AN Analytics

AN 250 BUSINESS DATA ANALYSIS. (3)

Business Data Analysis is a course in applied business decision making. It uses Excel to organize, summarize, and analyze data and to interpret the results of such analysis. It is an introduction to the process of transforming raw data into results to support common business decisions. The course will emphasize hands-on problem solving in a business context rather than on the specific techniques. Prereq: MA 113, MA 123, MA 137 or equivalent.

AN 300 ANALYZING BUSINESS OPERATIONS. (3)

To be well-prepared, a business graduate must appreciate the nature and importance of an enterprise's operations. This core business course introduces underlying concepts and basic analytical techniques essential for managing a firm's manufacturing and service operations. Operations decisions focus on how to plan, control, and coordinate the organizational resources and processes concerned with producing and distributing goods and/or services. This course emphasizes quantitative and technology-based analyses of real decision problems involving such operations issues as quality control, capacity planning, location analysis, layout analysis, inventory management, forecasting, and project management within a business firm. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics.

AN 303 SUPPLY CHAIN MANAGEMENT. (3)

The study of supply chain management involves the management of key business processes, the flow of goods and information, and relationships with fellow members of the supply chain. This course will introduce students to the terminology, concepts, and skills related to supply chain management. Students will develop an understanding of the complexities associated with the physical movement of goods and information, and how they affect the mission of the firm. Discussions will address the various processes and activities within an organization and how they interface with other members of the supply chain. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics. Non B&E Upper Division undergraduate students may be enrolled with the consent of the instructor. (Same as MKT 303.)

AN 306 ANALYTICS: MODELS AND METHODS. (3)

Analytical activities are rapidly expanding in businesses, government and not-for-profit organizations. For the modern enterprise, problems in practically every domain are being formulated as models, which are then used to analyze data – producing explanations and predictions to help solve these problems. Using potentially vast volumes of data, these models are implemented and solved via computers – generating solutions that must then be interpreted and appropriately applied in decisional processes. This course leads students through the steps of model formulation, solution, interpretation, and application in such crucial decision domains as investment, scheduling, production, inventory, and logistics. It furnishes hand-on experiences with such widely used modeling techniques as linear programming, network flow programming, and multiple-objective decision modeling. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics. Non-B&E Upper Division undergraduate students may be enrolled with the consent of the instructor. (Same as MKT 306.)

AN 320 BUSINESS COMPUTING SYSTEMS. (3)

This course investigates how business firms use computing systems to facilitate effective and efficient business processes – thereby improving individual and organizational productivity and competitiveness. The course is geared toward non-technical professionals who seek an overall understanding of how firms design and deploy computer-based solutions to organizational problems. Using cases and hands-on exercises as pedagogical tools, the course furnishes a business applications-oriented view of various computing technologies, such as communication networks, databases, decision support systems, and enterprise systems. The course also addresses ethical and global management issues arising from the worldwide deployment and use of such systems by modern, global business firms. Prereq: CS 101 or MOS Certification. Open only to Business Minors; not available for credit to Business and Economics Majors.

AN 322 INFORMATION SYSTEMS IN THE MODERN ENTERPRISE. (3)

This course provides an introduction to the uses of information systems in the management of organizations. Recognizing that modern organizations rely on such systems, it is geared toward aspiring professionals who need to understand both how these systems contribute to their organizations and how they can participate in the realization in value from these systems. The course covers basic systems concepts; socio-technical issues; emerging hardware, software, and telecommunications infrastructure technologies; systems analysis and design, database management; system implementation; project management; and systems management. It also introduces such applications as decision support, knowledge management, and e-business with an emphasis on relevant managerial problems within both local and global contexts. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics. Non-B&E Upper Division undergraduate students may be enrolled with the consent of the instructor.

AN Analytics

AN 324 DATA BASE MANAGEMENT. (3)

Databases are the backbone of information systems. Almost every modern organization uses database technology to support its routine operations such as inventory management, customer relationship management, human resources management, and electronic commerce. Database technology is also the foundation of data-driven decision-making that has permeated the business world. With the proliferation of data-driven decision-making and end-user computing, understanding database technologies is necessary for business students to remain competent in the modern business environment. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics. Non B&E Upper Division undergraduate students may be enrolled with the consent of the instructor. (Same as MKT 324.)

AN 390 SPECIAL TOPICS IN ANALYTICS. (3)

This course number gives faculty members the flexibility to teach various special topics of interest to students, subject to contemporary student demand and faculty availability. The special topics are concerned with techniques, technologies, and applications related to analytics. The offerings include, but are not limited to, such courses as Supply Chain Management, Enterprise Systems, Electronic Commerce, Systems Analysis & Design, Data Mining, Data Warehouse & Database Management, Online Analytical Processing, Knowledge Management Systems, and Programming Languages. While a student may take as many distinct DIS 390 courses as are offered, only two or these can be counted as electives. A student may not repeat a special topics course under the same title. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics. Non-B&E Upper Division undergraduate students may be enrolled with the consent of the instructor.

AN 395 INDIVIDUAL WORK IN ANALYTICS. (1-3)

This individually customized course enables the student to independently study a topic of personal interest that is not ordinarily covered in the standard curriculum. The student confers with a willing, qualified instructor to design the course – including the course scope, learning methods, timetable, milestones, deliverables, and evaluation metrics. Typically, a final written report or paper is required. To ensure progress, the student stays in contact with the instructor throughout the course of independent study. Examples of prior individual work include: Lean Logistics, Website Design & Implementation, Enterprise Resources Planning, Materials Requirement Planning, Lot Sizing, Advanced Six Sigma, Programming in Java, and Database Design. A course of independent study may not be requested/offered for material that is already covered in the normal curriculum, except under extenuating circumstances. May be repeated to a maximum of six credits. Prereq: Completion of all college pre-major requirements and admission to Upper Division in Business and Economics. Approval of Instructor and DSIS Director of Undergraduate Studies.

AN 403G PRODUCTION AND INVENTORY SYSTEMS. (3)

This course is an advanced introduction to the complexities of managing production and inventory systems. An enterprise's success in today's highly-competitive, often-global business environment, depends on effectively managing its production activities and the related inventories at various production-process stages. Because such decisions are invariably tied to demand forecasts, the course begins with an examination of forecasting. Students are then led through the topics of production planning, master scheduling, material-requirements & manufacturing-resources planning, production activity control, capacity management, and sequencing & scheduling. The course culminates with coverage of contemporary trends toward just-in-time manufacturing systems and lean manufacturing systems. Applications of analogous systems and principles in the service sector are also addressed throughout the course. Prereq: Completion of all college pre-major requirements and admission to Upper Division or graduate student status in Business and Economics. Non-B&E Upper Division undergraduate students and graduate students may be enrolled with the consent of the instructor. (Same as MKT 403.)

AN 406G PRODUCTIVITY AND QUALITY MANAGEMENT. (3)

This course is an advanced treatment of two related concepts that are vital to the success of an enterprise: quality and productivity. As a key ingredient of competitive strategy, quality encompasses many attributes of a product or service – such as its design, its features, fit and finish, durability, safety, and customer treatment. In highly competitive settings, a firm that achieves and sustains high quality levels for its goods and/or services, while remaining at least as efficient as competitors in processes used to produce these outputs, tends to outperform its competitors. Beginning with an examination of connections between quality and productivity, this course examines their underlying philosophic, strategic, and human issues. The coverage includes emergent practices for continuous improvement including Kaizen, Six Sigma, customer relationship management, and strategic planning. Prereq: Completion of all college pre-major requirements and admission to Upper Division or Graduate Student status in Business and Economics. Non-B&E Upper Division undergraduate students and graduate students may be enrolled with the consent of the instructor. (Same as MKT 406.)

AN Analytics

AN 420G DATA MINING. (3)

Data mining is concerned with tools and techniques to help a data/business analyst numerically and visually explore vast data sets, classify data, predict outcomes, or identify associations, patterns, and exceptional events. In practical terms, such capabilities allow firms to better segment markets, evaluate and classify stocks, identify prospective customers, foretell contingencies and catastrophes, identify defaulters and fraudulent transactions, measure churn, identify threats, perform service requests, bundle goods and services, recognize how events (e.g., purchases) are likely to unfold over time, and so on. Such capabilities often make the difference between survival and demise in today's increasingly global, increasingly competitive, and increasingly volatile business settings. Prereq: Completion of all college pre-major requirements and admission to Upper Division or graduate student status in Business and Economics. Non-B&E Upper Division undergraduate students and graduate students may be enrolled with the consent of the instructor. (Same as MKT 420.)

AN 440G TOPICS IN ANALYTICS. (3)

This course covers contemporary topics in enterprise data, analysis, and decision making. Past coverage has included Data Mining, Data Communications, and Valuation of Information. The topics covered would also be valuable to students from programs such as Computer Science, Telecommunications, Statistics and Engineering. Prereq: Completion of all college pre-major requirements and admission to Upper Division or Graduate Student status in Business and Economics. Non-B&E Upper Division undergraduate students and graduate students may be enrolled with the consent of the instructor. (Same as MKT 440.)

AN 450G ANALYTICS TECHNOLOGIES. (3)

This course develops computing skills relevant to the construction, maintenance, and usage of systems for analytics. It does so by combining the facets of technology (e.g., advanced spreadsheet computing), realistic workplace decision making, and decision support system development into a capstone experience. Prior courses introduce students to analytical techniques commonly used in organizational decision making, as well as current information technologies. This course combines students' abilities in both areas within an advanced software context. Specifically, the course enhances students' abilities in developing computer-based systems that employ analytical techniques for the purpose of aiding organizational decision makers. Prereq: Senior standing or graduate student status in the College of Business and Economics. B&E undergraduate students must have completed 9 of the 18 credits required for an Analytics major. Non-B&E Upper Division undergraduate students and graduate students may be enrolled with the consent of the instructor.