DECISION SCIENCE AND OPERATIONS MANAGEMENT (DSOM)

Courses

DSOM 5505 Decision Sciences Credit: 1.5
Understanding the conceptual framework of statistics as it relates to business decision-making and problem solving. Most of the work will be done based on the real-life applications of statistical concepts to business problems and cases. The course includes the topics of descriptive statistics, probability distributions, tests of hypotheses, and multi-variate analysis.

DSOM 5507 Operations and Supply Chain Management Credit: 1.5
An integrating study that focuses on the models and methods of supply chain and operations management (SCOM). Managerial approaches to planning, scheduling, and controlling cost, time quality, production, inventory, services, and supply chain are studied. This survey course exposes students to supply chain management, ERP systems, lean/just-in-time, total quality management, e-commerce, and other contemporary SCOM topics in both product and service-oriented organizations.

DSOM 5508 Statistical Analysis In Business Credits: 3
Data analysis and statistical inference in the context of business management. Communication of analysis and conclusions using text, numbers, and graphics is emphasized. Understanding the conceptual framework of probability and statistics as it relates to statistical tests and procedures is emphasized more than computational methods. Most of the work will be done using a computer spreadsheet. The course includes the topics of estimation, tests of hypotheses, analysis of variance, and multiple regression.

DSOM 5509 Business Analytics for Strategic Decision Making Credits: 3
Business analytics has become a key component in accomplishing strategic and operational goals. Students will become familiar with the concepts and principles of analytics. Utilizing real world cases, students will apply current analytical concepts to help solve managerial problems and support decision processes.

Prerequisites: Admission to Executive MBA Program.

DSOM 5511 Global Supply Chain and Operations Management Credits: 3
Global Supply Chain and Operations Management (SCOM) provides a holistic investigation of how businesses produce goods and offer services. Strategic approaches to planning, scheduling, and controlling cost, time, and quality are discussed. Students are exposed to the full circle of supply chain management, including demand planning, sourcing and procurement, production decisions, inventory and handling, MRP and ERP systems, Lean/JIT, quality management, CSR and sustainability. Spreadsheet models for managing operations, analyzing performance, and forecasting expectations are examined.

Prerequisites: MIS 5507

DSOM 5522 Managerial Statistics and Quantitative Decision Making Credits: 2
Managerial statistics introduces the student to the statistical methodology used in making business decisions. The ethics of accurately presenting results without bias is emphasized. Concepts of probability, confidence intervals, hypothesis testing, ANOVA, correlation, regression, and ANCOVA are examined in the context of business and organization applications and solving statistical problems using the Statistical Package for Social Sciences (SPSS).

DSOM 5524 Data Analytics and Quantitative Decision Making Credits: 2
Students learn how to use business analytics in support of managerial decision making. Decision analysis, forecasting, simulations, risk analysis, optimization models, and sensitivity analysis will be covered.

DSOM 5525 Operations and Supply Chain Management Credits: 2
An examination of the basic principles and strategies used to manage the production and distribution of goods and services. This course positions operations management (OM) as an important tool for achieving strategic leadership through competitive advantage, and illustrates how the managerial integration of OM functions with corporate strategy improves business processes. Concepts covered in the course include (but are not limited to) operations strategy, process management, world class SCM, strategic sourcing, and quality management. Emphasis will be placed on the application of these concepts to actual business situations.

Prerequisites: Student must be enrolled in the Full-Time MBA program and in good academic standing.

DSOM 5540 Service Operations Management Credits: 3
This course focuses on the increasing importance and role of service in our economy. Topics studied are: the role of services in an economy, the nature of services, service strategy, the service delivery system, service facility location, the service encounter, service quality, productivity and quality improvement. Methods of process analysis in service organizations, methods improvement procedures, and work measurement techniques are developed to provide the basis for analyses of processes, layouts, and job design in a service organization.

DSOM 5542 ERP-Enterprise Resource Planning Systems Credits: 3
Discusses the design and implementation of Advanced Manufacturing Technologies (AMT). This includes just-in-time (JIT) systems, cellular and flexible manufacturing systems (CM FMS), computer integrated manufacturing (CIM), and enterprise resource Planning (ERP) systems. It also explores the role that manufacturing plays in product development efforts and cross-functional teams. Other topics such as manufacturing strategy, maintenance, set-up and lot size reductions, group technology and focused factories, production and operations scheduling and control techniques, and the design of work systems are presented as well. Case Studies and group projects/presentations are used for instructional purposes. Students are also required to use the MAX software to perform an ERP system analysis.
DSOM 5543 Project Management Credits: 3
Planning and control of projects, to include network models, risk analysis, time reduction, resource scheduling, leadership, and evaluation.

DSOM 5544 Global Supply Chain and Logistics Management Credits: 3
A study of integrated global supply chain management and logistics. Topics include integrating global ERP and forecasting systems, inventory management, distribution requirements planning, supply chain management, purchasing and supplier/vendor networks, logistics, transportation networks, and E-operations. ERP systems and network optimization are studied relative to both production and service operations.

DSOM 5545 Strategic Sourcing & Supplier Relationship Management Credits: 3
This course explores the roles of procurement and strategic sourcing as components of an overall supply chain strategy, and the impact this strategy has on the competitive success and profitability of organizations. The course will be structured into three segments: before you source, how to source, and after sourcing. Topics will include spend analysis, supplier research, market analysis, supplier evaluation, global sourcing considerations, negotiating, and supplier relationship management. The students will also gain an appreciation of the ethical, contractual, risk management, sustainability, and legal issues faced by purchasing professionals.

DSOM 5566 Supply Chain and Operations Management Credits: 3
An examination of the basic principles and strategies used to manage the production and distribution of goods and services. This course positions operations management (OM) as an important tool for achieving strategic leadership through competitive advantage, and illustrates how the managerial integration of OM functions with corporate strategy improves business processes.

Prerequisites: DSOM 5509 or equivalent; Admission to the Executive MBA program.

DSOM 5587 Special Topics Credits: 3
Special topics in decision science and operations management.

DSOM 5595 Internship Credits: 1-3
An opportunity for students to integrate their academic studies via employment with a business/organization in the community.

DSOM 5597 Independent Study Credits: 1-6
Independent study and research in areas of special interest under individual faculty direction.

DSOM 5899 Required Graduate Enrollment Credit: 1