MS BUSINESS ELECTIVES (MSBX)

Courses

MSBX 5080 (3) Decision Modeling and Applications
Integrates topics from decision analysis and operations management as they relate to modeling management decisions. Field projects involve the university, local companies, and/or government agencies.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA), MS Supply Chain Management (SCMN-MS) or MS Business Analytics (BUAN-MS) majors only.

MSBX 5205 (3) Financial Strategy and Decision Modeling
Develops functional frameworks for analyzing and assessing uncertainty in real and financial assets and evaluating financial decisions under diverse scenarios. This course covers various methods of mapping uncertainty including binomial decision tree models, linear programming models and Monte-Carlo simulations. Further topics include tax consequences of these decisions.
Requisites: Restricted to Masters of Finance (FNCE-MS) and Masters of Real Estate (REAL-MS) majors only.
Grading Basis: Letter Grade
Additional Information: Departmental Category: MS: Business Electives

MSBX 5225 (3) Advanced Portfolio Management
Covers the management and construction of investment portfolios. Topics include performance and risk measures, identification of risk factors and the use of traditional and alternative assets classes including real estate, mutual funds, ETFs, venture capital funds, private equity funds and hedge funds. Additional topics include tax consequences of investment decisions and cash management.
Requisites: Restricted to Master of Finance (FNCE-MS), Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA) or Professional MBA Program (PMBA) majors only.
Grading Basis: Letter Grade
Additional Information: Departmental Category: MS: Business Electives

MSBX 5260 (3) Fixed Income Investing
Fixed income securities are those that nominally promise a fixed stream of payments. They include government and corporate long and short term debt issues that far exceed the amount of corporate stock issues, as well as long term personal debt (i.e.,home mortgages). Develops practical analytical tools for describing risk and return in fixed income securities, the markets where they are traded, and their purchase and management by financial intermediaries. This course will utilize the Bloomberg Lab to provide students with real world fixed income security analysis.
Requisites: Requires prereqs MBAC 6060, MSBC 5060, or MSBC 5610 (min grade D-).Restricted to Master of Business Admin (MBAD), MBA w Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Profl MBA Program (PMBA), MS Finance (FNCE-MS) MS Real Estate (REAL-MS) mjrs onl
Grading Basis: Letter Grade

MSBX 5270 (3) Applied Derivatives
Covers applications of financial derivatives and a range of topics, from market risk management to liquidity and counter party risk management in contemporary finance. Specifically, the course examines the pricing and use of financial derivatives, including options, forwards, futures, swaps and credit derivatives in risk management.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Finance (FNCE-MS) majors only.
Grading Basis: Letter Grade

MSBX 5280 (3) Sustainable Finance
Course materials draw from finance, economics, and law studies that analyze the theoretical and actual impact of ESG forces on firm outcomes. The course will be divided into two primary topics, namely (1) sustainable capital allocation (i.e. how firms manage their capital budgeting choices given ESG goals & the influence/role of activist investors in those decisions); (2) sustainable financing (i.e., how firms raise capital given ESG goals & the influence/role of passive socially responsible investing).
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Finance (FNCE-MS) majors only.
Grading Basis: Letter Grade

MSBX 5310 (3) Customer Analytics
Provides a deep understanding of how to use data on customer behavior and preferences to inform managerial decision making. Introduces methods for causal inference, modeling consumer demand, and modeling firm decisions. Applications include long-run customer management decisions (customer acquisition and retention) and short-run marketing mix (product, price, promotion and distribution) decisions. The R programming language is used for course examples and assignments. Students are assumed to have a working knowledge of R and linear regression techniques.
Requisites: Restricted to Supply Chain Management (SCMN-MS) or Business Analytics (BUAN-MS) majors only.
Grading Basis: Letter Grade
Additional Information: Departmental Category: MS: Business Electives

MSBX 5311 (2) Customer Analytics
Provides a deep understanding of customer centricity and its implications for the firm; state-of-the art methods for calculating customer lifetime value and customer equity; analytical and empirical skills that are needed to judge the appropriateness, performance, and value of different statistical techniques that can be used to address a issue around customer acquisition, development, and retention. Students will use their knowledge of R programming in this course.
Requisites: Restricted to Professional MBA Program (PMBA) majors only.
Grading Basis: Letter Grade

MSBX 5320 (3) Digital Advertising
Covers both traditional and emerging digital advertising methods, the popular platforms used to execute ads, and the leading analytic tools that can be used to assess advertising performance. Core advertising platforms covered include search, display, social media, native advertising, sponsored content and mobile. This class focuses on best practices and Key Performance Indicators that go with each advertising platform. Department consent required.
Requisites: Restricted to MS Business Analytics (BUAN-MS) majors or MKAG-CERG students only.
Grading Basis: Letter Grade

MSBX 5405 (3) Structured Data Modeling and Analysis
Explores both the functional and technical environment for the creation, storage and use of the most prevalent source and type of data for business analysis, ERP and related structured data. Students will learn how to access and leverage information via SQL for analysis, aggregation to visualization, create dashboards, and be source for business intelligence.
Requisites: Restricted to Master of Business Admin (MBAD), MBA w/ Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA), MS Supply Chain Management (SCMN-MS) or MS Business Analytics (BUAN-MS) majors BAMG-CERG, SCAG-CERG students only
Grading Basis: Letter Grade
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MSBX 5410 (3) Fundamentals of Data Analytics
Exposes the students to commonly used platforms for statistical and predictive analytics. The class will go into depth of analytics using R before demonstrating the same concepts using SPSS and SAS. Students will learn to analyze large datasets, including textual analytics such as twitter-stream analysis using R.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA (PMBA), MS Supply Chain Management (SCMN-MS), MS Business Analytics (BUAN-MS) or (SCAG-CERG) or (BAMG-CERG) students only.
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MSBX 5415 (3) Advanced Data Analytics
Explores the capabilities and challenges of data-driven business decision making and prepares students to lead in analytics-driven organizations. Introduces a set of common predictive and prescriptive analytics tools. Students apply the analytics tools to important decisions based on practical data sets from various companies. Analytics software packages are used extensively in the course.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA (PMBA), MS Supply Chain Management (SCMN-MS), MS Business Analytics (BUAN-MS) or (SCAG-CERG) or (BAMG-CERG) students only.
Grading Basis: Letter Grade
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MSBX 5420 (3) Unstructured and Distributed Data Modeling and Analysis
Moves the student beyond structured data and sources into business scenarios where data is semi-structured to unstructured such as those from social and web applications. Specific topics include introduction to SQL-on-Hadoop, NoSQL and related distributed processing technologies. Students will learn practical application and mechanisms for getting this sort of data ready for analytics.
Requisites: Requires prereq course MSBX 5405 (min grade D-). Restricted to Master of Business Admn (MBAD), MBA w/ Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Profl MBA Program (PMBA) Supply Chain Mgmnt (SCMN) or Business Analytcs (BUAN) or BAMG-CERG mjrs onl
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MSBX 5425 (3) Natural Language Processing for Healthcare Analytics
Practitioners of natural language processing (NLP) use methods from math, science, engineering and linguistics to teach computers to understand human language. Because much biomedical information is stored as text, there are many possible applications of NLP in health sciences. This course offers an introduction to NLP for the health sciences. Students will gain a conceptual and hands-on introduction to fundamental tools, concepts and problems from NLP by exploring applications in healthcare, population health and biomedicine.
Requisites: Requires prerequisite courses of MSBC 5070 and MSBC 5180 (minimum grade D-).
Recommended: Prerequisite Python 3.
Grading Basis: Letter Grade

MSBX 5430 (3) Advanced Statistical Analysis
Introduces advanced multivariate regression analysis and residual diagnostics, logistic regression, analysis of variance (ANOVA and MANOVA), time series models, and analysis of categorical variables. R, an open source programming language for statistical computing and graphics, will be used. It is assumed students have mastery of introductory statistics topics including descriptive tools, inference, and ordinary least squares regression.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Business Analytics (BUAN-MS) majors only.
Grading Basis: Letter Grade
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MSBX 5435 (1.5-3) Planning and Production
At the core of GDP and productivity is the science of planning new products of services in design, bringing them to market then producing and replicating it in reliable, dependable, scalable fashion. The course takes an in-depth look at the mechanisms for supporting new product/process design in a scaled, often world-wide supply chain. (MRP, Six Sigma, Modeling Software, Heuristic Model use).
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Supply Chain Management (SCMN-MS) majors or SCFG-CERG students only.
Grading Basis: Letter Grade
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MSBX 5440 (3) Decision Analysis
Covers both behavioral/psychological aspects and analytical approaches to making decisions with multiple objectives. The focus for the course is learning to frame decisions that involve multiple stakeholders with multiple objectives and then learning the various techniques used to evaluate the choices. Influence diagrams, decision heuristics using spreadsheets, and decision trees will all be explored with user-friendly decision tree software.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA), MS Supply Chain Management (SCMN-MS) or MS Business Analytics (BUAN-MS) majors only.
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MSBX 5450 (3) Transportation and Logistics
Examines critical elements of distribution and logistics management, including physical distribution, supply chain echelon planning, warehouse (transportation note) selection and location, material handling, inventory quantity and location and other topics.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Supply Chain Management (SCMN-MS) majors or SCFG-CERG students only.
Grading Basis: Letter Grade
Additional Information: Departmental Category: MS: Business Electives

MSBX 5470 (1.5-3) Procurement and Contracting
Examines principles and concepts of the acquisition process from commercial and governmental perspectives, focusing on the procurement process, including planning, source selection, solicitation writing, negotiations and oral discussions, contract preparation and administration.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Supply Chain Management (SCMN-MS) majors or SCFG-CERG students only.
Grading Basis: Letter Grade
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MSBX 5480 (3) Information Security Management
A broad introductions to the managerial issues of information security. Because security is multifaceted, the topics of the class range widely, including technical (e.g., cryptography), managerial (e.g., policy compliance), physical (e.g., door locks), and psychological (e.g. social engineering) issues. A key objective of the class is to develop a security mindset, in which one learns to think like an attacker for ways to exploit a system.
Requisites: Restricted to Master of Business Admin (MBAD), MBA w/ Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Profl MBA Program (PMBA), Business Analytics (BUAN) or Interdisciplinary Telecom (IPT) majors only.

MSBX 5500 (3) Security Analytics with Python and Machine Learning
Explores the application of data analytics to the domain of information security. Project-based class using python machine learning libraries to both build and deploy models for both supervised and unsupervised modeling algorithms. Business problem contexts include classifying the likelihood that a file or website is malicious based on either extracted static indicators or dynamic behavioral analysis (predictive analytics), as well as network anomaly detection on organizational network traffic data or on user account usage (unsupervised machine learning). Master of Business Admin (MBAD), MBA w/ Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Profl MBA Program (PMBA) can seek departmental approval to enroll upon demonstration of data networking and modeling capabilities.
Requisites: Requires prerequisite course of MSBX 5480 (minimum grade D-). Restricted to Business Analytics (BUAN) or Interdisciplinary Telecom (ITP) majors only.
Grading Basis: Letter Grade

MSBX 5605 (3) Real Estate Investment and Risk Management
This course empowers students with the knowledge and tools needed to understand, evaluate, and manage real estate investment risk and to recognize and capitalize upon potential real estate investment opportunities. We begin by exploring the types of risk investors face in residential real estate, mortgages, and investment properties and how to quantify those risks. With that foundation, we then delve into the history of such risks (e.g., the Great Depression, Great Recession, etc.) and regulations intended to address them. Finally, we explore current topics which are increasingly important in real estate (e.g., climate change, technology, ¿) including the risks and/or opportunities these challenges may present.
Requisites: Requires prerequisite course MBAX 6610 or MSBC 5610 (min grade D-). Restricted to Master's students in Real Estate (REAL), Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA) or Profl MBA Program (PMBA) majors onl
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MSBX 5615 (1.5) Real Estate Modeling
Real Estate Modeling and Analysis is a graduate level course which will teach students skills necessary to model Real Estate proformas to aid in valuation of acquisition and development of commercial real estate assets. The course will engage three software programs: Excel, Argus [¿Commercial Real Estate Software¿] and CoStar [¿largest commercial real estate information and analytics provider¿].
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA), or MS Real Estate (REAL-MS) majors only.

MSBX 5680 (3) Real Estate Technology
Course objectives are: (1) to understand economic forces that bridge technology, entrepreneurship and real estate; (2) to investigate short-, medium-, and lung-run effects of technology on residential and commercial real estate; (3) to communicate this information to Leeds School of Business students; and (4) to give current students the technology skills necessary to immediately add value for their potential employers.
Requisites: Restricted to Master's students in Real Estate (REAL), Master of Business Admin (MBAD), MBA with DUAL Degree (DMA), Joint Juris Doctor/MBA (JMBA) or Professional MBA Program (PMBA) majors only, or business majors with 80 completed units.

MSBX 5820 (1-3) Special Topics in Accounting
Provides a vehicle for the development and presentation of new topics with the potential of being incorporated into the standard graduate business curriculum.
Equivalent - Duplicate Degree Credit Not Granted: ACCT 5820
Repeatable: Repeatable for up to 6.00 total credit hours. Allows multiple enrollment in term.
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA), Professional MBA Program (PMBA) or MS Finance (FNCE-MS) majors only.
Grading Basis: Letter Grade

MSBX 6290 (3) Textual Analysis in Business
This course will discuss basic ideas around natural language processing (NLP) in research in different "dismal science" disciplines, from Economics to Psychology and Political Science, with a bent/focus on financial markets and accounting statements. The course is meant for graduate students as an introductory course on textual analysis, with an emphasis on methods and applications in Finance and Accounting. The language of choice for the course will be R. The course will be multilingual in that both the faculty and students can use other languages than R (python/perl/C).
Equivalent - Duplicate Degree Credit Not Granted: ACCT 6290
Requisites: Restricted to Master of Business Admin (MBAD), MBA with Dual Degree (DMBA), Joint Juris Doctor/MBA (JMBA) or Professional MBA Program (PMBA) majors only.
Recommended: Prerequisite MBAC 6060 (minimum grade D-).
Grading Basis: Letter Grade