Data Visualization and Analysis   2023-2024 Catalog

[ARCHIVED CATALOG]

DBMS 160 - Data Visualization and Analysis

PREREQUISITES: Demonstrated readiness for college-level English and ([INFM 109 - Informatics Fundamentals](#) or [BOAT 218 - Microsoft Excel](#) or 1 11 - 11 or [INDT 206 - Programmable Automation Controls II](#) or [PAET 222 - Precision Agriculture Applications of Geographic Information Systems](#))
PROGRAM: Data Analytics
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 2
LAB HOURS MIN: 2
DATE OF LAST REVISION: Fall, 2020

Data Visualization and Analysis will introduce students the concepts and tools used to visualize and analyze data. Students will connect to data stored in databases and spreadsheets, use data visualization software to gather, organize, categorize, and visualize data. Students will identify patterns in data through the creation of various charts and tables.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Identify and describe fundamental design principles and various types of data visualization.
2. Identify and describe best practices in data visualization.
3. Identify and describe the business value and features of data visualization tools.
4. Connect to and prepare data; construct visualizations by creating charts, heat maps, tables, and scatter plots.
5. Use predefined calculations such as basic arithmetic calculations, custom aggregations and ratios, date math, and quick table calculations.
6. Practice validation and management of data within workbooks and dashboards.
7. Demonstrate how to connect to data using external data sources.
8. Enhance and create visualizations to demonstrate a problem or situation using predefined datasets.
9. Identify sources of data including; institutional knowledge, Customer Relationship Management applications, transaction data, social media, and marketing sources.

COURSE CONTENT: Topical areas of study include -

- Spreadsheets
- Key Design Principles
- Data Validation
- Conditional Formatting
- Data Analysis
- Pivot Tables and Charts
- Data Visualization
- Data Preparation and Presentation
- Data Collection and Processing
- Data Visualization Dashboards
- Color Theory

Course Addendum - Syllabus (Click to expand)