

**VALUABLE DATA NEEDS  
INVALUABLE PROTECTION**

**JAIN UNIVERSITY**

Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956



**M.Sc. in Information Security Management Services**

Knowledge Partner

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## PROGRAMME OVERVIEW

The main goal of this course is to provide students with an in-depth understanding of how information security functions in an organization and to make them understand the background, foundation, and insight into the many dimensions of information security. This knowledge will serve as basis for further deeper study into selected areas of the field or as an important component in their further studies and involvement in Information Security as a whole.

Understand information security's importance in our increasingly networked world, Understanding external and internal threats to an organization, Working knowledge of Mobile, Wireless and VOIP security, Exposure to the stages of Ethical Hacking for defending the organization from external and internal threats, Discover, Analyze & deal with IT threats to an organization, Understand Fundamentals of cryptography, Understand database security concepts & Information security governance and related legal and regulatory issues

### Programme Name

Master of Science

### Programme Code

044

### Course code and Name

4412 M. Sc in IT Information Security Management Services

### Degree Awarded

Master of Science

### Duration of the Programme

2 years, 4 semesters

### Eligibility

The minimum qualification to apply is a Bachelor's degree in the relevant discipline.

### Medium of Instruction / Examination

English

### Study Campus

**School of Sciences - Dept. of Information Technology**  
**Jain University, # 34, 1<sup>st</sup> Cross, JC Road, Bangalore - 560 001**

### Programme Timings

8:30 am - 4:30 pm (Mon to Sat)

### Course Advisor

Dr. Easwaran Iyer  
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### Examinations & Assessments

1. Internal tests
2. Assignments
3. Seminar presentation

4. Class tests
5. Preparatory theory and Practical examination
6. End term theory and Practical examination

## Curriculum

### Semester 1

Computer System organization  
Designing Enterprise Network  
Application Programming  
Data Center Architecture and Storage Management Fundamentals  
Server Operating System

**Learning Labs:** Programming and Operating Systems Lab  
Mini Project

### Semester 2

Information Security  
Applied Cryptography  
Database Security Fundamentals  
Ethical Hacking  
Elective I

**Learning Labs:** Ethical hacking - Lab  
Network – Lab

### Semester 3

Virtualization & Cloud Security  
Advanced Computer Forensics  
Disaster Recovery and Business Continuity Management  
COBIT, ValIT and RiskIT  
Elective II

**Learning Labs:** Application & Web Security - Lab  
Advanced Computer Forensics - Lab

### Semester 4

Final Project and Internship

## CAREER OPPORTUNITIES

The global IT services market size is \$846 Billion (Source: Gartner Research) at 6.6% CAGR and India's IT Outsourcing market is estimated to be \$60 Billion as per NASSCOM 2011 report. As threats increase and enterprises place an increasingly higher level of priority on the security function, the need for trained staff is very high. Employers are looking for highly skilled and qualified professionals that possess a basic understanding of information security concepts, directly related experience and strong technical skills. But those who do the hiring say such staff are becoming increasingly difficult to find.

The Career Impact Survey-2012 conducted by (ISC) 2, from more than 82,250 security professionals from more than 135 countries found that "62 percent reported that they are looking to hire additional permanent or contract information security employees in 2012. Roughly 34 percent reported an increase in new hires in 2011." It also concludes that "If you're a well-trained, experienced professional in today's IT security market, you are facing a

world of opportunity. But if you're an IT executive looking to find such people for your enterprise, you're in for a tough challenge." Even in the most difficult of economic times, security is a full-employment field. With the growing number of threats on the horizon, and the growing awareness of cyber security vulnerabilities and issues inside the enterprise, it is clear that IT security will be a top priority for Government and Corporate in the coming year and likely for years to come.

Job opportunity for Cyber Security Professions are available at various departments of different sectors like Corporate, Banking, Finance and Insurance, Defense and Police, Government, Legal and Cyber Forensic Consultant. The positions that these IT Security professions can hold are Chief Information Security Officer, Information Security Officer, Database Security Officer, Information Security Expert, Malware Analyst, Forensics Expert, Forensics Analyst, Incident Responder, Business Continuity Manager, IT Security Auditor, Penetration Tester, Ethical Hacker, and Security Testing Engineer etc.