

## **(063-CSE-02-03) CSE (CYBER FORENSICS AND INFORMATION SECURITY)**

### **Significance of the Program**

The Computer Science and Engineering (CSE) program specializing in Cyber Forensics and Information Security is crucial in the digital landscape, equipping graduates with skills to investigate cybercrimes and protect digital assets, while also ensuring the confidentiality, integrity, and availability of sensitive information.

The program prepares graduates for diverse cybersecurity roles, preparing them for roles in corporate management and governmental agencies. It teaches both offensive and defensive aspects, fostering a deep understanding of cyber security and promoting a secure digital future.

### **Career Options**

By pursuing a professional course in Cyber Forensics and Information Security, students can explore the following opportunities:

- Start a cyber security consulting firm or develop innovative security solutions
- Specialize in securing cloud-based infrastructure and services as a Cloud Security Engineer
- Develop and implement security solutions, tools, and software to address vulnerabilities and enhance overall security as a Security Software Developer.
- They can work in digital and cyber forensic departments as Cyber Security Analysts, Security Consultants, Forensic Analysts, Security Auditors, and Security Architects.
- Research opportunities include studying cyber threats, creating forensic tools, and exploring privacy-preserving techniques in the digital space.

### **Program Objectives**

- To build awareness, enhance education, and provide a foundation for information security, digital forensics, and cyber law students.
- To train students in Cyber Forensics and Information Security to meet the growing demand for cyber security, and digital forensics experts with advanced skills
- To provide hands-on, industry-focused skills to ensure students are well-prepared for real-world challenges in the cybersecurity field.
- To provide students with learning environment awareness for collaborative research and development activities needed for a successful professional career

## **Outcomes of the Program**

At the end of the program, the student will be able to:

- Apply the Knowledge of relevant cyber laws, regulations, and ethical considerations, ensuring compliance in the context of digital investigations and information security practices.
- Design and implement secure information system architectures, considering the confidentiality, integrity, and availability of data.
- Use appropriate forensic tools and technologies for efficient and accurate digital investigations by understanding the procedures of collecting the digital evidence from the Scene of Crime
- Develop the ability to formulate research methodologies for preserving digital evidence in cloud environments, addressing challenges related to data storage, integrity, and chain of custody.

## **Major Course Outline**

- Mathematical Foundations
- Cryptography and Network Security
- Cyber security Fundamentals
- Digital Forensics Techniques
- Cyber Laws and Security Policies
- Case studies on Cyber Crime Investigations and Digital Forensics