MS/Supply Chain Management Courses

Summer Foundations Courses

**ACCT 560 Introduction to Financial Accounting**

In this course, we will study the three fundamental financial accounting issues, including (1) recognition, (2) measurement/valuation, and (3) classification/disclosure and consider how business transactions are reflected on the financial statements using generally accepted accounting principles (GAAP). We will cover the four primary financial statements (balance sheet, income statement, statement of stockholders' equity, and statement of cash flows), the supporting footnotes to these statements, and several reports (annual reports, proxy statements, and press releases). The course incorporates both a preparer’s perspective (i.e., GAAP requirements for recording and presenting financial information) and a user’s perspective (i.e., how an investor or analyst can interpret and use financial statement information).

2 Credits.

**FIN B62 510 Introduction to Finance**

The main topics to be covered in this course are (1) principles of investments, (2) financial analysis of corporate projects, (3) cost of capital, and (4) capital structure and financing policies. The objective of the company is assumed to be shareholder value maximization. Shareholder value is created by earning more than the cost of capital. The cost of capital is an opportunity cost – what investors could expect to earn on comparable investments in the financial markets. To understand the cost of capital, we need to understand the viewpoint of investors. Furthermore, to understand whether a project earns more than the cost of capital, we need to know how to estimate and discount project cash flows. So, the first three topics are closely connected. The main question in the fourth topic is whether we can create shareholder value through the financial structure of the firm. For example, we will ask whether we can lower the cost of capital by financing with debt instead of equity, or vice versa. 2 Credits.

**OMM 510 Operations Management Foundations**

This course discusses the main principles and concepts in managing operations for competitive success. Among the topics covered are: Operations strategy, capacity analysis and organization, queuing theory, service management, quality management, inventory management, and a brief introduction to supply chain management. Students learn the basics of how to manage the operations of a firm, with the main goal of this course being to prepare students for advanced coursework in operations and supply chain management, beginning in the Fall A term. Most sessions consist of in-depth case discussion, integrated with theory. 2 Credits.
Fall Semester (19.5 Credits)

OMM 576  Foundations of Supply Chain Management
Examines how companies manage effectively the entire set of activities involved in the production and delivery of goods and services to their customers. Supply chain management (SCM) deals with the management of materials, information, and financial flows in networks consisting of suppliers, manufacturers, distributors, and customers. Recent trends in communication technology, sophisticated information systems, globalization of operations and markets, increased demand for mass customization, and increasing customer expectations have made the coordination and integration of these flows within and across companies critical to the success of businesses. This course focuses primarily on the foundations of SCM, touching topics such as: 1) matching supply with uncertain demand, 2) inventory management, 3) logistics, 4) design for variety, 5) global issues in SCM, 6) Quick/Accurate Response, 7) collaborative processes. 1.5 Credits.

MKT 579G  Contemporary Marketing Channels
In this course we examine the important strategic issues related to marketing channels. Important topics include: conflict versus cooperation in marketing channels, the coordination problems between manufacturers and retailers, vertical restrictions, channel leadership, firm boundary and channel structure, franchising, and public policy toward marketing channels. 1.5 Credits.

OB 561  Negotiation and Conflict Management
Managers spend the majority of their time negotiating - from negotiating schedules and vacation time to negotiating resource allocations to negotiating mergers and major policy decisions and their implementation. Skillful negotiation is a critical component of the toolbox of the successful manager. The purpose of this course is to improve students’ abilities to diagnose conflict situations, to analyze, plan, and conduct negotiations. The course material addresses negotiation as an effective means for implementing decisions and strategies and resolving conflict in a variety of settings. Course format will involve simulated negotiation and experiential exercises, cases, discussion, and lecture. Students will be evaluated on the basis of case analysis, negotiating performance, a final project, and participation. Students are expected to participate in all negotiation exercises. 1.5 Credits.

OMM 500D  Project Management
Change management has become synonymous with project management, since organizations that want to change their focus or direction increasingly recognize that introducing new products, processes, or programs in a timely and cost effective manner requires professional project management. This course analyzes complex projects and discusses available tools for managing them. Some of the topics covered include life cycle models, project selection, project monitoring and control, planning with uncertainty, project risk management, the critical chain method, and managing multiple projects. It also discusses commercial project management software and how to overcome its limited functionality to address the requirements of managing risky complex projects in practice. Students learn project management skills that will be useful throughout their careers. As such, this course is essential for current or future managers regardless of their career concentration. 3 Credits.
OMM 500M Supply Chain Analytics: Stochastic Models

This course covers the two key types of simulation models of uncertain events: Monte Carlo simulation and Discrete Event Simulation. The conceptual difference between these simulation methodologies is in their treatment of time. Discrete Event Simulation is used to model dynamic systems where events occur at specified, random, time. In Monte Carlo simulation the timing of events is typically inconsequential. Upon successful completion of this course, students will demonstrate competency in formulating and analyzing stochastic models using state-of-the-art simulation software. They will become proficient with software tools like Arena for Discrete Event Simulation and Crystal Ball for Monte Carlo simulation. The course emphasizes proficiency in using software tools to analyze models rather than theory. 1.5 Credits.

OMM 558 Advanced Operation Strategy

This course deals with operations issues having a long-term impact on the corporate strategy, and on the competitive viability of a firm. We develop a general framework for creating and analyzing strategies for managing domestic and international manufacturing and service operations. The strategic decision categories to be examined include product-process technology strategies, facilities, and capacity management, performance measurement, managing quality and productivity, and system design. The course covers productivity measurement, process choice, product profiling, interfaces with marketing, experience costs, process positioning, accounting and financial perspectives, and international operations. It gives equal attention to service operations and manufacturing operations. Emphasis is on the application of systems thinking to case studies and the design of world class operations. It is valuable for students with an operations or general management focus, as well as for finance and marketing students. 3 Credits.

OMM 501 Operations and Supply Chain Management Platform Practicum

Students work in small teams on an operations and/or supply chain related consulting project for a client organization, applying insights from their course work to real-world business problems under supervision of both a faculty advisor and a client project lead. Each student is expected to spend about 150 hours on the project. Grades are based on the quality of the project work and the final deliverables (e.g., written and oral reports), as determined by the faculty advisor and client project lead. 1.5 Credits.

MGT 550Z Professional Communication Forum

The course focuses on the development and delivery of a technical presentation in a persuasive manner, reflecting a typical consulting environment. The course teaches students communication skills necessary to communicate to both technical and non-technical audience members. The students will deliver both an oral team presentation and a client proposal "leave behind". 1.5 Credits.

MGT 550B Managing the Innovation Process

The course takes the perspective that innovation is a core business process associated with survival and growth of the organization, and it should be managed as such. We view innovation broadly as a process of knowledge creation. Innovation creates new possibilities through combining different knowledge sets. This process is multi-stage and takes place under highly uncertain conditions. The course objective is to help develop for our students the needed managerial skills in managing the multi-stage process of innovation. We focus on the systematic
management of innovation processes through careful resource commitment and management of involved uncertainties. 1.5 Credits.

**OMM 572 Strategic Quality Management**

Discusses the theory and practice of quality management in the business world. Covers operations and marketing issues that are typical for manufacturing and service organizations, a cross-functional perspective emphasizing the interactions between the operations and marketing decisions. Topics include quality strategies and competition; organization and incentives for quality enhancement (the approaches of Crosby, Deming, Feigenbaum, Ishikawa, and Juran); quality-function deployment; process mapping; and the role of top management. 1.5 Credits.

**OMM 577 IT & Supply Chain Management**

Recent developments and breakthroughs in information technology have radically changed the business world, offering opportunities not only for new products and services also for reengineering supply chains and improving supply chain performance. The course will study how the innovations in information technology affect the ways information flows through the supply chain, which in turns provide opportunities to better coordinate the material and financial flows. The course will review business cases in which companies use supply chain management concepts and emerging technologies to improve business processes as well as creating values. 1.5 Credits.

**MGT 534 Corporate Strategy**

This course explores the unique strategy issues that arise within multi-business firms. The course examines how value is created or destroyed through the process of combining businesses and examines strategic issues surrounding mergers and acquisitions. Discussion within the course will critically evaluate patterns of diversification and growth within firms. The course will also address issue of vertical integration, exploring the limits of firm size. The course will also address the unique organizational design choices that emerge in multi-business settings, including an exploration of corporate governance. 1.5 Credits.

**Spring Semester (16.5 Credits)**

**OMM 559 Managing Global Business Process Outsourcing for Competitive Advantage**

The growth of global outsourcing of all types of business processes (from manufacturing, to R&D, engineering, call centers, clinical trial tests, IT, Accounting, human resources, etc.) with third party contracting organizations all over the world has been heralded by the popular and academic press as the most important business trend of the last decade. As a result of such strategic trends and actions, it becomes essential to strategically manage the "global business process outsourcing" as a key business process by itself, and thus to hire and train managers that fully understand the tradeoffs, implementation challenges involved, approaches for managing risks, and more importantly, able to manage the business relationships with the third party contracting organizations. The course is intended to provide the fundamental skills to our students so they can become successful, global managers of "virtual" value chains, which when faced with outsourcing decisions, can competently make them within the context of their firm's strategy, but also effectively execute all aspects of the outsourcing process and manage the
outsourcing relationship with their suppliers. There will be a course packet with readings and case studies. 1.5 Credits.

**ACCT 502 Managerial Control Systems**

Organizations face both information and incentive problems, usually simultaneously. Managerial control involves developing policies and systems to cost-effectively minimize these problems while helping the organization achieve its objectives. The course focuses on control issues by analyzing the financial aspects of planning, feedback, and performance measurement. Topics include: responsibility accounting, budgeting, benchmarking, target costing, variance analysis, productivity measures, transfer pricing and optimal design of performance measures. 1.5 Credits.

**OB 565 Leading Change**

This course introduces the concepts of how leaders create and manage change in four domains: developing a strategic vision, designing new structures and processes, aligning individual motivation with organizational culture, and gaining support for the implementation of change. The class approach will include presentations on leadership experiences, case studies of examples of leaders exhibiting specific behaviors, and experiential exercises. It offers participants meaningful opportunities for the development of a portfolio of tools for leading change. 1.5 Credits.

**FIN 524 Options & Futures**

Focuses on futures with an introduction to options. Discusses forward and futures pricing, and the use of various futures contracts to hedge commodity price risk, interest risk, currency risk, stock portfolio risk, and other risk exposures. 1.5 Credits.

**Marketing Elective (Spring Semester Recommended Option: MKT 558 Pricing Strategies)**

This course is designed to equip you with some essential concepts and techniques needed to make profitable decisions about one of the most important marketing variables - price. The course is structured around four fundamental factors that firms need to consider in their pricing decisions: costs, customers, competitors and climate (legal environment). Through case studies, in-class discussions, and course project/presentations this course will provide you with a conceptual framework, grounded in modern economics and consumer psychology, for analyzing a complex marketing environment and designing proactive pricing strategies that are most profitable for your business. Familiarity with basic statistical techniques and a spreadsheet package like Excel is desirable. 1.5 Credits.

**Or: Marketing Elective (Fall Semester Recommended Option) MKT 500J Business-to-Business Marketing**

This mini course, and its complement, MKT 500K, focus on business marketing management: Understanding industrial, institutional and governmental purchase behavior and processes, and recognizing, creating, and capturing value in those markets. We will place emphasis on issues of channel coordination, customer relationship management, systems approaches, and personal selling, as well as value calculation and pricing, in the creation of business marketing strategy and implementation plans. 1.5 Credits.
OMM 500F  Advanced Topics in Logistics and Supply Chain Management

Fast-changing consumer demand, the Internet and digital technology, growing competitive pressures, and globalization create new opportunities and challenges on how firms can efficiently deliver the right product to the right place at the right time. Practitioners have responded to drastic market changes through various innovative strategies such as supply chain redesign. These challenges have also attracted significant academic attention and inspired new supply chain research. This course focuses on advanced topics in logistics and supply chain management that are of interest to managers, consultants, and researchers. Students will gain exposure to state-of-the-art knowledge about these topics by attending seminar sessions given by both industry and academic speakers. 1.5 Credits.

OMM 500N  Supply Chain Analytics - Optimization

This course covers optimization models and tools as they apply to the design and analysis of supply chains. Production planning, distribution, network design, and revenue management problems are covered using the methods of linear, non-linear, and integer programming. Upon successful completion of this course, students will demonstrate competency in formulating and solving supply chain optimization models of real-life complexity using state-of-the-art software. They will become proficient with industrial strength software tools like AMPL and Gurobi alongside Excel’s Solver. The course emphasizes proficiency in model-building and using software tools rather than theory. 1.5 Credits.

OMM 554  Operations Planning and Control

Examines approaches to problems of operations planning and control in various organizational settings. Topics include demand forecasting (data analysis, forecasting techniques, and control of forecasting systems), end-item inventory control (lot sizing, safety stock, and evaluation of systems), and materials requirements planning (master scheduling, shop scheduling, aggregate capacity planning, and systems implementation). 3 Credits.

OMM 500E  Supply Chain Risk Management

Many events in the last few years made supply chain managers keenly aware of the multiplicity and diversity of risks affecting them, from fluctuating commodity prices, unstable currencies, hurricanes and earthquakes, fires, terrorist attacks, contaminated material sourced from developing countries, and suppliers going bankrupt in tight financial credit environments. Building a functional supply chain requires careful planning and consideration of a variety of disruption risks, and it is of paramount importance to integrate management of physical flows and financial hedges when dealing with such risks. Companies that effectively manage their supply chain risks enjoy a level of robustness (flexibility) and resilience disruption-“proof-ness”) that affords them significant competitive advantage. This course will develop a comprehensive risk management framework for complex supply chains and introduce students to all needed decision tools for supply management and risk hedging. In addition, it will outline a portfolio of proven strategies to assess, reduce, hedge, and mitigate supply chain risks. 1.5 Credits.

OMM 573  Operations Mgmt in the Service Industry

The service industry is of vital importance to today’s economy. Through a greater understanding of the design and operation of services, productivity improvements can be achieved which result in real growth. In this course we will analyze both the strategic issues in service management as well as the particular aspects of running firms. We will discuss important issues in the operations of major service providers such as hotels and restaurants, airlines, retailers, financial
services, and health care providers. We cover such topics as: service design, capacity and demand management, quality in services, variability and bottlenecks, and revenue management. The course will approach services from an operations management viewpoint, though related aspects of strategy, marketing, technology management and organizations will be discussed. Much of the discussion will focus on case studies and articles. Students will be required to write-up several cases, complete other written assignments, and may be required to take part in a term project. 1.5 Credits.