DSBIZ™ (Exam DSZ-210)

Course No. CNX0018

Course Length: Half day

Overview:

The ability to identify and respond to changing trends is a hallmark of a successful business. Whether those trends are related to customers and sales or to regulatory and industry standards, businesses are wise to keep track of the variables that can affect the bottom line. In today's business landscape, data comes from numerous sources and in diverse forms. By leveraging data science concepts and technologies, businesses can mold that raw data into information that facilitates decisions to improve and expand the success of the business.

Course Objectives:

In this course, you will identify how data science supports informed business decisions. You will:

- Explain the fundamentals of data science.
- Identify functions of data science for business.
- Implement business requirements for data science.

Target Student:

This course is primarily designed for business professionals and leaders who are interested in growing the business by leveraging the power of data science. Other individuals who wish to explore basic data science concepts may also benefit from taking this course.

This course is also designed to assist learners in preparing for the CertNexus® DSBIZ™ (Exam DSZ-210) credential.

Prerequisites:

To ensure your success with this course, you should have basic knowledge of business processes, general business concepts, and relevant data that helps to solve business problems or achieve business goals. You should also have a basic understanding of information technology (IT) resources and systems, including networks, computers, and other digital devices used in an enterprise setting.

Course Content

Lesson 1: Data Science Fundamentals

Topic A: What Is Data Science?
- Data Science
- The Elements of Data Science
- Data Teams
- Required Skills and Knowledge
- Data Analytics
- Descriptive Analytics
- Types of Descriptive Analytics
- Diagnostic Analytics
- Types of Diagnostic Analytics
- Predictive Analytics
- Types of Predictive Analytics
- Prescriptive Analytics
- Types of Prescriptive Analytics
- Statistical Analysis Concepts
- Related Concepts and Technologies
- Pulling It All Together
- Discussing Data Science and Related Technologies
- Identifying Data Science Opportunities from a Dataset (Optional)

Topic B: Types of Data
- Big Data
- Structured, Unstructured, and Semi-Structured Data
- Open and Proprietary Data
- Data Sources
- Data Repositories
- Discussing Types of Data Used in Data Science Projects

Topic C: The Data Science Lifecycle
- Lifecycle Stages
- Problem Identification
- Data Collection
- Preprocessing
- Exploratory Data Analysis
- Modeling
- Model Deployment
- Communication of Results

- Discussing the Data Science Lifecycle

Lesson 2: Functions of Data Science in Business

Topic A: Improve Customer Experience

- Customer Experience
- Personalized CX
- Sentiment Analysis
- Recommender Systems
- Self-Service Support
- Chatbots and Virtual Assistants
- Improving Customer Experience

Topic B: Improve Marketing Efforts

- Audience Segmentation
- Targeted Advertising
- Campaign Optimization
- Marketing Measurement Analysis
- Improving Marketing Efforts

Topic C: Optimize Organizational and Transactional Security

- Fraud Detection
- Minimization of Loan Defaults
- Reduction of Intellectual Property Theft
- Risk Identification and Mitigation
- Cybersecurity Considerations
- Optimizing Organizational and Transactional Security

Topic D: Enhance Operational Practices

- System or Component Failure
- Sales Forecasting
- Dynamic Pricing
- Customer Churn
- Talent Acquisition
- Transportation and Logistics
- Enhancing Operational Practices

Lesson 3: Implementing Business Requirements for Data Science

Topic A: Develop a Data-Centric Organization

- What Is a Data-Centric Organization?
- Challenges Associated with Building a Data-Centric Organization
- Organizational Preparation
- Team Preparation

- Discussing the Development of Data-Centric Organizations

Topic B: Develop an Implementation Strategy

- Selection of Business Cases for Implementation
- Implementation Investments
- Data Collection Considerations
- Data Preparation Considerations
- Modeling and Deployment Considerations
- Results Communication Considerations
- Developing an Implementation Strategy

Topic C: Identify Impact of Data Science on Business

- Effects on Overall Business Operations
- Effects on Business Processes and Practices
- Data Issues
- AI-Related Risks
- Discussing the Impact of Data Science on Business

Topic D: Identify Governance Measures

- Ethical Considerations
- Legal and Regulatory Considerations, Frameworks, and Guidelines
- Discussing Governance Measures