Curriculum MB-511 (Data Science for Managerial Decisions) Graded Curriculum

Units

- Introduction to Data Science
- Information Technology: An Overview
- Applications of Data Science in various fields
- MIS and Control Systems
- Data Collection and Data Pre-Processing
- Building Information Systems
- Support Systems for Management Decisions

Sub-Units

- Introduction to Data Science
    - Overview of Data Science and its Importance
        - Data Science and its applications.
        - Role of data scientists in various industries.
        - Historical context and evolution of data science.
    - Key Concepts in Data Science
        - Fundamental concepts: data, information, knowledge, and wisdom.
        - Data lifecycle: collection, cleaning, analysis, and visualization.
    - Importance of Data in Decision Making
        - Impact of data-driven decision-making on businesses and society.
        - Case studies demonstrating successful data-driven strategies.

- Information Technology: An Overview
    - Foundations of Information Technology
    - Information Systems and Management
    - Cybersecurity and IT Governance
    - Future Trends in Information Technology

- Applications of Data Science in various fields

- MIS and Control Systems
    - Introduction to MIS and Control Systems
    - Design and Implementation of MIS
    - Control Systems in Action
    - Challenges and Future Trends
- Data Collection and Data Pre-Processing
    - Introduction to Data Collection
    - Methods of Data Collection in Management
    - Designing Data Collection Instruments
    - Sampling Techniques
    - Data Collection Planning and Management
    - Understanding Data Pre-Processing
    - Data Cleaning Techniques
    - Quality Assurance in Data Pre-Processing
- Building Information Systems
    - Introduction to Information Systems in Management
    - Planning and Designing Information Systems
    - Implementation and Integration of Information Systems
    - Managing and Evaluating Information Systems
- Support Systems for Management Decisions
    - Introduction to Decision Support Systems (DSS)
    - Design and Implementation of Decision Support Systems
    - Enhancing Decision-Making with Advanced DSS Features
    - Implementation Challenges and Future Trends in DSS