



**ROSEBANK  
INTERNATIONAL**  
University College

**SHORT  
LEARNING  
PROGRAMME**



# **Artificial Intelligence for Business Decision-Making**



#### COURSE OVERVIEW

This course provides a comprehensive introduction to the application of Artificial Intelligence (AI) techniques in the field of business analytics. Students will learn how AI can be used to analyze business data, identify trends, make predictions, and support strategic decision-making. The course will cover various AI methodologies and tools relevant to business contexts, with a focus on ethical considerations and practical applications.

#### LEARNING OBJECTIVES

Upon completion of this course, students will be able to:

- Demonstrate understanding of the fundamental concepts of AI and machine learning.
- Apply AI techniques to analyze business data and extract meaningful insights.
- Use AI to build predictive models for forecasting and risk assessment.
- Evaluate and select appropriate AI tools for specific business analytics tasks.
- Communicate AI-driven business insights to stakeholders effectively.
- Examine the ethical considerations of using AI in business.

#### COURSE DETAILS

##### Module 1: Introduction to AI and Business Analytics

- Fundamentals of AI and Machine Learning
- Overview of Business Analytics: descriptive, predictive, and prescriptive
- The role of AI in transforming business analytics
- Ethical considerations in AI for business

##### Module 2: Data Preprocessing and Feature Engineering for AI

- Data collection, cleaning, and transformation
- Feature selection and engineering
- Handling missing data and outliers
- Data visualization techniques

##### Module 3: AI Techniques for Descriptive Analytics

- Clustering algorithms for customer segmentation
- Association rule mining for market basket analysis
- Dimensionality reduction techniques
- Using AI to automate reporting and dashboards

##### Module 4: AI Techniques for Predictive Analytics

- Regression models for forecasting
- Classification models for customer churn prediction
- Time series analysis with AI
- Evaluating and comparing predictive models

##### Module 5: AI for Prescriptive Analytics and Decision Support

- Optimization techniques with AI
- Recommendation systems
- AI-driven simulation and scenario planning
- Communicating AI insights for decision-making

##### Module 6: AI Implementation and Strategy

- AI project lifecycle
- Selecting appropriate AI tools and technologies
- Integrating AI into business processes
- Developing an AI strategy for an organization

##### Software/Tools

- Data analysis and visualization tools
- Python libraries like Pandas, NumPy, Matplotlib, Seaborn
- Power BI, Tableau
- Machine learning platforms (e.g., scikit-learn, TensorFlow, cloud-based AI services)
- Business intelligence software

##### Course Information

- **Course Fee:** GH 2,500
- **Session (Days):** 3
- **Duration:** 20 hours
- **Level:** Beginner
- **Mode of Delivery:** In-person
- **Venue:** RIUC

##### Who Should Attend

- Business analysts and data professionals
- Entrepreneurs and business owners
- Managers seeking data-driven decision-making skills
- IT and operations staff exploring AI integration
- Students and graduates in business or tech fields
- Professionals transitioning into analytics roles

##### Certification

- Certificate of attendance by Rosebank International University College



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