BUSINESS TECHNOLOGY MANAGEMENT (BTM)

BTM 2000 - Introduction to Business Technology Management
3 Credits
This course introduces students to the development, implementation and use of information systems in organizations. It is intended to prepare students for living and working in an information-rich, networked world and to introduce students to the profession of business technology management. A variety of computer software is utilized to fulfill the objectives. Major topics include: the creation, storage, and usage of data; the application of information systems in organizations and functional areas; information security; IT trends; business analytics; enterprise systems; and the role of IT in supply chain management. As more and more businesses globally adopt enterprise systems, it becomes increasingly important for students to understand how real-world business processes are managed and executed.
Attributes: Business Common Body Knowledge

BTM 2500 - Data Modeling, Analysis and Visualization
3 Credits
This course introduces the student to the full arc of a data lifecycle in business analytics, from modeling, spreadsheet and database analyses through visualization. Students will build and use a relational database based on a data model and write queries in SQL to extract and prepare data for analysis. MS Excel is the most heavily used data platform in all of business. Students completing BTM 2500 will be able to apply an advanced Excel skillset to cleansing, organizing, consolidating data, and then analyzing and reporting results through visualization techniques. Finally, students will use software for data visualization.
Prerequisite(s): (BTM 2000 or ITM 2000)
Attributes: Business Common Body Knowledge

BTM 3100 - Enterprise Application Development
3 Credits
This course provides the students with a fundamental understanding of enterprise application technologies using web-based protocols, data storage, and communication methodologies. The course uses JavaScript programming language and SAP's HANA "In-Memory" data storage, retrieval and analytics platform. (Offered in Fall)
Prerequisite(s): (BTM 2000 or ITM 2000)
Attributes: BTM Major Standard Requirement, BTM Minor Elective, BTM Major AES Elective

BTM 3300 - Managing Databases and Big Data
3 Credits
Databases play a key role in information systems and drives running different applications for organizations. The importance of a database and its management has increased due to the immense size of the data generated and the variety of data sources used. Managers need to know how to derive meaningful actions from both structured and non-structured data sources. This course focuses on understanding how data is managed in organizations. The key topics include SQL queries, Hadoop and MapReduce, big data characteristics, and applications that use data. Students will learn SQL, SQL in Google cloud, and Big Data concepts. (Offered in Fall)
Prerequisite(s): (ITM 2500 or BTM 2500)
Attributes: Business Analytics Minor Req, BTM Major Standard Elective, BTM Minor Elective, BTM Major AES Elective, Supply Chain Minor Elective

BTM 3500 - Data Governance and Information Security
3 Credits
This course will examine the field of data governance and information security to equip students with both managerial and technical knowledge for their roles as business decision makers. The course provides the foundation for understanding the key issues associated with protecting data assets, determining the levels of protection, understanding data governance framework, and complying with security regulations. Students will grasp a solid understanding of data communication basics and data governance principles to comprehend the security triad: Confidentiality, Integrity and Accountability. (Offered in Fall)
Prerequisite(s): (BTM 2000 or ITM 2000)
Attributes: BTM Major Standard Requirement, BTM Minor Elective, BTM Major AES Elective

BTM 3700 - Business Analytics
3 Credits
This course builds on the basic analytical concepts and visualization techniques that are taught in BTM 2500. The course focuses on three aspects of data analytics. These are (a) data cleaning and preparation, (b) advanced visualization development, and (3) predictive analytics techniques to solve business problems. For data cleaning and preparation, tools/language such as OpenRefine and R will be used. For developing advanced visualizations, Tableau & R will be used. These visualizations will be used in the storytelling format. Finally, predictive analytics techniques such as Regression and Decision Tree will be used to predict business events.
Prerequisite(s): (ITM 2500 or BTM 2500)
Attributes: Business Analytics Minor Req, BTM Major Standard Elective, BTM Minor Elective, BTM Major AES Requirement, Supply Chain Minor Elective

BTM 3810 - Business Simulation with SAP
3 Credits
This course introduces ERP while providing a foundation for common business processes and decisions using analytics. Playing the simulation game will allow the students to become proficient in the use of SAP. They will purchase and sell inventory, order and manufacture goods, handle finances as well as create strategies to be successful in a competitive environment. Students assume the role of business managers and learn to make the necessary decisions to operate a businesses. In addition, students will learn how to apply analytics to the operational business data so their company can perform more efficiently.
Prerequisite(s): (BTM 2000 or ITM 2000); ACCT 2200; OPM 3050[*]

[*] Concurrent enrollment allowed.
Attributes: BTM Major Standard Requirement, BTM Minor Elective, BTM Major AES Requirement

BTM 3850 - Applied Enterprise Systems Implementation
3 Credits
This course focuses on setting up an Enterprise Resource Planning (ERP) system for use in a global organization. Students learn how to configure a large system to support a global organization with multiple companies. Project management skills are enhanced as the students work in cross-functional teams in order to configure and use a multi-company ERP system. (Offered in Fall)
Prerequisite(s): (BTM 3810 or ITM 4900)
Attributes: BTM Major Standard Elective, BTM Minor Elective, BTM Major AES Requirement

BTM 4100 - Systems Analysis and Design Thinking
3 Credits
Systems Analysis is a core IT management topic. Systems/Business Analysts play a major role in designing effective information systems. They act as a communicator between the stakeholders (e.g. management) and the IT team (e.g. Developers). This course focuses on the tasks that a systems analyst must know in order to do their job effectively. The contents include fundamentals of systems analysis, information requirements analysis, and agile approaches. A relatively new approach in designing products and services is Design Thinking. This course adopts the techniques of design thinking such as ideation, empathy, prototyping, and user testing in the context of information systems development. The techniques of design thinking are blended in the systems analysis processes. (Offered in Spring)
Prerequisite(s): (BTM 2500 or ITM 2500)
Attributes: BTM Major Standard Requirement, BTM Minor Elective, BTM Major AES Elective

BTM 4700 - Machine Learning in Business Analytics
3 Credits
Machine learning (ML) extracts meaningful insights from raw data to quickly solve complex, data-rich business problems. Organizations generate large volume of structured and unstructured data that needs to be analyzed. Machine Learning can increase the power of decision making by extracting insights from large data. In this course, students will learn the core concepts and different techniques of machine learning and examine how they can be used to improve business decision making. Using R, students will apply the machine learning techniques on large business datasets. Students will learn the application of machine learning algorithms in multiple business domains (e.g. Healthcare, Supply Chain, and Banking) to gain useful business insights. (Offered in Fall and Spring)
Prerequisite(s): BTM 3700
Attributes: Business Analytics Minor Elec, BTM Major Standard Elective, BTM Minor Elective, BTM Major AES Requirement

BTM 4810 - Business Technology Management Practicum
3 Credits
The Business Technology practicum Course is an educational experience that gives students the opportunity to apply classroom learning to the workplace, expand professional skills and earn academic credit. The practicum will focus on a technology area (e.g. creating a conceptual model of the database) that will help the students to reinforce the skills that they learnt in the classroom. The practicum will also help the students to learn soft skills and communication skills.
Prerequisite(s): BTM 2500
Attributes: BTM Major Standard Requirement, BTM Minor Elective

BTM 4811 - Data Analytics Practicum
3 Credits
The Data Analytics practicum is an educational experience that gives students the opportunity to apply classroom learning to the workplace, expand professional skills and earn academic credit. The practicum will focus on a technology area (e.g. creating a conceptual model of the database) that will help the students to reinforce the skills that they learnt in the classroom. The practicum will also help the students to learn soft skills and communication skills.
Prerequisite(s): BTM 3700
Attributes: Business Analytics Minor Elec, BTM Minor Elective, BTM Major AES Practicum Elec

BTM 4812 - Enterprise Systems Practicum
3 Credits
The Enterprise Systems practicum Course is an educational experience that gives students the opportunity to apply classroom learning to the workplace, expand professional skills and earn academic credit. The practicum will focus on a technology area (e.g. modeling a business process) that will help the students to reinforce the skills that they learnt in the classroom. The practicum will also help the students to learn soft skills and communication skills.
Prerequisite(s): BTM 3810
Attributes: Business Analytics Minor Elec, BTM Minor Elective, BTM Major AES Practicum Elec

BTM 4910 - Business Technology Management Internship
1-3 Credits (Repeatable up to 3 credits)
The Business Technology Internship Course is an educational experience that gives students the opportunity to apply classroom learning to the workplace, expand professional skills and earn academic credit. The internship will focus on a technology area (e.g. creating a conceptual model of the database) that will help the students to reinforce the skills that they learnt in the classroom. The internship will also help the students to learn soft skills and communication skills. (Offered in Fall)
Prerequisite(s): BIZ 3000; (BTM 3100 or BIZ 3000); (CORE 1000 or UIS with a minimum score of S); Minimum Earned Credits of 60; CORE 1500[*]

[*] Concurrent enrollment allowed.
Attributes: UUC:Reflection-in-Action

BTM 4930 - Special Topics
3 Credits (Repeatable for credit)
Attributes: Business Analytics Minor Elec, BTM Major Standard Requirement, BTM Minor Elective, BTM Major AES Requirement

BTM 4980 - Advanced Independent Study in Business Technology Management
1 or 3 Credits (Repeatable for credit)
Independent Study.