

MASTER OF SCIENCE, BUSINESS ANALYTIC (MSBA)

MSBA 6600 Independent Study. (Formerly 600) This course allows an opportunity for a student to concentrate on a specific topic related to an existing course or to explore a timely topic not covered in an existing course. A proposal is required, outlining the nature of the problem and scope of the investigation. A research paper or project is required, as appropriate to the problem under investigation. 1-4 quarter credit hour/s. Course Repeatable. Maximum number of units allowed: 12. Department Consent Required.

Campus: LISLE

MSBA 6623 Web Analytics. This course introduces the topics of web analytics for making better business and marketing decisions. Web analytics is the measurement, monitoring, and analysis of Internet traffic data for the purpose of optimizing websites. The increasing complexity of today's e-business environment has resulted in the implementation of many web analytics tools. These tools turn raw Internet data into valuable business insight through the use of advanced analytics. Web analytics combines data collection, marketing research, mathematical model building, statistical software, and key performance indicators (KPIs) monitoring tools. Deliverables include literature reviews, case analyses, and course projects. Prerequisite: MBA 5541. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6641 Optimization Techniques for Management Decisions. (Formerly 641) This course introduces the topics of optimization techniques for management decisions. Optimization is the process of discovering the best business solution from many feasible solutions using mathematical and statistical methods. The increasing complexity of today's business decision-making has resulted in the development of many optimization techniques. These techniques have provided a wealth of solutions to facilitate business planning and execution. Optimization combines data transformation, mathematical model building, and optimization software with analytical tools to present the recommended solutions to planners and decision makers. Deliverables include literature reviews, case analyses, and course projects. Prerequisite: MBA 5541 and MBA 6630. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6659 Business Analytics. (Formerly 659) Business analytics refers to the skills, technologies, applications and practices for continuous iterative exploration and investigation of past business performance to gain insight and drive business planning. Business analytics focuses on developing new insights and understanding of business performance based on data and statistical methods. It makes extensive use of data, statistical and quantitative analysis, explanatory and predictive modeling and fact-based management to drive decision making. Analytics may be used as input for human decisions or may drive fully automated decisions. Deliverables include article reviews, case analyses, course project and presentations. Prerequisite: MBA 5541. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6663 Machine Learning. (Formerly 663) This course introduces the topics of data mining and business intelligence. Data mining is the process of discovering new patterns from large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics and database systems. The overall goal of the data mining process is to extract knowledge from a data set in a human-understandable structure. Business Intelligence systems combine data gathering, and data storage with analytical tools to present complex corporate and competitive information to planners and decision makers. The objective is to improve the timeliness and quality of the input to the decision process. Deliverables include article reviews, case analyses, course project, and presentations. Prerequisite: MIS 6674. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6685 Data Visualization. (Formerly 685) This course introduces data visualization, that is, communicating information clearly and effectively through graphical means. Visualization tools go beyond the typical tables, histograms, pie charts and bar graphs by displaying data in more sophisticated ways such as dials and gauges, geographic maps, time-series charts, tree maps, heat maps and detailed bar, pie and fever charts. The goal is to expose patterns that might not have been noticed otherwise. Visualized data is often displayed in business Intelligence dashboards which provide users with high-level views of corporate information and key performance indicators. Deliverables include article reviews, several software-based exercises, projects and presentations. Prerequisite: MIS/MSBA 6663. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6686 Analytics for Big Data. (Formerly 686) This course introduces the concept of big data, that is, data sets so large that traditional relational database management systems, statistics, and visualization tools are insufficient. Organizations today are inundated with data, gathered from both inside and outside the organization. Analytics for data-at-rest and data-in-motion will be explored. The problem of solving problems which involve complex and structured data will be explored using the Hadoop platform. Deliverables include article reviews, several software-based exercises, several projects and presentations. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6687 Data Warehousing. (Formerly 687) This course introduces data warehousing, which combines data from varied sources into one comprehensive and easily manipulated database. Access methods include queries, reporting and analysis. The goal is to analyze trends over time, thereby contributing to business forecasting, strategic planning and making smarter decisions faster. Deliverables may include article reviews, several software-based exercises, projects and presentations. Prerequisite: MIS 6674. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6689 Business Analytics Capstone. (Formerly 689) This course requires students to use and integrate the disciplines and techniques learned in business analytics program coursework to address a real-world problem, strategy formulation and implementation concepts are discussed using cases and readings. Deliverables include article reviews, several software-based exercises, a course-length project and presentations. This course should be taken within two courses of completion or with permission of the program director. 4 quarter credit hour/s.

Campus: LISLE

MSBA 6690 Business Analytics Internship. (Formerly 690) An internship offers practical work experience within which the student has the opportunity to apply and test theoretical learning while developing executive skills. The internship experience may be an apprenticeship in which a less experienced student learns about the organization, the business unit, and a variety of analytics projects in which the supervisor is involved, or a project in which the student has major responsibility for a specific assignment and exposure to other areas of responsibility or interest. The Business Analytics internship may be repeated in different settings. 1-6 quarter credit hour/s. Course Repeatable. Maximum number of units allowed: 12. Department Consent Required.

Campus: LISLE

MSBA 6691 Business Analytics Lecture Series. (Formerly 691) Timely business analytics topics are presented in the form of 1, 2, or 4-quarter credit hour courses. Keeping pace with advances in analytics requires constant learning. These courses provide an opportunity to examine and assess issues in analytics. There are no designated pre-requisites, but graduate students are encouraged to have completed the 5000-level course sequence. Topics are announced in advance. 1-4 quarter credit hour/s. Course Repeatable. Maximum number of units allowed: 12. Department Consent Required.

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