MASTER OF SCIENCE (M.Sc.) – INFORMATION TECHNOLOGY

Duration: 4 Years
Total Semesters: 8

SEMESTER – I

Code	Subject
MSIT-101	Fundamentals of Information Technology
MSIT-102	Programming in C
MSIT-103	Computer Organization
MSIT-104	Mathematical Foundations
MSIT-105	Communication Skills

Course Details (Sem I):
This semester introduces the fundamentals of IT, basic programming concepts, computer hardware structure, mathematical logic, and communication skills required for IT professionals.

SEMESTER – II

Code	Subject
MSIT-201	Data Structures
MSIT-202	Object Oriented Programming (C++)
MSIT-203	Operating Systems
MSIT-204	Discrete Mathematics
MSIT-205	Environmental Studies

Course Details (Sem II):
Focuses on data organization, object-oriented programming, operating system principles, and mathematical techniques used in computing.

SEMESTER – III

Code	Subject
MSIT-301	Database Management Systems
MSIT-302	Java Programming
MSIT-303	Computer Networks
MSIT-304	Software Engineering
MSIT-305	Web Technologies – I

Course Details (Sem III):
Students learn databases, networking concepts, software development models, Java programming, and web design fundamentals.

SEMESTER – IV

Code	Subject
MSIT-401	Advanced Java & J2EE
MSIT-402	Web Technologies – II
MSIT-403	Linux & UNIX Programming
MSIT-404	Numerical Methods
MSIT-405	Mini Project

Course Details (Sem IV):
This semester enhances advanced programming skills, server-side web development, Linux environments, and practical application through a mini project.

SEMESTER – V

Code	Subject
MSIT-501	Data Warehousing & Data Mining
MSIT-502	Artificial Intelligence
MSIT-503	Information Security
MSIT-504	Mobile Application Development
MSIT-505	Elective – I

Course Details (Sem V):
Students explore intelligent systems, security concepts, mobile app development, and data analytics for decision making.

SEMESTER – VI

Code	Subject
MSIT-601	Cloud Computing
MSIT-602	Big Data Analytics
MSIT-603	Internet of Things (IoT)
MSIT-604	Software Testing
MSIT-605	Industrial Training

Course Details (Sem VI):
This semester focuses on emerging technologies like cloud, IoT, big data, and hands-on industrial exposure.

SEMESTER – VII

Code	Subject
MSIT-701	Machine Learning
MSIT-702	Advanced Database Systems
MSIT-703	Cyber Laws & IT Ethics
MSIT-704	Research Methodology
MSIT-705	Seminar & Case Study

Course Details (Sem VII):
Develops advanced analytical, research, and ethical understanding of IT systems with exposure to real-world case studies.

SEMESTER – VIII

Code	Subject
MSIT-801	Major Project
MSIT-802	Internship / Industry Project
MSIT-803	Project Report
MSIT-804	Viva Voce

Code	Subject
MSIT-805	Comprehensive Evaluation

Course Details (Sem VIII):
The final semester emphasizes research-based learning, industry-oriented projects, internships, and final evaluation.

OVERALL COURSE DETAILS / PROGRAM OUTCOME

After completing **M.Sc. Information Technology**, students can:

- Design and manage IT systems
- Develop software, web & mobile applications
- Work in **IT companies, MNCs, startups, government & private sectors**
- Roles: **Software Developer, Data Analyst, System Analyst, Cloud Engineer, Cyber Security Expert, IT Manager**
- Pursue **Ph.D., Teaching, Research, or Advanced Certifications**