BUSINESS DATA ANALYTICS (BDA)

Courses and Descriptions

BDA 201 Introduction to Business Analytics 3 Credits
This course introduces students to the process of analyzing big data and discovering new information to support business decision making. The course covers descriptive, predictive, and prescriptive analytics. Some topics covered include data visualization, data forecasting, and data mining. This course provides students with the fundamental concepts and tools needed to understand the role of business analytics in organizations and shows students how to apply basic business analytics tools in a spreadsheet environment. It also includes how to communicate with analytics professionals to effectively use and interpret analytic models and results for making better business decisions. Emphasis is given on applications, concepts and interpretation of results. Students utilize Excel for data analysis.
Prerequisite(s): MSD 200 with a minimum grade of D or MSD 205 with a minimum grade of D.

BDA 205 Introduction to Visual Data Analytics 3 Credits
This course will equip the students with the fundamental skills to perform visual data analytics. Students will learn how to prepare a dataset for visual analysis, create basic and advanced visualizations using Tableau, and "tell a story" using data visualization. At the completion of the course, students will be able to apply best visualization practices and create effective visualizations to convey analytical insights to a business audience.
Prerequisite(s): CIS 185 and BDA 201.

BDA 355 Business Analytics with Python 3 Credits
Python has become essential for data analysis in recent years. Research shows that Python is the most popular and growing programming language for business analytics mainly because it is flexible, easy to learn, easily accessible due to its open-source nature, and well supported by plenty of useful analytics libraries since it is heavily used in industry and academy. This course provides students with the required knowledge of working with popular Python data analytics libraries such as Pandas, NumPy, Matplotlib, SciPy, and Scikit-Learn as well as basic programming with Python such as Python syntax, data structure, conditional statements, and functions. Some topics covered include data retrieval and manipulation with Pandas (Python's most popular library for data analytics) and SQL, data visualization with Matplotlib, statistical distributions with NumPy, hypothesis testing with SciPy, and multiple regression with Scikit-Learn.
Prerequisite(s): BDA 201.

BDA 398 Business Data Analytics Practicum 3 Credits
This course develops and sharpens the skills needed for a successful career in analytical business consulting, such as analysis, critical thinking, presentation, problem solving, and teamwork. This class will develop skills in each of these areas through discussion of the principles underlying best practices and feedback in a series of applied exercises and cases that will prepare students to obtain and succeed in analytical business consulting problems. The students will analyze the data provided by professionals from experts in the field, and they will present the project at the end of the semester.
Prerequisite(s): BDA 205 and BDA 201; Junior or Senior Standing; Completion of 12 credit hours in business analytics coursework or Permission of Instructor.

BDA 399 The Co-Operative Experience 6 Credits
This Co-Operative Experience will provide Business Analytics majors with supervised employment (approximately four months), where the students will have an opportunity to apply what they have learned in their business analytics and other business classes.
Prerequisite(s): Business Analytics major, Junior or Senior standing, GPA of 3.0 or above.

BDA 490 Independent Research and Study 3-4 Credits
Topic to be approved by professor and department chairperson. Available to juniors and seniors.

BDA 491 Business Data Analytics Internship 3 Credits
This Internship course will provide Business Analytics majors students with supervised employment (approximately two months), where the students will have an opportunity to apply what they have learned in their business analytics and other business classes.
Prerequisite(s): Business Analytics major, Junior or Senior standing, GPA of 2.75 or above.