Supply Chain and Operations Management

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Program Codes:
20FS5671MS

The MS in Supply Chain and Operations provides foundational knowledge in supply chain and operations functional areas such as logistics, transportation, forecasting, warehouse and distribution management, production, quality, risk and decision analysis; use of analytical modeling techniques with data analysis and business intelligence; information analysis methods using enterprise resource and related systems; leadership skills such as project and supplier management; and the understanding of supply chain and operations strategies within a global context.

Admission and Degree Requirements

- MS in Supply Chain and Operations Management (http://catalog.uic.edu/gcat/colleges-schools/business-administration/supply-chain-operations-mgmt/ms)

IDS 400. Programming for Data Science in Business. 3 or 4 hours.
Aims to provide students the knowledge and skills for designing and developing data science applications in various business areas, using a language such as Python. Focuses on programming constructs and use of functions and packages. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): IDS 201 and basic knowledge of programming at the level of IDS 201 or equivalent. Recommended background: IDS 270.

IDS 401. Business Object Programming using Java. 0-4 hours.
Basic concepts in object-oriented programming such as objects, classes, class inheritance and interfaces, data abstraction and encapsulation, polymorphism, and dynamic binding. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 201 or the equivalent. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

IDS 403. Information Security. 3 or 4 hours.
Examine the field of information security to prepare students for their future roles as business decision-makers. Presents a balance of the managerial and technical aspects of information security. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 200 or the equivalent.

IDS 405. Business Systems Analysis and Design. 3 or 4 hours.
Theory of analysis, design and development of information systems; information management and database management systems; data management and analysis; case studies in systems implementation and evaluation. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 201 or IDS 331.

IDS 406. Business Systems Project. 3 or 4 hours.
Project experience in a business setting. Analysis, design, development and evaluation of computer-based business information systems. Project planning, scheduling and management. Project work at an outside company or University office. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): Knowledge of programming and databases; or consent of the instructor. Recommended background: Familiarity with systems analysis and design (IDS 405).

IDS 410. Business Database Technology. 3 or 4 hours.
Computer software techniques used in business with emphasis on information management and database management systems. Data management and analysis. Major types of database management systems, query languages. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 201 or IDS 331.

IDS 412. Distributed Business Systems. 3 or 4 hours.
Organizational aspects and underlying concepts of distributed business systems, decentralization versus centralization issues, costs of distributed computing, and performance evaluation measures. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 201 or IDS 330; and credit or concurrent registration in IDS 410.

IDS 413. Internet Technology and Management. 3 hours.
The technologies of World Wide Web development. Topics include: TCP/IP, HTTP, HTML, HTML authoring, XML, ASP programming, client-side programming, and Web 2.0, web servers, database servers, business application servers and Internet. Course Information: Credit is not given for IDS 413 if the student has credit for IDS 424. Extensive computer use required. Prerequisite(s): IDS 201 or IDS 331; and IDS 410.

IDS 420. Business Model Simulation. 3 or 4 hours.
Simulation analysis of strategic business decision models for investment, marketing, product introduction, and operational policies concerning inventory, production planning, quality assurance and supply chain management. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Credit or concurrent registration in IDS 355; or credit or concurrent registration in IDS 331 or the equivalent.

IDS 422. Knowledge Management Systems. 3 or 4 hours.
Computer-based methods for decision support. It aims at providing exposure and insights into a range of approaches and tools for decision aiding, and how they can be utilized in supporting various managerial decision processes. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 410 or consent of the instructor.
IDS 435. Optimization Models and Methods. 3 or 4 hours.
Linear, nonlinear, dynamic programming, combinatorial methods. Use of spreadsheet and other software tools. Duality, sensitivity analysis. Models for business operations and planning, computer systems, transportation, finance. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 355; and IDS 371 or the equivalent. Business Administration students must have declared a major.

IDS 437. Stochastic Methods. 3 or 4 hours.
Stochastic processes and other applications of probability theory. Use of spreadsheet and other software tools for analysis, simulation and decision theory. Models for business operations and planning, computer systems, transportation, finance. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 355 and IDS 371.

IDS 446. Decision Analysis. 3 or 4 hours.
Prior and posterior distributions; conjugate priors; value of information; applications to decision making in business. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371.

IDS 450. Supply Chain Planning and Logistics. 3 or 4 hours.
Covers concepts in designing, analyzing, improving, measuring and controlling logistics operations in modern supply chains. Students are presented with logistics concepts, techniques, planning tools, and case studies to facilitate learning. Course Information: 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): IDS 355; and IDS 454. IDS 454 can be taken as a corequisite; or consent of the instructor. Recommended background: Prior coursework/experience in operations management.

IDS 451. Enterprise Operations and Supply Chain Systems. 0-4 hours.
Provides an overview of how enterprise business systems operate and are used to manage operations and supply chains in order to make effective business decisions. Course Information: 3 undergraduate hours. 4 graduate hours. May be repeated. Extensive computer use required. Shows students how business processes integrate within an enterprise and across the supply chain. Prerequisite(s): IDS 200 and credit or concurrent registration in IDS 355; or credit or concurrent registration in IDS 532. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Laboratory.

IDS 454. Introduction to Supply Chain Management. 3 or 4 hours.
Supply Chain Management is studied as an information-intensive, integrated system for managing material flows, logistics and inter-organizational partnership to deliver products and services. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 355.

IDS 460. Survey Sampling: Theory and Methods. 3 or 4 hours.
Planning and analyzing surveys. Topics include simple random sampling, stratified sampling, systematic sampling, ratio estimation, and cluster sampling. Case studies with applications to real situations. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371.

IDS 462. Statistical Software for Business Applications. 3 or 4 hours.
Hands-on experience with statistical software commonly used in industry. Data preparation, advanced statistical methods for business problems - marketing, finance, operations, etc. Interpretation and communication of results to guide decision making. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371 or consent of the instructor.

IDS 470. Multivariate Analysis. 3 or 4 hours.
Introduction to the structure and analysis of multivariate data. Emphasis on the multivariate normal model. Regression; tests concerning multivariate means, classification; discriminant analysis, principal components. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371; or MATH 310; or MATH 320.

IDS 472. Business Data Mining. 3 or 4 hours.
Data mining for business insights and decisions. Classification, trees, random forests, naive Bayes, clustering, association rules, neural nets, recommender systems, text mining. Hands-on application to problems in finance, marketing, and operations. Course Information: 3 undergraduate hours. 4 graduate hours. Credit is not given for IDS 472 if the student has credit for IDS 572. Prerequisite(s): IDS 371 or the equivalent.

IDS 473. Introduction to Risk Management. 3 hours.
Introduction to risk management. Loan and credit management; credit scoring. Risk measurements and reserves; banking and insurance capital requirements, the BASEL accord, tail events and catastrophic event insurance. Financial contracts and hedging. Course Information: Same as FIN 473. Prerequisite(s): FIN 300 and IDS 371.

IDS 474. Quality and Productivity Improvement Using Statistical Methods. 3 or 4 hours.
Directed experimentation for quality and productivity improvement, quality surveillance, design and analysis of two-level factorial experiments and multi-level experiments, data transformation. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371 or consent of the instructor.

IDS 475. Database Accounting Systems. 3 or 4 hours.
Concepts and principles of designing database systems to perform accounting functions, applications of microcomputer accounting software packages systems design tools, and computerized transaction cycles. Course Information: Same as ACTG 475. 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): A passing grade in both ACTG 211 and IDS 200.

IDS 476. Business Forecasting Using Time Series Methods. 3 or 4 hours.
Autoregressive, moving average, and seasonal models for time series analysis and business forecasting. Forecasting using multi-variable transfer function models is also included. Course Information: Same as ECON 450. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371 or ECON 300 or ECON 400; or consent of the instructor.

IDS 478. Regression Analysis. 3 or 4 hours.
Data collection and exploration; model building; variable least squares; residual analysis; variable selection; multicollinearity; ridge regression; nonlinear regression; nonparametric regression. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): IDS 371.

IDS 479. Enterprise Risk Management. 3 or 4 hours.
Overview of enterprise-wide risk management strategies and techniques; strategies that firms employ to enhance value and minimize exposure; techniques used to identify, measure, reduce, and transfer risk. Course Information: Same as FIN 479. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): FIN 300; or consent of the instructor. Recommended background: IDS 473 or FIN 473.

IDS 494. Topics in Information and Decision Sciences. 3 or 4 hours.
Topics vary; selected readings; case analysis. Course Information: 3 undergraduate hours. 4 graduate hours. May be repeated up to 1 time(s) if topics vary. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.
IDS 495. Competitive Strategy. 4 hours.
Multidisciplinary analysis of organizational strategy and policy using case method and/or business simulation. Assignments involve extensive library research and oral and written reports. Course Information: Prerequisite(s): Senior standing or above Senior standing in the College of Business Administration and completion of all other CBA core courses.

IDS 499. Research Experience. 1-3 hours.
Research experience under the supervision of a faculty member. The faculty member and student will determine the research project. Each student must submit a written report and each student must participate at a research event on campus. Course Information: May be repeated to a maximum of 9 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the department and the instructor.

IDS 500. Information Systems in Organizations. 4 hours.
Use of information technology in business; planning, management, and strategic use of information technology including the role of enterprise-wide systems, the Internet, and electronic commerce.

IDS 504. Introduction to Electronic Commerce. 4 hours.
Addresses issues on electronic commerce for businesses and consumers, considering topics such as competition, distribution, infrastructure on the Internet, shopping, and product characteristics.

IDS 505. Business Information Systems Analysis and Design. 4 hours.
Analysis, design and development of information systems. Management concerns in systems design, development, and evaluation. Course Information: A student who has taken IDS 405 must see an adviser to determine whether another graduate course from IDS, MATH, or CS must be substituted for IDS 505. Prerequisite(s): IDS 500; or consent of the instructor.

IDS 506. Survey of Healthcare and Information Technology. 4 hours.
Exposes students to advances in the technical aspects of electronic business. Topics include WSDL, UDDI, SOAP, Service Quality, Security, and Queuing Models. Course Information: Extensive computer use required. Prerequisite(s): Introductory information systems course. Recommended background: Advanced information system courses such as databases and system analysis.

IDS 507. Advanced Systems Analysis and Design Project. 4 hours.
Principles and concepts of analysis, design and development of information systems including project management. Includes a project at an outside company or University office. Course Information: Prerequisite(s): Completion of three MS in MIS core courses or completion of two core MS in MIS and concurrent enrollment in third core course.

IDS 508. E-Commerce Project. 4 hours.
Electronic commerce project initiated by local small and medium enterprises, teaming students with technical or entrepreneurial skills/interests, supervised by faculty on board of directors. Course Information: Prerequisite(s): IDS 504 or MGMT 558 or MKTG 558; and consent of the instructor.

IDS 509. Data and Prescriptive Analytics. 4 hours.
Covers core concepts in data modeling, analytics and analytical modeling methods used for prescriptive analytics. This course provides foundation knowledge applicable to other courses. Course Information: Prerequisite(s): IDS 371 or IDS 570; or consent of the instructor. Recommended Background: Previous exposure to spreadsheet tools and methods a plus. Recommended Background: Previous exposure to spreadsheet tools and methods a plus.
IDS 519. Topics in Information Systems. 4 hours.
Selected topics in information systems, information management and information technology. Content varies. Topics will be announced. Course Information: May be repeated if topics vary. Prerequisite(s): IDS 505 or IDS 510; and consent of the instructor.

IDS 520. Enterprise Information Infrastructure Planning & Security. 4 hours.
This course introduces students with methods and practices involved in the planning, design and security of information infrastructure commonly found in large and medium enterprises. Course Information: Recommended background: IDS 401, IDS 410 and IDS 405 or equivalent.

IDS 521. Advanced Database Management. 4 hours.
Data analysis for database design; logical data modeling, transaction processing; implementation models; physical database design; database query languages; optimization; performance evaluation; database decomposition; distributed database; database security. Course Information: Prerequisite(s): IDS 410 or equivalent.

IDS 522. Advanced Database Management. 4 hours.
Modeling and analysis of information systems application in organizations; measurement of effectiveness; strategies for implementation and updating; interface with other management control systems.

IDS 523. Audit and Control of Information Systems. 4 hours.
Introduction to frameworks and methods for designing, developing, implementing, and evaluating for emergency management and business continuity strategies in the public and private sectors. Course Information: No graduation credit given to students enrolled in the Master of Business Administration program. Students who are not in the EMCP program should contact External Education at emcp@uic.edu for approval to register for this course.

IDS 524. Strategic Emergency Management and Continuity Planning. 3 hours.
This course introduces students with methods and practices involved in the planning, design and implementation of emergency management and business continuity strategies in the public and private sectors. Course Information: May be repeated if topics vary. Prerequisite(s): IDS 505 or IDS 510.

IDS 525. Project Management. 2 hours.
Teaches the fundamental principles of project management (including an introduction to Agile Techniques) for business related projects in the areas of general business, supply chain and operations management, and information systems. Course Information: Credit is not given for IDS 534 if the student has credit in IDS 512 or MBA 590. Meets eight weeks of the semester. Recommended background: Coursework or experience related to project management.

IDS 526. Computer Performance Evaluation and Modeling. 4 hours.
Probabilistic, simulation and statistical techniques for modeling computer systems with a view to evaluating their performance. Models of multi-programming systems, multi-access systems, input/output systems, priority queues, and paging systems. Course Information: A student who has taken IDS 426 must see an adviser to determine whether another graduate course from IDS, MATH, or CS must be substituted for IDS 526. Prerequisite(s): IDS 522; and IDS 505 or IDS 510.

IDS 527. Seminar on Management Information Systems. 4 hours.
Special research topics in management information systems. Topics vary from term to term depending on the interests of the instructor and students. Course Information: May be repeated if topics vary.

IDS 528. Introduction to Operations Management. 4 hours.
The management of operations for the production and delivery of goods and services. Topics include management of business processes, projects, production, supply chain, inventory, quality, layout and job design. Course Information: Credit is not given for IDS 532 if the student has credit in MBA 507 and MBA 509. Prerequisite(s): Admission to the MBA Program.

IDS 532. Introduction to Operations Management. 4 hours.
The management of operations for the production and delivery of goods and services. Topics include management of business processes, projects, production, supply chain, inventory, quality, layout and job design. Course Information: Credit is not given for IDS 532 if the student has credit in MBA 507 and MBA 509. Prerequisite(s): Admission to the MBA Program.

IDS 534. Project Management. 2 hours.
Teaches the fundamental principles of project management (including an introduction to Agile Techniques) for business related projects in the areas of general business, supply chain and operations management, and information systems. Course Information: Credit is not given for IDS 534 if the student has credit in IDS 512 or MBA 590. Meets eight weeks of the semester. Recommended background: Coursework or experience related to project management.

IDS 535. Vendor Management. 2 hours.
Covers fundamentals of vendor management, including procurement process, vendor selection, contracts, relationship management, and governance. Course Information: Meets eight weeks of the semester. Recommended Background: Coursework like IDS 534 (Project Management) or experience related to project management. Credit is not given in IDS 535 if the student already has credit in MBA 590. Graduation credit is not given to students enrolled in Business Administration.

IDS 540. Marketing Analytics. 4 hours.
Introduces concepts, data analysis techniques and software tools for making key marketing decisions including segmentation, targeting, positioning, forecasting, new product design and resource allocation. Course Information: Same as MKTG 562. Extensive computer use required. Prerequisite(s): MKTG 500 or MKTG 360; or consent of the instructor. Recommended background: MKTG 563.

IDS 541. Disaster Response and Recovery Operations. 3 hours.
Designed to provide the student with the requisite skills to create effective operations, preparedness, and response plans to manage and coordinate private, institutional, and public health emergencies and complex disasters. Course Information: Extensive computer use required. No graduation credit given to students enrolled in the Master of Business Administration program. Students who are not in the EMCP program should contact External Education at emcp@uic.edu for approval to register for this course.

IDS 542. Global Innovation Management. 4 hours.
Provides the student with a survey and case studies of successful innovations, their components, strategies and financial structure. Course Information: Same as MGMT 582. Prerequisite(s): Graduate or professional standing; and consent of the instructor.

IDS 551. Operations Management in the Service Sector. 4 hours.
Service strategy and design, managing capacity, waiting lines, quality, and revenue in service-oriented businesses and online service platforms. Course Information: Extensive computer use required. Prerequisite(s): Credit or concurrent registration in IDS 532 or the consent of the instructor.

IDS 552. Supply Chain Management. 4 hours.
The management of supply chains ranging from their design to operating strategies. Topics include forecasting; sourcing, inventory, and network design models; and logistics and transportation systems. Forecasting and planning tools will be covered. Course Information: Prerequisite(s): Credit or concurrent registration in IDS 532 or the consent of the instructor.
IDS 553. Supply Chain Analytics and Decision Models. 4 hours.
Covers analytics and modeling concepts in logistics and supply chain operations, warehousing and distribution, and transportation. Students are presented with terminology, methods, tools, and case studies to facilitate learning and hands-on training. Course Information: Prerequisite(s): IDS 532 and IDS 509 or consent of instructor. Corequisites: IDS 509 can be taken concurrently with consent instructor. Students can take elective courses in the MS in Supply Chain and Operations Management program concurrently with consent of program advisor. Recommended background: Prior coursework/ experience in operations management. Familiarity with MS Excel.

IDS 554. Revenue Management. 4 hours.
Uses mathematical models and analytics to solve for profit-maximizing business strategies for companies. Topics covered include price optimization, price differentiation, market segmentation, capacity allocation, and network management. Course Information: Recommended background: Coursework in probability. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Practice.

IDS 560. Analytics Strategy and Practice. 4 hours.
Projects and case studies on how to apply analytic skills developed in the MS Business Analytics curriculum to practical problems. Analytics related issues in the context of organizational strategy. Course Information: Prerequisite(s): Completion of all three MS in Business Analytics core courses. Or completion of at least two of the MS in Business Analytics core courses and concurrent registration in the third core course.

IDS 561. Analytics for Big Data. 4 hours.
Fundamental concepts of distributed algorithms to analyze large-scale data in various domains; data mining on large data (Mahout, Hadoop) and applications; data storage, query and business intelligence with distributed databases (Hive). Course Information: Extensive computer use required. Prerequisite(s): IDS 572.

IDS 564. Social Media and Network Analysis. 4 hours.
Analytic approaches to help organizations utilize massive social media data for making informed business decisions; sentiment identification; social network analysis; customer behavior analysis, social advertising using machine learning methods. Course Information: Extensive computer use required. Prerequisite(s): IDS 572.

IDS 566. Advanced Text Analytics for Business. 2 hours.
Techniques for mining and analyses of textual information. Natural language processing and machine learning approaches for sentiment and opinion analyses, topics extraction, document clustering, and their application for business decisions. Course Information: Extensive computer use required. Meets eight weeks of the semester. Prerequisite(s): IDS 572.

IDS 567. Business Data Visualization. 2 hours.
Introduction to principles of data visualization for business and the optimal presentation of analytics results. Course Information: Extensive computer use required. Meets eight weeks of the semester.

IDS 570. Statistics for Management. 4 hours.
Survey of statistical methods with applications for business and management. Course Information: Prerequisite(s): Admission to any business graduate program or consent of the instructor.

IDS 571. Statistical Quality Control and Assurance. 4 hours.
The importance of quality in products and services; quality surveillance, Deming's management method, Ishikawa's seven tools, control charts, acceptance sampling, quality improvement using directed experiments. Course Information: Same as IE 571. Prerequisite(s): At least one term of statistics.

IDS 572. Data Mining for Business. 4 hours.
Machine learning, statistics in data mining for business insights. Prediction, classification, trees, random forests, boosting, clustering, regularization, SVM, recommender systems, neural nets, text mining. Application to varied business contexts. Course Information: Credit is not given for IDS 572 if the student has credit for IDS 472. Recommended background: Backgnd knowledge in statistics and databases.

IDS 573. Risk Management. 4 hours.
Introduction to risk management. Risk measurements and reserves; banking and insurance capital requirements, the BASEL accord, tail events, catastrophic event insurance, reinsurance. Financial contracts and hedging. Course Information: Same as FIN 573. Prerequisite(s): Credit or concurrent registration in IDS 570 and FIN 500.

IDS 575. Statistical Models and Methods for Business Analytics. 4 hours.
Generalized Linear Models; Factor Analysis; Time Series Analysis; Maximum Likelihood and Expectation Maximization; Sampling; Optimization; Support Vector Machines and Structured Prediction. Course Information: Extensive computer use required. Prerequisite(s): IDS 570.

IDS 576. Advanced Predictive Models and Applications for Business Analytics. 4 hours.

IDS 577. Research Methodology I. 4 hours.
Use of statistics and computers in research. Data collection and organization, survey sampling, questionnaire design, experimental design. Course Information: Prerequisite(s): IDS 532 or the equivalent admission to the Ph.D. program in Business Administration.

IDS 578. Research Methodology II. 4 hours.
Data analysis, including estimation, hypotheses testing, non-parametric methods, analysis of variance, regression analysis, economic forecasting, and time series. Course Information: Prerequisite(s): IDS 577 or the equivalent.

IDS 582. Time Series Econometrics. 4 hours.
The role of research in business; forecasting methods and techniques, including models and their applications. Course Information: Same as ECON 537. Prerequisite(s): ECON 534 and at least one statistics course with regression analysis at the 300-level or above.

IDS 583. Business Research and Forecasting II. 4 hours.
The role of research in business; forecasting methods and techniques, including multivariate time series models and their applications. Course Information: Same as ECON 538. Prerequisite(s): ECON 537 or IDS 582; and graduate standing.
IDS 589. MIS Co-operative Experience. 0-4 hours.
Provides an opportunity for students to apply their learning in a practical real-world setting. Students can work on a MIS project in a business or a non-profit organizational setting. Involves interaction with the industry and professionals. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Graduate or professional standing and approval of the department; at least two core courses in the MIS program and simultaneous registration in the third core course.

IDS 594. Special Topics in Information and Decision Sciences. 1-4 hours.
Intensive study of a selected topic. Content varies. Topics are announced. Course Information: Prerequisite(s): Consent of the instructor.

IDS 595. Seminar in Information and Decision Sciences. 1-4 hours.
Topics vary from term to term depending on the interests of the instructor. May be taken for up to four credit hours depending on the outline of the seminar as determined by the instructor. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 8 hours. Students may register for more than one section per term. Prerequisite(s): Admission to the PhD program in Business Administration or the PhD program in Management Information Systems.

IDS 596. Independent Study in Information and Decision Sciences. 1-4 hours.
Independent study under the direction of a faculty member. Course Information: May be repeated. Students may register for more than one section per term. Prerequisite(s): Graduate standing and consent of the instructor.

Research on topic of the doctoral dissertation. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.