

# OPERATIONS AND TECHNOLOGY MANAGEMENT (OTM)

## OTM 300 – OPERATIONS MANAGEMENT

3 credits.

Managing operations is about people, information, equipment, and materials and how these are combined to produce and/or deliver goods and services to customers. Emphasis is on how systems and processes can be designed, managed, and improved to achieve operations excellence and competitive advantage.

**Requisites:** Sophomore standing or declared in undergraduate Business Exchange program

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

## OTM 351 – PRINCIPLES AND TECHNIQUES OF QUALITY MANAGEMENT

3 credits.

Introduces students to the terminology, concepts, principles, and techniques for managing and improving quality.

**Requisites:** Sophomore standing and OTM 300

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

## OTM 365 – CONTEMPORARY TOPICS

1-3 credits.

An exploration of subject areas possibly to be introduced into the business curriculum.

**Requisites:** Sophomore standing and OTM 300

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2022

## OTM 370 – SUSTAINABLE APPROACHES TO SYSTEM IMPROVEMENT

3 credits.

Organizations employ a variety of improvement approaches to develop sustainable practices. Sustainability concerns such as natural capital, emission buildup, and base of the pyramid are directly addressed by examining innovative system-improvement concepts, while simultaneously strengthening mission-central concerns such as cost, quality, customer, market, revenue, profit, brand, reputation sourcing, and quality of work life.

**Requisites:** None

**Repeatable for Credit:** No

**Last Taught:** Summer 2023

## OTM 399 – READING AND RESEARCH-OPERATIONS AND INFORMATION MANAGEMENT

1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.

**Requisites:** Consent of instructor

**Course Designation:** Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Fall 2022

## OTM/MARKETNG 421 – FUNDAMENTALS OF SUPPLY CHAIN MANAGEMENT

3 credits.

Supply chain management (SCM) is a dynamic, cross-functional discipline that encompasses the areas of strategy, product development/innovation, marketing, finance, sourcing, production, logistics, and technology in both product and service industries. The supply chain is responsible for the sustainable and efficient movement of products, services, funds, and data along the value chain. Companies must effectively coordinate these functions not only within the firm, but with business partners and customers around the world. SCM is a critical, strategic component of any business or organization, from high-tech to healthcare, and it is a fundamental knowledge base for any student of business.

**Requisites:** Sophomore standing and (MARKETNG 300 or OTM 300) or declared in undergraduate Business Exchange program

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

## OTM/MARKETNG 422 – LOGISTICS MANAGEMENT

3 credits.

Provides a management perspective on the fundamental activities, concepts, and current practices in logistics. Transportation management, order fulfillment, warehousing, global logistics, key performance indicators, outsourcing, and introduction to radio frequency identification and barcoding. Use of case studies and industry speakers.

**Requisites:** MARKETNG 300, OTM 300, and sophomore standing, or declared in undergraduate Business Exchange program

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

## OTM/MARKETNG 423 – PROCUREMENT AND SUPPLY MANAGEMENT

3 credits.

Procurement and supply management is the business function concerned with an organization's acquisition of required materials, services, and equipment. Explores the key aspects of modern supply management including the purchasing process, cost management, negotiation, sourcing strategies, supplier management, category management, acquisition methods for materials and services, and outsourcing.

**Requisites:** Sophomore standing and (MARKETNG 300 or OTM 300) or declared in undergraduate Business Exchange program

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM/MARKETNG 427 – INFORMATION TECHNOLOGY IN SUPPLY CHAINS**

3 credits.

Explores the concepts and practices of using information technology to effectively manage and operate supply chains of businesses and other organizations. Topics include supply chain processes, enterprise resource planning (ERP) system implementation, and supply chain simulations using SAP software.

**Requisites:** MARKETNG 300, OTM 300, and sophomore standing, or declared in undergraduate Business Exchange program

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM/MARKETNG 428 – SUPPLY CHAIN CAPITAL MANAGEMENT**

3 credits.

Introduce the set of activities and solutions available to finance an organization's supply chain infrastructure. Define and study the related influencers. Investigate risks and mitigation techniques relative to associated metrics and strategies. Analyze multiple cases in group study work. Identify and recommend improvement opportunities.

**Requisites:** Junior standing and (MARKETNG 300 or OTM 300), or declared in the Business Exchange program

**Repeatable for Credit:** No

**OTM/MARKETNG 429 – GLOBAL EXPERIENCE: SUPPLY CHAIN MANAGEMENT**

1-2 credits.

Companies and organizations operate globally – sourcing, producing, and distributing to/from markets around the world. For business leaders in this environment, political, economic, historical, and cultural frameworks are critical to understand and navigate. Learn and explore these themes via classroom and applied experiences in global supply chain management.

**Requisites:** Consent of instructor

**Repeatable for Credit:** Yes, for 2 number of completions

**OTM 451 – SERVICE OPERATIONS MANAGEMENT**

3 credits.

Application of operations management principles to the analysis of service-delivery systems in profit and nonprofit organizations. Topics include designing service-delivery systems, location and layout, operations planning and control, yield management, technology and information systems, and service quality management.

**Requisites:** OTM 300

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

**OTM 452 – PROJECT MANAGEMENT**

3 credits.

During their careers, managers spend a significant amount of time either participating in or leading projects. While every project is unique, some concepts and tools in project management apply to a wide range of projects. The aim of this course is to equip students with these concepts and tools, and to develop them into successful project managers (and team members). With that aim in mind, the course will emphasize quantitative aspects of project management while also discussing more qualitative aspects. Key topics include Project Initiation, Scheduling, Resource Management, Monitoring, Valuation, Rework, Agile Project Management, Project Management Analytics and Contracting.

**Requisites:** Sophomore standing

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM 453 – OPERATIONS ANALYTICS**

3 credits.

Focuses on the application of analytical methodologies to problems that arise in the context of a company's operations and supply chains. Touches on all three dimensions of analytics (descriptive, predictive, and prescriptive). Emphasis on data and real industry data collected from the university, alumni, and executive board members when possible. Explore, analyze, and utilize such data in a hands-on way, using a variety of software tools. Significantly driven by a set of case problems as opposed to systematic coverage of methodologies.

**Requisites:** OTM 300 and GEN BUS 306

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM/ISYE/MATH/STAT 632 – INTRODUCTION TO STOCHASTIC PROCESSES**

3 credits.

Topics include discrete-time Markov chains, Poisson point processes, continuous-time Markov chains, and renewal processes. Applications to queueing, branching, and other models in science, engineering and business.

**Requisites:** (STAT/MATH 431, 309, STAT 311 or MATH 531) and (MATH 320, 340, 341, 375, 421 or 531) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program

**Course Designation:** Breadth – Natural Science  
Level – Advanced

L&S Credit – Counts as Liberal Arts and Science credit in L&S

Grad 50% – Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM 654 – PRODUCTION PLANNING AND CONTROL**

2-3 credits.

The role of materials and capacity planning and control in business operations. Manufacturing Resource Planning Systems: aggregate planning, material requirements planning, capacity planning, operations scheduling. Procedures for cellular manufacturing systems. Costing issues in modern planning and control systems.

**Requisites:** Sophomore standing and OTM 300

**Repeatable for Credit:** No

**Last Taught:** Spring 2022

**OTM 700 – OPERATIONS MANAGEMENT**

2-3 credits.

Management of operations throughout an organization. Emphasizes the coordination of resources to improve cost, quality, and customer service. Topics include capacity and materials management, operations strategy, and process improvement.

**Requisites:** Declared in an MBA program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Fall 2023**OTM 701 – PRODUCT MANAGEMENT**

2-3 credits.

Introduction to both the technical and interpersonal sides of developing and managing a product, from ideation to application and revision and launch. Key tools and frameworks including agile software development, product road mapping and design thinking are included.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2024**OTM 702 – DIGITAL STRATEGY**

2 credits.

Helps develop the critical thinking skills necessary to assess how digitization shapes business strategy, innovation, and operations in firms. Prepares students to analyze and evaluate business challenges for maximizing the impact of digitization on products, processes, and services in different settings.

**Requisites:** Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2024**OTM 703 – COMPETING THROUGH ANALYTICS**

2 credits.

Introduction to business analytics, machine learning and artificial intelligence from a managerial perspective. Covers identifying opportunities to capture data, learning about the current trends in and possibilities with data mining, converting analytics insights into action and evaluating your organization's readiness to compete with analytics.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**OTM 714 – SUPPLY CHAIN ANALYTICS**

2-3 credits.

The ability to extract information from data has become essential for companies that want to remain competitive – and therefore essential for students aspiring to become successful managers. Provides an understanding of various analytics methodologies and concepts, and the ability to apply these to business problems related to supply chain management and operations management. Key topics include Data Visualization, Time Series Forecasting, Linear Regression, Classification Methods, Association Rules, Cluster Analysis and Text Mining.

**Requisites:** Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2024**OTM/MARKETNG 722 – LOGISTICS MANAGEMENT**

2-3 credits.

A foundation in transportation, order fulfillment, warehousing, materials planning including MRP, demand planning, import/export fundamentals, ERP systems, supply chain metrics, and leading supply chain technologies such as RFID.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Fall 2023**OTM/MARKETNG 724 – STRATEGIC GLOBAL SOURCING**

3 credits.

Supply management (procurement) is widely recognized as one of the most critical elements in global supply chain management. The function plays a major role in maximizing the value and the integration of supply chain operations. Explores the key aspects of modern supply management including functional responsibilities and exemplary practices for major industry sectors.

**Requisites:** Graduate/professional standing and (MARKETNG 300 and OTM 300) or (MARKETNG 700 and OTM 700)**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2024**OTM/MARKETNG 726 – SUPPLY CHAIN STRATEGY**

3 credits.

Focuses on strategic issues and current theory and practice in supply chain management. Effective design and management of supply chain resources is a key source of competitive advantage for organizations. Supply chain management is a cross-functional discipline that concentrates on the management of goods, services, and information among all links in the value chain.

**Requisites:** (MARKETNG 300 and OTM 300) or (MARKETNG 700 and OTM 700) and graduate/professional standing, or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2024

**OTM/MARKETNG 727 – INFORMATION TECHNOLOGY IN SUPPLY CHAINS**

3 credits.

Explores the concepts and practices of using information technology to effectively manage and operate supply chains of businesses and other organizations. Topics include supply chain processes, enterprise resource planning (ERP) system implementation, and supply chain simulations using SAP software.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM/MARKETNG 728 – SUPPLY CHAIN CAPITAL MANAGEMENT**

3 credits.

Supply chain capital management refers to the set of activities and solutions available to finance an organization's supply chain infrastructure. As supply chains become more extended and complicated a need has developed to both manage and fund the supply network. Define and study the various influencers on the supply chain capital structure. Investigate risks, mitigation techniques, metrics and themes relating to the topic.

**Requisites:** Graduate Students Only

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

**OTM 732 – ECONOMICS FOR MANAGERS**

2-3 credits.

Develops and applies economic principles to examine the effect of firm, industry, domestic and global market conditions on both day-to-day managerial decision-making and long-term strategic planning.

**Requisites:** Declared in an MBA program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM 751 – SERVICE OPERATIONS MANAGEMENT**

3 credits.

Application of operations management principles to the analysis of service-delivery systems in profit and nonprofit organizations. Topics include designing service-delivery systems, location and layout, operations planning and control, yield management, technology and information systems, and service quality management.

**Requisites:** OTM 700 and GEN BUS 704

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

**OTM 752 – PROJECT MANAGEMENT**

1-3 credits.

During their careers, managers spend a significant amount of time either participating in or leading projects. While every project is unique, some concepts and tools in project management apply to a wide range of projects. Equips students with these concepts and tools, and to develop them into successful project managers (and team members). Focuses on broadly applicable concepts and methods and will cover both qualitative and quantitative aspects of project management. Key topics include Project Initiation, Scheduling, Resource Management, Monitoring, Valuation, Risk Management, Agile Project Management, Project Portfolio Management and Contracting.

**Requisites:** Graduate/professional standing

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**OTM 753 – HEALTHCARE OPERATIONS MANAGEMENT**

2-3 credits.

Healthcare delivery systems around the world struggle with three fundamental issues: patient access to care, quality and safety in the care process (including patient and staff satisfaction), and cost of care. These issues will be examined along with selected analysis and improvement approaches that the discipline of Operations Management can offer. Different types of both clinical and non-clinical processes in hospital settings are illustrated.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

**OTM 758 – MANAGING TECHNOLOGICAL AND ORGANIZATIONAL CHANGE**

3 credits.

Issues surrounding strategic decisions to adopt new technologies and modern improvement philosophies, the impact these will have on the organization and its members, obstacles preventing successful implementations, and the effective management of change processes. Change triggered by process technologies, and models of change management, form the core of the course.

**Requisites:** OTM 700

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2023

**OTM 760 – MANAGING BY DESIGN**

2-3 credits.

Exploration of design as a new practice in management that serves the need for identifying innovation opportunities in all types of organizations. Includes readings and cases in design/management and a set of creative projects that advance design skills in the context of management.

**Requisites:** Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2024**OTM 765 – CONTEMPORARY TOPICS**

1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Spring 2024**OTM 770 – SUSTAINABLE APPROACHES TO SYSTEM IMPROVEMENT**

4 credits.

Innovative system-improvement concepts and approaches that sustainably strengthen mission-central concerns such as quality, cost, customers, markets, revenue, profit, brand, reputation, sourcing, quality of work life, natural capital, buildup of concentrations and base of the pyramid.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Fall 2021**OTM/E P D/GEN BUS 784 – PROJECT MANAGEMENT ESSENTIALS**

1 credit.

Techniques that will help to plan, execute, and deliver projects with desired scope on time and on budget. Learn to document clear project objectives and goals, accurately estimate project time and costs, schedule and allocate time-critical resources, and establish feedback systems for optimal project control.

**Requisites:** Graduate/professional standing or declared in graduate Business Exchange program**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Summer 2023**OTM 799 – READING AND RESEARCH-OPERATIONS AND INFORMATION MANAGEMENT**

1-6 credits.

Individual work suited to the needs of graduate students.

**Requisites:** Consent of instructor**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Spring 2024**OTM 861 – STRATEGIC SYSTEMS AND SUSTAINABILITY**

3 credits.

Innovative concepts and methodology that embed sustainability into strategic organizational systems.

**Requisites:** OTM 770**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2016**OTM 990 – OPERATIONS AND INFORMATION MANAGEMENT-INDEPENDENT RESEARCH PH.D. THESIS**

1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.

**Requisites:** Consent of instructor**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Spring 2024**OTM 999 – READING AND RESEARCH-OPERATIONS AND INFORMATION MANAGEMENT PHD**

1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged both during regular sessions and during the intersession periods.

**Requisites:** Declared in Business PHD**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Spring 2024