

M. Sc. IT Learning Objectives & Learning Outcomes

MSc IT Semester I

SN	LEARNING OBJECTIVES	LEARNING OUTCOMES
Data Mining		
1.	Interpret the contribution of data mining to the decision-support level of organizations	Students would be able to discover interesting patterns from large amounts of data to analyze and extract useful information. Evaluate and implement a wide range of emerging and newly-adopted methodologies and technologies to facilitate the knowledge discovery.
2.	Learning different data-mining techniques: frequent pattern mining, association, correlation, classification, prediction, and cluster and outlier analysis.	Students would be able to understand different data-mining techniques: frequent pattern mining, association, correlation, classification, prediction, and cluster and outlier analysis.
Distributed System		
1.	To enable students to acquire knowledge about the architecture of a distributed system and understand the protocols working for the same	Students would be able to acquire knowledge about principles, architectures, algorithms and programming models used to design distributed systems.
2.	To enable students to learn various IPC techniques and distributed algorithms.	Students would be able to understand various inter-process communication techniques and distributed algorithms.
Data Analysis Tools		
1.	To assist students learn various statistical functions and tools of C	Students would be able to understand various statistical functions and tools of C
2.	To help students learn to use database queries in C	Students would be able to use database queries in C
3.	To help students learn and analyze data through various statistical tools and parametric and non-parametric testing.	Students would be able to analyze data through various statistical tools and parametric and non-parametric testing.
Software Testing		
1.	To make students understand whether the software is working satisfactorily as per the requirements	Students would be able to investigate the reason for bugs and analyze the principles in software testing to prevent and remove bugs.
2.	To help students to understand whether the software is error free.	Students would be able to implement various test processes for quality improvement, Design test planning and manage the test process.
3.	To enable students to understand whether the software does its job	Students would be effectively able to use software testing tools.

	correctly and can be used in production.	
Data Mining Practical		
1.	Evaluate the performance of different data-mining algorithms	Students would be able to evaluate, select and apply appropriate data-mining algorithms, interpret and report the output appropriately to solve problems and make predictions.
2.	Propose data-mining solutions for different applications	Students would be able to understand various data-mining solutions for different applications.
Distributed System Practical		
1.	To simulate the working of a client server paradigms in a distributed system	Students would be able to simulate the working of various client server inter-process communication models.
Data Analysis Tools Practical		
1.	To enable students to use theoretical knowledge to write programs in Cygwin and analyze and interpret data.	Students would be able to write programs in Cygwin and can analyze and interpret data of any statistical problem.
Software Testing Practical		
1.	To help students to acquire knowledge about different types of testing with examples.	Students would be able to use practical knowledge of a variety of ways to test software and have an understanding of some of the tradeoffs between testing techniques.
2.	To help students learn different tools –Selenium Tool, Ellipse software	Students would be able to use different software testing tools.

MSc IT Semester II

SN	LEARNING OBJECTIVES	LEARNING OUTCOMES
Mobile Computing		
1.	To acquire knowledge about the working of mobile and wireless communication	Students would be able to learn the basic fundamentals of mobile communication systems.
2.	To enable students to learn radio communications and wireless standards.	Students would be able to understand mobile radio communication principles and to study the recent trends adopted in cellular systems and wireless standards.
Advanced Computer Networks		
1.	To enable students to acquire knowledge about models used for	Students would be able to develop basic knowledge of the taxonomy and terminology

	advanced networking.	related to networking models - OSI model and TCP/IP Protocol Suite and various Routing Protocols.
2.	To enable students to learn about data and storage centers and WAN designs considerations.	Students would be able to acquire knowledge about Data centers, WAN designs and Storage Area Networks.
Cloud Computing and Ubiquitous System		
1.	To enable students to acquire in-depth knowledge of Cloud Computing concepts, technologies, architecture and applications by introducing and researching state-of-the-art in Cloud Computing fundamental issues, technologies, applications and implementations.	Students would be able to understand the Cloud Computing concepts, technologies, architectures, applications and role of virtualization in cloud computing and gain knowledge of different emerging cloud software environments.
2.	To enable students to learn the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc.	Students would be able to analyze different cloud computing platforms such as GAE, AWS and Azure
Advanced Database Systems		
1.	Learning Query optimization, parallel and distributed database systems	Students would be able to get knowledge of Query optimization, parallel and distributed database systems
2.	Execution of queries based on data	Students would be able to implement SQL queries.
Mobile Computing Practical		
1.	To help students to emulate the working mobile devices on smart or android devices	Students will be able to emulate the working of mobile smart devices to develop mobile applications.
Advanced Computer Networks Practical		
1.	To enable students to simulate the working of various networking protocols	Students would be able to simulate the working of various routing protocols.
Cloud Computing and Ubiquitous System Practical		
1.	To gain knowledge of application development and deployment using cloud platforms.	Students will be able to implement various cloud environments such as Private Cloud, Azure application, server cluster, Open Nebula GAE.
2.	To develop cloud based software applications such as Open Nebula, Azure, Cluster, GAE etc	Students would be able to implement cloud service models such as IaaS, PaaS and SaaS
Advanced Database Systems Practical		
1.	Learn to implement object oriented, spatial, active, deductive and temporal database systems.	Students would be able to implement object oriented, spatial, active, deductive and temporal database systems.

