

**SES's L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE
(AUTONOMOUS)**



BOARD OF STUDIES: IT & DATA SCIENCE

**PROGRAMME: B.COM (COST AND MANAGEMENT
ACCOUNTING)**

SEMESTER: I

**NOMENCLATURE OF THE COURSE: TECHNOLOGY AND
ANALYTICS - I**

NEP Vertical: SEC

Credit: 2

(As Per Choice Based Credit System (under NEP 2020) with effect from the Academic Year 2025-26)



Programme:	B. Com (Cost & Management Accounting)
Nomenclature of the Course	Technology & Analytics - I
Total Marks	50
Semester:	I
Academic year	2025-2026

LEARNING OBJECTIVES:

1. To provide an understanding of information systems, including transaction cycles, databases, and enterprise resource management.
2. To equip students with knowledge of data management techniques, including data warehouses, data marts, data lakes, and enterprise performance management (EPM).
3. To develop an understanding of data governance principles, data life cycle management, and records management.
4. To familiarize students with cybersecurity concepts, cyberattacks, and the implementation of effective defences against cyber threats.

COURSE OUTCOMES:

1. Explain the fundamental concepts of information systems, data governance, and cybersecurity.
2. Utilize information system tools to manage databases, transaction cycles, and enterprise resources effectively.
3. Assess cybersecurity risks and develop appropriate strategies to defend against cyberattacks.

Unit	Course Content	Andragogy	No of Lectures
I	<p>Information Systems</p> <p>Overview of Information Systems in Business</p> <p>Transaction Cycles and Their Importance</p> <ul style="list-style-type: none"> - Revenue Cycle - Expenditure Cycle - Production Cycle <p>Databases and Data Management</p> <ul style="list-style-type: none"> - Types of Databases (Relational, NoSQL) - Database Management Systems (DBMS) <p>Enterprise Resource Management (ERP)</p> <ul style="list-style-type: none"> - Key Features and Benefits of ERP Systems - ERP Implementation Challenges <p>Data Storage Solutions</p> <ul style="list-style-type: none"> - Data Warehouse, Data Mart, and Data Lake - Enterprise Performance Management (EPM) Systems 	<p>Presentations,</p> <p>Case studies,</p> <p>Group Discussions</p>	15
II	<p>Data Governance and Cybersecurity</p> <p>Data Governance Principles</p> <ul style="list-style-type: none"> - Importance of Data Governance - Regulatory Compliance and Standards <p>Data Life Cycle and Records Management</p> <ul style="list-style-type: none"> - Stages of Data Life Cycle - Best Practices in Records Management <p>Cyberattacks and Threats</p> <ul style="list-style-type: none"> - Types of Cyberattacks (Phishing, Malware, Ransomware, DDoS) - Impact of Cyberattacks on Organizations 	<p>Presentations,</p> <p>Case studies,</p> <p>Group Discussions</p>	15

Defenses Against Cyberattacks - Firewalls and Intrusion Detection Systems (IDS) - Encryption Techniques - Employee Awareness and Training		
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SUGGESTED READINGS

1. Kenneth C. Laudon and Jane P. Laudon - "Management Information Systems: Managing the Digital Firm," Pearson
2. Ramez Elmasri and Shamkant B. Navathe - "Fundamentals of Database Systems," Pearson
3. William Stallings - "Cryptography and Network Security: Principles and Practice," Pearson
4. John Rittinghouse and James F. Ransome - "Cybersecurity Operations Handbook," Elsevier

QUESTION PAPER PATTERN Internal Continuous Assessment (ICA) Pattern

Particulars	Marks
Presentation/Viva Voce	10
Assignment/Project	10
Total	20

TERM END EXAMINATION

Maximum Marks: 30

Duration: 1 Hour

All questions are compulsory.

Question No.	Description	Total Marks
1	A. Full Length Theory Question OR	12
	B. Full Length Theory Question	
2	A. Full Length Theory Question OR	12
	B. Full Length Theory Question	
3	Short Notes (Any 2 out of 3)	6

The Full length theory questions of 12 marks each may be split up into two smaller problems carrying 6 marks each.