Supply Chain Management Concentration

Master of Science in Management & Administrative Sciences

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General Information

Supply Chains (SC) are concerned with the efficient integration of suppliers, factories, warehouses and stores so that products are distributed to customers in the right quantity, at the right time and at a low cost. Supply Chain Management (SCM) graduates will use their analytical decision-making skills to design and manage SCs. They will provide a rational basis for decision making by seeking to understand and structure complex systems, and to use this understanding to improve system performances. SCM draws upon ideas from management, engineering and mathematics to contribute to a wide variety of application domains; the field is closely related to several other fields in the "decision sciences" -- applied mathematics, computer science, economics, industrial engineering and systems engineering. The concentration, being a medley of practice and methodology, surveys both industrial success stories and useful techniques; It provides an opportunity to effectively meld managerial ideas with analytical techniques.

The concentration in SCM is also supported by the Center for Intelligent Supply Networks (C4ISN). C4ISN sponsored activities are designed to complement classroom learning. Interaction with the Center Advisory Board, participation in a capstone project and student internships provide students the opportunity to network with industry leaders and gain practical experience. Students are also exposed to the current SC challenges and trends by listening to guest speakers and by visiting manufacturing and service organizations running effective SCs. The web address for the center is http://mgmt.utdallas.edu/c4isn.

SCM is distinguished by its broad applicability and by the wide variety of career opportunities and work styles it embraces. SCM specialists may implement SC models in industry, in public service and in managerial consulting contexts. In some contexts they are called “Management Analysts or Consultants”. The US Bureau of Labor Statistics forecasted that the need for “Management Analysts” would grow about 21-35% from 1998 to 2008. In 1988, there were 344,000 “Management Analysts”. Also then, about a million people were working in “Management and Public Relations Industry”, 79% of which worked in “Management Services and Consulting”. Both management analyst and consultant positions require a solid education; some consulting firms hire only people who hold master’s degree in business administration, as reported by the US Bureau of Labor Statistics. Therefore, SCM graduates will be in great demand in both service businesses and manufacturing industries.

The Dallas area is the home of the world leader SC software and consulting companies such as i2, Sabre and EDS. American Airlines, Southwest Airlines, JC Penny and Frito-Lay are all in greater Dallas area and run complex SCs. The “Telecomm Corridor” houses several leading firms in the telecommunications industry, such as Nortel, Alcatel, Ericsson, Samsung and Cisco, which demand not only well-educated potential employees but also educational programs to improve the current employees’ knowledge and skills. Furthermore, many firms, financial institutions, retailers, manufacturers, consulting companies and hospitals supply services or products made available through complex systems. The complexity of these systems is increasing with company mergers and globalization, hence so does the need for SCM professionals who are taught to analyze and improve such complex systems. The concentration aims to educate such professionals.

The Master of Science in MAS with SCM concentration will explore the key issues associated with the design and management of industrial SCs. It will include concepts dealing with the improvement of SC operations towards lower costs, faster delivery, higher quality and mass customization. The ultimate objective is using SCM to mold traditional business operations into competitive weapons for today's fierce global economy. Students will acquire not only fundamental knowledge of business management but also analytical decision-making skills especially for complex systems.
Waivers and Transfers of Credit: Waivers of program requirements may be granted in recognition of previous coursework completed with grade B or better within the past six years in a specific business program area. Waivers are approved by the appropriate Program Director through a process which allows a student to skip a core course and take the next higher level course in the same academic area with no reduction in the overall program hour requirements.

Transfer credits may be granted for equivalent graduate course work taken at other universities with a grade of B or better within the past six years. Up to 12 hours of course work from other universities may be waived from or transferred to the MS-MAS program. Consult the UTD Graduate Catalog for further details. Applications for approval of waivers and transfers may be obtained in and submitted to the School of Management Advising Office. For more info see http://som.utdallas.edu/advising/advising_welcome.html.

Prerequisites: Calculus and competence in personal computing are required as prerequisites. If a student has not taken equivalent courses already, he/she will need to take MATH 5404 to meet the calculus requirement and BA 3351 for personal computing.

Basic Business Core Courses (10 credit hours): All students enrolling in the Master of Science in Management & Administrative Sciences with a concentration in SCM must complete the following Basic Business Core. Please see the course catalog for the prerequisite course information.

AIM 6201 Financial Accounting          MIS 6204 MIS Fundamentals
MECO 6301 Business Economics           OPRE 6301 Quant. Methods for Business Decision Making

Required SCM Core Courses (15 credit hours):
OPRE 6302 Operations Management         OPRE 6363 Inventory Control
OPRE 6366 Supply Chain Management       OPRE 6370 Logistics and Distribution

and either one of the following
OPRE 6367 Capstone Projects in Supply Chain Management or OPRE 6368 Industrial Applications in Supply Chains

Electives (11 credit hours): Credit hours must be satisfied by taking graduate courses from the following list:

AIM 6202 Managerial Accounting          MKT 6235 Retailing Strategy
AIM 6342 Strategic Cost Management      OPRE 6311 Game Theory
AIM 6345 Business Valuation `          OPRE 6330 Probability and Stochastic Processes
AIM 6346 Financial Dimensions of Mergers and Acquisitions OPRE 6331 Stochastic Models in Operations Research
AIM 6347 Cost Benefit Analysis for Technology Management OPRE 6340 Flexible Manufacturing Strategies
BPS 6310 Strategic Management
BPS 6211 Strategy Implementation
CS 6390 Advanced Computer Networks
CS 6363 Design and Analysis of Computer Algorithms
CS 6373 Intelligent Systems
CS 6360 Database Design
FIN 6301 Financial Management
MIS 6318 Intro to Electronic Commerce
MIS 6319 Enterprise Resource Computing
MIS 6321 Systems Simulation
MIS 6326 Database Management Systems
MKT 6322 Internet Business Models
MKT 6301 Marketing Management

Courses are primarily offered in the late afternoon and evening of weekdays and Saturday morning. Several courses are currently offered and are planned to be offered through the World Wide Web.

Students can obtain a dual MBA and MS degree by taking a total of 66 credits (assuming all prerequisites are met). This serves students who would like to get additional SCM skills at a reduced cost. Furthermore, the courses that form the set of core and electives in the concentration can be used as electives in the MBA program.