizens.

Scheme 2022-23

Download Scheme

Scheme 2022-23

Download Scheme

Scheme 2020-21

Download Scheme

Want to learn more about NCU?

Be a part of an interesting journey, a journey that will take you to the heights.

Contact Us

Address: HUDA Sector 23-A Gurugram – 122017

Phone: + 91 124 2365811 / 12 / 13/87

Admissions Hotline: 9311300803

Email: ncu@ncuindia.edu

Locate Us | Contact Us

APPLY NOW!

Important Link

Blog

Alumni

Careers

Stakeholders Feedback

Code of Conduct

SC/ST/OBC/Minority Online Complaint Form

Follow Us

Virtual Tour

"The Information Technology related network guidelines issued by NCU is in consonance with the laws of the Government of India and rules and regulations under the information technology and network resources policy of the university. Therefore any misuse or unlawful activities are strictly prohibited and shall be dealt with under the applicable law."