### Business Analytics (BUAN)

**Courses**

**BUAN 346 Python Applications for Business 3 Credits**
This class is designed to introduce students to the processes involved in acquiring, cleaning, arranging, analyzing, and visualizing business data using the Python programming language. It will be fast-paced, but assumes only a basic familiarity with coding, and requires no specific expertise in Python to start. Students cannot receive credit for both BUAN 346 and BIS 446.

**Prerequisites:** BIS 111

**BUAN 348 Predictive Analytics in Business 3 Credits**
The course covers theories and practices in predictive analytics in business. Students will have hands-on experience on analyzing business data for business intelligence and improved business decision making. Includes: key theories, concepts, and models of predictive analytics and data mining tools to formulate and solve business problems. The course uses data analytics software and real data. Topics include prediction, forecasting, classification, clustering, data-visualization and data reduction techniques. Not available to students who have credit for BUAN 348 or BIS 456.

**Prerequisites:** BIS 111 and (ECO 045 or MATH 012 or MATH 231)

**BUAN 352 Business Analytics and Modelling 3 Credits**
This course covers advanced analytic methods for understanding and solving business problems. The emphasis is on understanding and applying a wide range of modern techniques to specific decision-making situations. Using the programming language R, the course covers advanced topics such as machine learning, text mining, and social network analysis. Upon completion, students will have valuable practical analytical skills to handle large datasets and make business decisions. Credits will not be given for both BUAN 352 and BUAN 452.

**Prerequisites:** BIS 111 and (ECO 045 or MATH 012 or MATH 231)

**BUAN 357 Artificial Intelligence for Business 3 Credits**
This course covers fundamental concepts of artificial intelligence (AI) and how it is applied to solve business problems, to increase business value, transform businesses and to gain competitive advantage. A brief technical overview will be covered. Common machine learning (ML) algorithms will be covered and students will have hands-on experience with AI tools/frameworks. Example use cases of these ML algorithms in various business functional areas will be examined. Finally, ethical challenges in the AI context will be explored.

**Prerequisites:** BIS 111 and (ECO 045 or MATH 012 or MATH 231) and (BIS 044 or BIS 335 or CSE 002 or CSE 012 or CSE 007 or CSE 003)

**BUAN 446 (BIS 446) Python Applications for Business 3 Credits**
This class is designed to introduce students to the processes involved in acquiring, cleaning, arranging, analyzing, and visualizing business data using the Python programming language. It will be fast-paced, but assumes only a basic familiarity with coding, and requires no specific expertise in Python to start. Students cannot receive credit for both BUAN 346 and BUAN 446.

**BUAN 448 (BIS 448) Predictive Analytics in Business 3 Credits**
The course covers theories and practices in predictive analytics in business. Students will have hands-on experience on analyzing business data for business intelligence and improved business decision making. Includes: key theories, concepts, and models of predictive analytics and data mining tools to formulate and solve business problems. The course uses data analytics software and real data. Topics include prediction, forecasting, classification, clustering, data-visualization and data reduction techniques. Not available to students who have credit for BUAN 348 or BIS 456.

**BUAN 452 (BIS 452) Business Analytics and Modelling 3 Credits**
This course covers advanced analytic methods for understanding and solving business problems. The emphasis is on understanding and applying a wide range of modern techniques to specific decision-making situations. Using the programming language R, the course covers advanced topics such as machine learning, text mining, and social network analysis. Upon completion, students will have valuable practical analytical skills to handle large datasets and make business decisions. Credits will not be given for both BUAN 352 and BUAN 452.

**Prerequisites:** ECO 045 or BUEC

**BUAN 457 Artificial Intelligence for Business 3 Credits**
This course covers fundamental concepts of artificial intelligence (AI) and how it is applied to solve business problems, to increase business value, transform businesses and to gain competitive advantage. A brief technical overview will be covered. Common machine learning (ML) algorithms will be covered and students will have hands-on experience with AI tools/frameworks. Example use cases of these ML algorithms in various business functional areas will be examined. Finally, ethical challenges in the AI context will be explored.