CSBU - Computer Science Business Analytics | Grad

CSBU 5300 Database Systems for Business Analytics (3)

This course will provide a foundation for understanding organization database technology by examining the way databases are used, designed and managed. The course will introduce fundamental concepts related to operational and data warehouse databases. The course will also cover the principles of extracting required data using QBE technique. Students use industry-standard software Oracle® to improve their database query proficiency. **Prerequisite**: Basic knowledge of computer and information technology.

CSBU 5320 Data Analytics Foundations for Business Analytics (3)

This course provides an introduction to the field of analytics, which has been defined as the extensive use of data, descriptive,prescriptive, and predictive models, and fact-based management to drive decisions and actions. The development and use of the organization's data to support business analytics is discussed. The application of selected data analytics techniques to business decision-making situations is illustrated. Students use industry-standard software including MS Excel®, Tableau®, SAP Business Explorer®, SAP Business Object Analysis® and Lumira® to improve their data analysis proficiency. **Prerequisite**: BUSN 5760.

CSBU 5340 ERP Systems and Business Transformation (3)

This course provides an in-depth exploration of Enterprise Resource Planning (ERP) systems and their critical role in driving organizational success and transformation. Students will examine the evolution of ERP systems, key components, and best practices for implementation to enhance business efficiency and agility. Emphasis is placed on the strategic impact of ERP systems as platforms for optimizing business operations, enabling data-driven decision-making, and fostering innovation in a competitive landscape. The course includes hands-on practical application of ERP tasks, allowing students to gain real-world experience using an ERP platform to simulate and manage core business processes.

CSBU 5420 Machine Learning for Business Analytics (3)

Business analytics is the process of transforming data into insights to improve business decisions. Data management, data visualization, machine learning modeling and simulation, and optimization are some of the tools used to create insights from data. Business analytics focus on statistical, quantitative, and machine learning, developing data visualizations to present their findings and shape business decisions is the end result. For this reason, balancing business analytics knowledge with business operation and communication skills is imperative. **Prerequisite**:CSIS 5320.

CSBU 6300 Descriptive Analytics and ERP Integration Practicum (3)

This practicum course provides a hands-on exploration of Descriptive Analytics and its integration with Enterprise Resource Planning (ERP) systems to support data-driven decision-making in modern enterprises. Students will apply Business Intelligence (BI) concepts, including big data principles, online analytical processing (OLAP), including machine learning and data mining, multidimensional modeling, data warehousing, and extract, transform, and load (ETL) processes, while working with BI tools like Power BI and ERP platforms such as SAP S/4 HANA. Through case studies, interactive exercises, and system-based projects, students will analyze complex business transactional data, uncover insights, and develop data-driven strategies to optimize enterprise operations. As a culminating experience in the MS in Business Analytics program, this practicum bridges technical expertise and strategic decision-making, preparing students to solve real-world organizational challenges through analytics and ERP integration. **Prerequisite**: BUSN 5760, CSDA 5310, CSBU 5340, CSBU 5420, and BUSN 6160. This course is to be taken in the final semester.

CSBU 6500 Business Analytics Internship (0-3)

Students undertake, with the supervision of a qualified professional, an approved internship in a business analytics-related setting. The work experience involves professional business analytics duties. The academic aspects involves written assignments by the faculty advisor. The outline of duties and evaluative methods are established by the student and the internship professional mentor and approved by the faculty advisor prior to initiation of the programs. This course is not a required course and cannot be applied to the 36 required credit hours for the program.

Note: This course may be taken as a zero-credit course option as long as it meets the program requirements for approval. The zero-credit course option is not a paid course.