Business Analytics

**BUAN 6312** *(MECO 6312)* Applied Econometrics and Time Series Analysis (3 semester credit hours) A survey of techniques used in analyzing cross-sectional, time series and panel data with special emphasis on time series methods. Prerequisite: **OPRE 6301** or **SYSM 6303** or **FIN 6306** or instructor consent required. (3-0) T

**BUAN 6320** *(ACCT 6320 and MIS 6320 and OPRE 6393)* Database Foundations (3 semester credit hours) The course provides database knowledge for non-MIS business students to function effectively in their functional area. The course covers conceptual data modeling with the entity-relationship diagram, the fundamentals of relational data model and database queries, and the basic concepts of data warehousing. Structured Query Language will be used extensively. Applications of databases for accounting, finance, marketing, and other areas of business will be emphasized. May not be used to fulfill degree requirements in MS Information Technology and Management. Credit cannot be received for both courses, **MIS 6320** and **MIS 6326**. (3-0) Y

**BUAN 6324** *(MIS 6324 and OPRE 6399)* Business Analytics With SAS (3 semester credit hours) This course covers theories and applications of business analytics. The focus is on extracting business intelligence from firms' business data for various applications, including (but not limited to) customer segmentation, customer relationship management (CRM), personalization, online recommendation systems, web mining, and product assortment. The emphasis is placed on the ‘know-how’ -- knowing how to extract and apply business analytics to improve business decision-making. Students will also acquire hands-on experience with business analytics software in the form of SAS Enterprise Miner. Credit cannot be received for both courses, **BUAN 6324** and **BUAN 6356**. (3-0) Y

**BUAN 6335** *(SYSM 6335)* Organizing for Business Analytics: A Systems Approach (3 semester credit hours) The course develops conceptual understanding of business analytics and key business drivers that lead to business initiatives. The course takes a systems and organizational approach and examines how decision-makers in key functional areas of an enterprise rely on business analytics, how they develop analytical techniques, and how key roles are played by business analytics professionals. The course also emphasizes developing the business case for analytics through defining and executing strategy and addresses how to successfully integrate analytical processes, technologies, and people in all aspects of business operations. (3-0) T

**BUAN 6337** *(MKT 6337)* Marketing Predictive Analytics Using SAS (3 semester credit hours) This course is designed for those interested in a career in marketing analytics. Students analyze data from large databases to make important marketing decisions. These methods are commonly employed in online marketing, grocery stores, and in financial markets. Students will acquire knowledge about the tools and software that are used to understand issues such as who the profitable customers are, how to acquire them, and how to retain them. The tools can also be used to manage brand prices and promotions using scanner data as is done in supermarkets. Prerequisites: **MKT 6301** or major in MS Business Analytics and **OPRE 6301** or instructor consent required. (3-0) Y
**BUAN 6345 (MIS 6345)** High Performance Analytics (3 semester credit hours) This course provides students with in-depth knowledge of SAN HANA implementation modeling techniques and SAP data services. The course covers HANA architecture, graphic and SQL modeling tools in SAP HANA using text search and analysis, managing modeling content, security and authorizations, and using data services to bring data into SAP HANA as well as non-SAP, data warehouse concepts and sources. Students learn such concepts using hands-on exercises and practical assignments and the data services focused on bringing data into SAP HANA. Prerequisite: **MIS 6309**. (3-0) Y

**BUAN 6346 (MIS 6346)** Big Data Analytics (3 semester credit hours) The course covers topics including: (1) understanding of big data concepts, (2) manipulation of big data with popular tools, and (3) distributed analytics programming. The course is project-oriented, thus students are required to establish a big data environment, perform various analytics, and report on project findings. In addition to concepts and theoretical aspects, the course emphasizes on the actual operations of a big data system. Students manipulate the big data environment, use various dedicated big data tools, and perform distributed analytics programming with popular computer languages. Prerequisites: **BUAN 6324** and **MIS 6326**. (3-0) Y

**BUAN 6356 (MIS 6356)** Business Analytics With R (3 semester credit hours) This course covers theories and applications of business analytics. The focus is on extracting business intelligence from firms' business data for various applications, including (but not limited to) customer segmentation, customer relationship management (CRM), personalization, online recommendation systems, web mining, and product assortment. The emphasis is placed on the 'know-how' -- knowing how to extract and apply business analytics to improve business decision-making. Students will also acquire hands-on experience with business analytics software in the form of R. Credit cannot be received for both courses, **BUAN 6324** and **BUAN 6356**. (3-0) Y

**BUAN 6390** Analytics Practicum (3 semester credit hours) Student gains experience and improves analytics skills through appropriate developmental work assignments in a real business environment. Student must identify and submit specific business learning objectives at the beginning of the semester. Student must demonstrate exposure to the managerial perspective via involvement or observation. At semester end, student prepares an oral or poster presentation or a written paper reflecting on the work experience. (3-0) S

**BUAN 6398 (OPRE 6398)** Prescriptive Analytics (3 semester credit hours) Introduction to decision analysis and optimization techniques. Topics include linear programming, decision analysis, integer programming, and other optimization models. Applications of these models to business problems will be emphasized. (3-0) S

**BUAN 6V98** Business Analytics Internship (1-3 semester credit hours) Student gains experience and improves skills through appropriate developmental work assignments in a real business environment. Student must identify and submit specific business learning objectives at the beginning of the semester. The student must demonstrate exposure to the managerial perspective via involvement or observation. At semester end, student prepares an oral or poster presentation, or a written paper reflecting on the work experience. Student performance is evaluated by the work supervisor. Pass/Fail only. May be repeated for credit as topics vary (3 semester credit hours maximum). JSOM Internship Coordinator consent required. ([1-3]-0) S