## SUPPLY CHAIN MANAGEMENT AND ANALYTICS (SCMA)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>SCMA 831</td>
<td>Advanced Enterprise Systems</td>
<td>Analytical approach to the design, planning, and control of operations management systems, including domestic and international, manufacturing and service operations.</td>
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<tr>
<td>SCMA 832</td>
<td>Planning and Controlling Supply Chain Systems</td>
<td>Taught predominately by the case method with a few classes for review and summary lectures. Concentrates on higher management decisions involving the manufacturing, service, and public sectors. Facilities planning, labor, aggregate planning, strategic planning, capacity management, and trade-off analysis.</td>
<td>GRBA 815 (Supply Chain Management Strategies)</td>
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<tr>
<td>SCMA 833</td>
<td>Advanced Topics in Supply Chain Management</td>
<td>Advanced conceptual and methodological practices in designing and planning supply chain systems. Advances and strategies in supply chain procurement, transportation, distribution and warehousing, globalization, outsourcing, and technology.</td>
<td>GRBA 815</td>
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<tr>
<td>SCMA 834</td>
<td>Advanced Topics in Lean Supply Chain Management</td>
<td>Focus on the improvement of supply chain operations through the application of lean management principles. Topics include just-in-time, six-sigma, theory of constraints, and associated tools and applications. The course would be offered primarily in the on-line MBA program.</td>
<td>GRBA 815</td>
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<tr>
<td>SCMA 836</td>
<td>Project Management and Implementation</td>
<td>Planning and managing projects from initiation through implementation. Use of tools and techniques for bidding, planning budgeting scheduling, risk management and implementation.</td>
<td>Admission to MBA or Supply Chain Certificate Program</td>
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<tr>
<td>SCMA 837</td>
<td>Risk and Simulation Modeling</td>
<td>Analytical and simulation models for decision making in functional areas such as finance, accounting, marketing, personnel, operations, and inventory. Construction of decision models for practical applications. Emphasis on analyzing alternatives and implementing solutions that result in increased productivity.</td>
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<tr>
<td>SCMA 839</td>
<td>Global Supply Chain Management</td>
<td>Focus on global aspects of supply chain managing with primary emphasis on sourcing and distribution strategies. Topics will include sourcing strategies, concepts and tools. Specific issues include make versus buy decisions, supplier evaluation and selection, total cost of ownership, contracts and legal terms, negotiation, and purchasing ethics.</td>
<td>GRBA 815</td>
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<tr>
<td>SCMA 844</td>
<td>Managing Logistics in the Supply Chain</td>
<td>Examination of physical distribution activities in the marketing mix from the viewpoints of both providers and users of components of logistics systems. Logistics problems of concern to the marketing manager include time and place utility concepts, spatial relationships of markets, channel design, transportation modes, and inventory management.</td>
<td>GRBA 815</td>
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<tr>
<td>SCMA 847</td>
<td>Advanced Supply Chain Technology</td>
<td>Technological advancements to include radio frequency identification systems, automated storage and retrieval systems, distribution routing systems. Description of physical characteristics, potential to support supply chain management, and implications on inventory management within supply chains.</td>
<td>GRBA 815</td>
<td>3</td>
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<tr>
<td>SCMA 851</td>
<td>Predictive Analytics</td>
<td>This course will focus on how knowledge management has been successfully applied in business in the form of predictive analytics. Predictive analytics extends statistical and/or artificial intelligence to provide forecasting capability. It will also describe in non-technical terms the statistical and artificial intelligence-based tools commonly used in forecasting and other business decisions involving big data.</td>
<td>GRBA 815</td>
<td>3</td>
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SCMA 852 Data Management and Organization
Prerequisites: GRBA 851
Description: Technology of databases and related human and managerial considerations. Databases are studied from the perspective of the logical organization, as well as from the perspective of managers and applications programmers, in the use of organizational data. Consideration of physical organization and SQL. Practical applications of databases.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

SCMA 853 Business Data Mining and Descriptive Analytics
Prerequisites: GRBA 851
Notes: The Supply Chain Management Analytics department is changing the name to be more reflective of the content.
Description: Data mining applies quantitative analysis to support humans in identifying actionable information from large amounts of data. Actionable means that value can be obtained, which for businesses usually relates to making money. This course will focus on how data mining has been successfully applied in business. It will also describe in non-technical terms how the statistical and artificial intelligence-based tools commonly used in data mining work. The course will also address ethical issues related to use of information obtained through data mining.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

SCMA 854 Advanced Descriptive Analytics
Prerequisites: GRBA 851
Description: This course will focus on exploratory and initial data mining, including cluster analysis and link analysis.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

SCMA 855 Prescriptive Analytics
Prerequisites: GRBA 851
Description: This course will focus on how optimization modeling techniques can be used to make the best decisions in a variety of business analytics applications. The emphasis will be on the formulation of different optimization problems and the use of the correct quantitative techniques to solve these problems.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

SCMA 996 Directed Reading or Research
Prerequisites: Permission of Department Chair
Description: Specific topic covered in any given term and credit awarded is to be determined by the instructor.
Credit Hours: 1-6
Min credits per semester: 1
Max credits per semester: 6
Max credits per degree: 6
Format: IND