

Subject Code	Subject Name	Credits
26CS618	AI FOR BUSINESS AND DECISION INTELLIGENCE	04

Course Objectives:

1. To understand the role of Artificial Intelligence in business decision-making
2. To learn data-driven decision intelligence techniques
3. To apply machine learning models to business problems
4. To analyze business data using AI tools and analytics
5. To study optimization and predictive modeling for decision support
6. To explore ethical and strategic implications of AI in business

Learning Objectives:

After completion of the course the students will be able to:

1. Apply AI and analytics techniques to real-world business problems
2. Build predictive and prescriptive models for decision-making
3. Analyze structured and unstructured business data
4. Use business intelligence (BI) tools and dashboards
5. Evaluate decisions using optimization and simulation models
6. Understand AI ethics, bias, and governance in business

Unit I - Introduction to AI in Business (12 Hrs.)

Role of AI in modern organizations, Decision intelligence vs business intelligence, Types of analytics (descriptive, predictive, prescriptive), AI-driven business transformation Data for Business Intelligence: Data collection and preprocessing, Data warehousing and data lakes, Data visualization tools (Tableau, Power BI basics), KPIs and business metrics.

Unit II - Machine learning for business (12 Hrs.)

Supervised learning (regression, classification), Unsupervised learning (clustering, segmentation), Model evaluation techniques, Applications: sales forecasting, customer churn, Decision Intelligence & Optimization: Decision theory basics, Optimization techniques (linear programming basics), Simulation models, Risk analysis and decision trees

Unit III - AI Applications in Business Domains (12 Hrs.)

Marketing analytics (customer segmentation, recommendation systems), Finance (fraud detection, credit scoring), Operations (supply chain optimization), HR analytics

UNIT IV - Business Intelligence Tools & Systems (12 Hrs.)

Dashboards and reporting systems, Data storytelling techniques, Real-time analytics systems, Integration of AI with enterprise systems

UNIT V - AI Ethics, Governance, and Emerging Trends in Business (12 Hrs.)

Ethics, Governance & Strategy, AI ethics and bias, Data privacy and security, Responsible AI in business, Strategic decision-making using AI Emerging Trends: Generative AI in business, AI-driven automation, Decision intelligence platforms, Future of AI in management

Reference Books:

1. "Artificial Intelligence for Business" – Doug Rose
2. "Prediction Machines" – Ajay Agrawal, Joshua Gans, Avi Goldfarb
3. "Data Science for Business" – Foster Provost & Tom Fawcett
4. "Analytics & Decision Intelligence "Business Analytics" – James R. Evans