Data Science & Analytics Curriculum

Program Overview

This four-year undergraduate program equips students with essential skills in data science, statistical modeling, analytics, and data-driven decision-making for diverse industries.

Year 1 - Foundation

- Introduction to Programming in Python
- Mathematics for Data Science
- Data Structures and Algorithms
- Introduction to Statistics
- Computer Organization and Architecture
- Communication Skills

Year 2 - Core Data Science

- Database Management Systems
- Probability and Statistical Inference
- Data Visualization Techniques
- Object-Oriented Programming in Java
- Operating Systems
- Discrete Mathematics

Year 3 - Analytics and Applications

- Data Mining and Warehousing
- Machine Learning Foundations
- Big Data Analytics
- Business Analytics
- Elective I (e.g., Time Series Analysis)
- Natural Language Processing

Year 4 - Advanced Topics and Project

- Deep Learning Techniques
- Data Ethics and Privacy
- Cloud Computing for Data Science
- Predictive Modeling and Decision Science
- Capstone Project in Data Science & Analytics
- Internship / Industry Collaboration

Career Prospects

Graduates can pursue careers as Data Scientists, Business Analysts, Data Engineers, and Analytics Consultants across various sectors including finance, healthcare, and technology.