Business Analytics - BUAL

Courses

BUAL 2600 BUSINESS ANALYTICS I (3) LEC. 3. Pr. (MATH 1610 or MATH 1617 or MATH 1680 or MATH 1683). Introduction to analytics in business including use of data to make business decisions, basic predictive business modeling, and communication of analytical results.

BUAL 2650 BUSINESS ANALYTICS II (3) LEC. 3. Pr. BUAL 2600 or STAT 2610 or STAT 2010 or STAT 2017 or STAT 2510 or STAT 3010 or STAT 2513. A second course in quantitative analysis in business including statistical inference, classification analysis, predictive modeling, forecasting, introduction to data mining.

BUAL 3010 PROFESSIONAL DEVELOPMENT IN BUSINESS ANALYTICS (1) LEC. 1. SU. Pr. P/C BUAL 2650 and P/C BUSI 2010. Career planning and preparation for employment as an analytics professional.

BUAL 4910 PRACTICUM (1-3) PRA. SU. Supervised practical application of business analytics theory and methods. Course may be repeated for a maximum of 3 credit hours.

BUAL 4920 BUSINESS ANALYTICS INTERNSHIP (1-6) INT. SU. The internship program represents an opportunity for students to be exposed to analytics environments first-hand and to integrate this experience with their formal education. The practical nature of the internship facilitates the educational process and provides valuable work experience. Course may be repeated for a maximum of 6 credit hours.

BUAL 5600 PRINCIPLES OF PREDICTIVE MODELING (3) DSL/LEC. Pr. BUAL 2650. Introduction to linear models including multiple linear regression and model building in business decision making and applications. Credit will not be given for both BUAL 5600 and BUAL 6600/6606.

BUAL 5610 PREDICTIVE MODELING FOR BUSINESS DECISIONS (3) DSL/LEC. Pr. BUAL 2650. Basic data mining techniques including neural networks, decision trees, clustering algorithms, linear programs, text and web mining in business setting. Credit will not be given for both BUAL 5610 and BUAL 6610/6616.

BUAL 5650 BUSINESS DATA MANAGEMENT AND ACQUISITION (3) LEC. 3. Pr. BUAL 2600 or BUAL 2603. Management and governance of the big data environment that is necessary to support extracting, merging, and preparing large data sets for analysis.

BUAL 5660 DESCRIPTIVE ANALYTICS FOR BUSINESS DECISIONS (3) LEC. 3. Pr. BUAL 2600 or BUAL 2603. Advanced topics in big data management, with emphasis on various technical environments used in the big data environment. Credit will not be given for both BUAL 5660 and BUAL 6660/6666.

BUAL 5700 BIG DATA INFRASTRUCTURE AND APPLICATIONS (3) LEC. 3. Pr. ISMN 5650. Advanced topics related to big data infrastructure and using these technologies to create data science applications. The course provides deep understanding of various state-of-art data science approaches using different distributed and (or) cloud computing environments. Credit will not be given for both BUAL 5700 and BUAL 6700/6706.

BUAL 5710 ADVANCED DATA AND TEXT ANALYTICS (3) LEC. 3. Pr. (BUAL 5700 or BUAL 6700 or BUAL 6706) and (P/C BUAL 5660 or P/C BUAL 6660 or P/C BUAL 6666). This course covers advanced approaches used for writing crawlers and spiders, text analytics, sentiment analysis, social media analytics, network analytics, and deep learning for solving business and organizational problems. The course provides conceptual and hand-on understanding of such state-of-art analytics approaches using various python libraries. Knowledge of python programming is necessary to do well in the course.

BUAL 5860 COMMUNICATING QUANTITATIVE RESULTS IN BUSINESS (3) LEC. 3. Pr. BUAL 5610 and BUAL 5660. A case-based, project-oriented approach to business decision making based on company's mission and strategic objectives. Credit will not be given for both BUAL 5860 and BUAL 6860/6866.

BUAL 5900 DIRECTED STUDIES (1-3) IND. SU. Faculty led individualized or group-oriented in-depth study of a topic in business analytics. May include literary research, algorithm development, programming, data analysis, or a combination of these. Course may be repeated for a maximum of 6 credit hours.

BUAL 5960 SPECIAL PROBLEMS (3) DSL. This course may be either a self-learning course or a lecture course designed to enhance the student's knowledge of a selected topic. If self-learning, the course will be designed individually for each student with agreement between the student and the professor. Coursework may include traditional exams, readings, papers, or more specific projects and tasks depending on the material and the course objectives. Course may be repeated for a maximum of 6 credit hours.

BUAL 6600 PRINCIPLES OF PREDICTIVE MODELING (3) DSL/LEC. Pr. BUAL 2650. Introduction to linear models including multiple linear regression and model building in business decision making and applications. Credit will not be given for both BUAL 5600 and BUAL 6600/6606.

BUAL 6610 PREDICTIVE MODELING FOR BUSINESS DECISIONS (3) DSL/LEC. Basic data mining techniques including neural networks, decision trees, clustering algorithms, linear programs, text and web mining in business setting. Credit will not be given for both BUAL 5610 and BUAL 6610/6616.

BUAL 6650 BUSINESS DATA MANAGEMENT AND ACQUISITION (3) LEC. 3. Managing, governing, extracting, merging, and preparing large data sets for analysis.

BUAL 6660 DESCRIPTIVE ANALYTICS FOR BUSINESS DECISIONS (3) LEC. 3. Advanced topics in big data management, with emphasis on loading and cleansing the data for analysis. May count either BUAL 5660 or BUAL 6660/6666.

BUAL 6700 BIG DATA INFRASTRUCTURE AND APPLICATIONS (3) LEC. 3. Pr. ISMN 5650 or ISMN 6650 or ISMN 6656. This course covers advanced topics related to big data infrastructure and using these technologies to create data science applications. The course provides deep understanding of various state-of-art data science approaches using different distributed and (or) cloud computing environments. Credit will not be given for both BUAL 5700 and BUAL 6700/6.

BUAL 6710 ADVANCED DATA AND TEXT ANALYTICS (3) LEC. 3. Pr. (BUAL 5700 or BUAL 6700 or BUAL 6706) and (P/C BUAL 5660 or P/C BUAL 6660 or P/C BUAL 6666). This course covers advanced approaches used for writing crawlers and spiders, text analytics, sentiment analysis, social media analytics, network analytics, and deep learning for solving business and organizational problems. The course provides conceptual and hand-on understanding of such state-of-art analytics approaches using various python libraries. Knowledge of python programming is necessary to do well in the course.

BUAL 6800 DATA VISUALIZATION (3) DSL/LEC. This course is designed as a graduate level class in which graduate students will learn the various elements and techniques of data visualization. The focus of the course will be to learn the challenges of big data and how effective utilization of data visualization techniques can help with decision making. Course will cover the principles of effective visualization designs as well as get hands on experience with developing dashboards and present analysis in other visual formats.

BUAL 6860 COMMUNICATING QUANTITATIVE RESULTS IN BUSINESS (3) LEC. 3. Pr. BUAL 6610 or BUAL 6616. A case-based, project-oriented approach to business decision making based on company's mission and strategic objectives. Credit will not be given for both BUAL 5860 and BUAL 6860/6866.

BUAL 6900 DIRECTED STUDIES (3) IND. 3. SU. This course is a self-learning course designed to enhance the student's knowledge of a selected topic. The course will be designed individually for each student with agreement between the student and the professor. Coursework may include traditional exams, readings, papers, or more specific projects and tasks depending on the material and the goal of the student. Course may be repeated for a maximum of 9 credit hours.

BUAL 6960 SPECIAL PROBLEMS (3) IND. 3. This course is a self-learning course designed to enhance the student's knowledge of a selected topic. The course will be designed individually for each student with agreement between the student and the professor. Coursework may include traditional exams, readings, papers, or more specific projects and tasks depending on the material and the goal of the student. Course may be repeated for a maximum of 9 credit hours.