

## Information Brochure

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Over the past years, computer technology has forced everyone to change the way they do things. Even the criminals have adapted to the information age. The threats of cyber attacks are increasingly apparent to individuals and organizations across the globe. From hacking to phishing, scamming to grooming, and botnets to cyber-terrorism, the variety and ingenuity of exploits appear to expand constantly.

The unprecedented incidence of crimes in the information and communication systems, made a compulsion to fill up the vacuum created due to the dearth of experts. This could be overcome by creating experts in the field of Cyber Security and Digital Forensics. Chances of getting victimized accidentally are more common in the current era. To sensitize the people and to protect oneself from landing in such a scenario, there is a need of specialized academic programs which will ultimately culminate in the expertise. This academia imparts overall security measures required for the protection through various misadventures with the electronic systems. It would also provide comprehensive solution for the preventive care and also for the post traumatic measures to be taken. It also addresses system vulnerabilities and the preventative measures that may counter cyber-attacks, including steps to repair systems weaknesses, prevent repeat occurrences, and collecting and examining digital evidence using a variety of digital and mobile forensics tools and technology.

The aim of these programs is to provide learners with essential expert technical knowledge, competence and research skills of the most important technical concepts of cyber security and how they are applied in emerging areas such as device security and forensics.

The courses are technical and practical in nature, uniquely embedded in industry, and develops in-depth expertise of core technical topics within the area of cyber security and digital forensics such as information security, secure programming, network security, penetration testing, malware analysis, IT law and ethics, and technologies and tools that support application and service vulnerability detection, incident detection, data and log retrieval and analysis. Courses also provide a sharper focus into forensics and cyber security through the elective subjects that are offered to the learners.

# **M.Sc. Digital Forensic and Information Security**

## **Course Structure**

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### **Semester – I**

Paper – 1: Cyber Law and IRM

Paper – 2: Forensic Application Development and Networking Concepts

Paper – 3: Digital Forensics Part – 1

Paper – 4: Introduction to Forensic Science and Law

### **Semester – II**

Paper – 1: Threats to Web Infrastructure, its Defense and Resilience

Paper – 2: Digital Forensics Part – 2

Paper – 3: Malware Analysis

Paper – 4: Minor Project – 1

### **Semester – III**

Paper – 1: Network Security and Forensics

Paper – 2: Mobile Security and Forensics

Paper – 3: Elective

Paper – 4: Minor Project – 1

### **Semester – IV**

Project / Dissertation

## Admission procedure

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**Program:** M. Sc. Digital Forensics and Information Security (Full Time)

**Intake:** 50

**Duration:** 2 years (4 Semesters)

### Eligibility for Admission:

Student seeking admission to the above mentioned program must fulfill the following criteria:

B.E./B.TECH. in Computer Engineering/Technology or Computer Science and Engineering or Information Technology Engineering or Information and Communication technology or B.Sc. (IT/CS/Math/Electronics/Forensic Science with computer forensics) or Bachelor of Computer Applications (BCA) or equivalent qualification from recognized University with minimum 55% (50% for SC/ST/SEBC candidates) at the qualifying examination.

### Admission Procedure:

Merit list will be prepared on the basis of 100 % of Score of Entrance Test conducted by the Gujarat Forensic Sciences University.

### Details of Entrance Exam:

The entrance examination for the admission in M. Sc. Digital Forensics and Information Security will be conducted by GFSU at Gandhinagar and will be based on computer fundamentals like Operating Systems, Programming, Database, Networking and other concepts taught in Computer Applications / Computer Science / Computer Engineering / Computer Technology. The exam will be in Multiple Choice Question (MCQ) format and will not have any negative marks. There will be 50 questions and each question will carry TWO marks.

### Fees Structure:

- Semester Tuition fee: Rs.50, 000/- per semester + Other University fees

## **M. Sc. Cyber Security**

### **Course Structure**

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#### **Semester – I**

Paper – 1 Cyber Security Essentials and Incident Response Management

Paper – 2 Cyber Security Audit and Compliance

Paper – 3 Web Application Security

Paper – 4 Network Security

Paper – 5 Introduction to Forensic Science and Law

#### **Semester – II**

Paper – 1 Artificial Intelligence and Data Science

Paper – 2 Threat Hunting and Scripting

Paper – 3 Malware Analysis

Paper – 4 Digital Forensics

Paper – 5 Minor Project - 1



## Admission procedure

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**Program:** M. Sc. Cyber Security (Full Time)

**Intake:** 50

**Duration:** 2 years (4 Semesters)

### Eligibility for Admission:

A student seeking admission to any M. Sc. Program must fulfill the following criteria:

B.E./B.TECH. in Computer Engineering/Technology or Computer Science and Engineering or Information Technology Engineering or Information and Communication technology or B.Sc. (IT/CS/Math/Electronics/Forensic Science with computer forensics) or Bachelor of Computer Applications (BCA) or equivalent qualification from recognized University with minimum 55% (50% for SC/ST/SEBC candidates) at the qualifying examination.

### Admission Procedure:

Admission shall be given on the merit based on 100 % of Score of Entrance Test conducted by the Gujarat Forensic Sciences University.

### Details of Examination:

The entrance examination for the admission in M. Sc. Cyber Security will be conducted by GFSU at Gandhinagar and will be based on computer fundamentals like Operating Systems, Programming, Database, Networking and other concepts taught in Computer Applications / Computer Science / Computer Engineering / Computer Technology. The exam will be in Multiple Choice Question (MCQ) format and will not have any negative marks. There will be 50 questions and each question will carry TWO marks.

### Fees Structure:

- Semester Tuition fee: Rs.50,000/- per semester + Other University fees

## M. Tech. Cyber Security & Incident Response

### Course Structure

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#### **Semester – I**

Paper – 1 Cyber Law, Policies and Compliance

Paper – 2 Introduction to OS and Scripting

Paper – 3 Network Security and Forensics

Paper – 4 Threats to Web Infrastructure, its Defense and Resilience

Paper – 5 Introduction to Forensic Science and Law

#### **Semester – II**

Paper – 1 Malware Analysis and Forensics

Paper – 2 Mobile Phone Security and Forensics

Paper – 3 Incident Response and e-Discovery

Paper – 4 Digital Forensics

Paper – 5 Elective

#### **Semester – III**

Major Project - I

#### **Semester – IV**

Major Project – II

## Admission Procedure

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**Program:** M. Tech. Cyber Security & Incident Response (Full Time)

**Intake:** 50

**Duration:** 2 years (4 Semesters)

### Eligibility for Admission:

A student seeking admission to any M. Tech. Program must fulfill the following criteria:

B.E./B.TECH. in Computer Engineering/Technology or Computer Science and Engineering or Information Technology Engineering or Information and Communication technology or equivalent qualification from recognized University with minimum 55% (50% for SC/ST/SEBC candidates) at the qualifying examination.

### Admission Procedure:

Admission shall be given on the merit by adopting one of the following methods as decided by Academic Council.

100% of the GATE Score for GATE qualified students.

### **OR**

100% of Score of Entrance Test conducted for Non-GATE qualified students by the Gujarat Forensic Sciences University. (The preference will be given to GATE qualified over Non-GATE qualified students in merit list.)

### Details of Entrance Examination:

The entrance examination for the admission in M. Tech. Cyber Security & Incident Response will be conducted by GFSU at Gandhinagar and will be based on computer fundamentals like Operating Systems, Programming, Database, Networking and other concepts taught in Computer Applications / Computer Science / Computer Engineering / Computer Technology. The exam will be in Multiple Choice Question (MCQ) format and will not have any negative marks. There will be 50 questions and each question will carry TWO marks.

### Fees Structure:

- Semester Tuition fee: Rs.65,000/- per semester + Other University fees



## Facilities

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To achieve these goals, GFSU has established state-of-the-art Cyber Defence Centre. It is a hybrid setup consisting of physical and virtual environments that simulates Cyber Range. GFSU also have laboratories which are equipped with the tools and technologies like Threat Intelligence, Fuzz Testing, E-Discovery, Malware and Ransomware Analysis, IoT security, Darknet, Artificial Intelligence, Machine Learning, Data Science, Cloud, Blockchain, Mobile Forensics, Computer Forensics, CDR Analysis and Multimedia Forensics and many more.

## **Placements**

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The University has full-fledged Training and Placements Cell which provides placement assistance for internship as well as job placement to the students of M Tech Cyber Security and Incident Response; M Sc Digital Forensics and Information Security and M Sc Cyber Security. The Training and Placement Cell works rigorously throughout the year, arranging placements for their students, in various organizations around the world. Most of the students from these courses received good internship offer with stipend.

Our students get placed at reputed multinational companies and government organizations. Average placement for two courses\* is 80 %; Average stipend offered was 25000/- INR and average package offered was 6 Lakh per annum.

\* Placement details of M Sc Cyber Security will be available in the next year as the course starts from academic year 2019-20.