Managing World-Class Operations and Information Systems

Managing World-Class Operations and Information Systems is composed primarily of three disciplines: information systems, operations management, and statistics. While there is some overlap among the three groups in research and teaching programs, we offer elective courses in each area separately. There are about 30 faculty members in the department who are very active in teaching, research and various professional organizations. Several of the department faculty have received research awards and honors, serve on editorial boards of major journals, and have won a range of teaching awards.

IOM 529 Data Warehousing, Business Intelligence and Data Mining (3 units, Summer)
This course helps to build Business Analytics skills set required by corporations. This is one of the class time spent on data mining which is especially useful to companies, because it allows you to understand customers to a level not possible before. This course is about how companies apply two new technologies, data warehousing (DW) and data mining (DM), including business intelligence (BI), to empower their employees, and build and manage a customer-centric business model. Besides learning the strategic role DW and DM play in an enterprise, you will also get a close-up look at DW and DM by working on cases and gaining hands-on experience using software tools. Students taking this class will get an overview of the technologies of DW and BI/M from a managerial perspective. Finance companies have started data mining, example: Capital One Credit Card Company. Real Estate companies are now using neural networks to evaluate the probability of default on mortgage loans.

IOM 529 Advanced Regression Analysis (3 units, Spring)
Students completing this course will have a detailed understanding of Multiple Regression, Analysis of Variance, and other Data Analysis methods. Advanced Multiple Regression Analysis, Survey Analysis, Analysis of Variance and regression analysis will be covered. Practical problems in estimating and testing all of the above will be discussed using various computer software packages. Focus will be placed on applications to Finance and Marketing, although other fields also benefit from the procedures we will cover.

IOM 530 Applied Modern Statistical Methods (3 units, Fall)
This course aims to provide a very applied overview to such modern non-linear models as Generalized Additive Models, Decision Trees, Boosting, Bagging and Support Vector Machines which are some classical linear approaches such as Logistic Regression, and Linear Discriminant Analysis. We will cover all of these models on the basis of Marketing, Finance and other important business decisions.

IOM 543 Global Business Issues in the Networked Digital Industry (3 units, Fall)
This course was created at the request of, and with significant input from senior corporate executives in the digital media industries including Cisco, Disney, Qualcomm and ATT. This course will analyze the role of new technologies, such as 4G, WiMAX and cloud computing on business models of companies in the digital eco-system. This course provides students with the tools, such as business modeling and scenario construction techniques, to identify new areas of growth or opportunities and profitability for new product development. The class format includes lectures, case discussions, guest speakers and a corporate consulting project.

IOM 547 Designing Spreadsheet Based Business Models (3 units, Fall and Spring)
This course focuses on structuring, analyzing, and solving managerial decisions in business areas. Using Excel as the modeling platform, we learn to summarize useful information from available data, to optimally allocate limited resources, synthesize sequences of decisions, and incorporate uncertainties into analysis. The course covers practically all examples and offers ample problem solving opportunities.

IOM 551 Digital Transformation in the Global Enterprise (3 units, Spring)
This course prepares the general manager to be more effective in dealing both strategically and organizationally with the digital transformation of the global enterprise and its ecosystem of partners. It is a survey course that teaches how to intelligently harness the strategic business value of information technologies through large-enterprise systems and applications (such as ERP, CRM, Business Intelligence...). It illustrates methods for how to design and manage business models for services offered through digital platforms. It provides guidelines on how to organizationally implement and deploy different types of information systems, within and across enterprises while understanding user needs. It also addresses how to track and manage emerging disruptive technologies (WIA, mobile apps, social networks, augmented reality) in the context of the enterprise. The course includes cases and examples, current articles, and executive guest speakers.

IOM 580 Project Management (3 units, Fall and Spring)
This course begins with organizational issues in project management and focuses on skills and roles of project leaders and structure of project teams. Then the course moves on to more technical areas and covers project integration, scope, time and cost management. It will also cover project resource, risk, and procurement management. It will be finalized with controlling, monitoring and terminating projects. Throughout the course students will learn how to use MS Project, Monte Carlo simulation for project risk management, and spreadsheet models for various optimization problems within the project management context.

IOM 581 Supply Chain Management (3 units, Fall and Spring)
The course focuses on the management and improvement of supply chain processes and performance. We explore important supply chain metrics, the primary tradeoffs in making supply chain decisions, and the basic tools for effective and efficient supply chain management, production planning and inventory control, order fulfillment and supply chain coordination. Several recent and influential innovations such as revenue management, VMI, reverse logistics, RFID and supply chain software solutions will be discussed. We also investigate topics such as global supply chain design, logistics, e-commerce, and outsourcing. The class format includes lectures, case discussions, guest speakers, movie clips, simulation games, etc. The content covers both quantitative and qualitative material.

IOM 582 Service Management: Economics and Operations (3 units, Spring)
This course examines the service industry from a managerial and entrepreneurial perspective; emphasis will be on the tactical decisions needed to design and deliver successful and profitable services, and on interacting with other functional areas of business. This course is targeted at students interested in pursuing a management career in any service industry, consulting, or with an entrepreneurial disposition.

IOM Graduate Course Descriptions

Graduate Elective Courses
Information and Operations Management Department
IOM 599 Sourcing and Supplier Management (3 units, Fall)

This course aims to provide students with an understanding of the impact that sourcing and supply management have on the success and profitability of firms in today’s business environment. This course will increase levels of outsourcing and offshoring make correct selection of suppliers and their quality along with development of relationships between suppliers and producers, more crucial than ever. We will look at some of the factors that need to be considered when making sourcing and supplier decisions (relationships, contracts, globalization, risks, sustainability) and discuss the influence that sourcing and supply management have on other functional activities, such as product design, inventory management, electronic commerce, etc. This class format includes case discussions, simulations, and move clips.

IOM 599 Sustainable Supply Chains (1.5 units, Fall)

This course aims to provide students with an understanding of the sustainability challenges and opportunities facing supply chains today. We will look at some of the factors that are contributing to the adoption of sustainability strategies, such as regulations that are penalizing negative environmental and social impacts, and society’s expectations of businesses in terms of health, human rights, and the environment. The supply chains today cannot be concerned only with creating shareholder value; their performance is also measured in terms of social, environmental and economic impact. The main topics covered in the course are sustainability concepts and frameworks, environmental legislation, sustainable design of products, renewable energy, closed-loop supply chains, facilities, locations, and transportation decisions, supply management, and strategic sustainability implementation. The class format includes lectures, case discussions, guest speakers, and move clips.

IOM 583 Operations Consulting (3 units, Spring)

This course provides conceptual, analytic and managerial skills needed for leading and adding value in consulting projects with a focus on operations. The students will develop the ability to identify and analyze strategic issues in operations, link these to business strategic advantage and create action plans to implement the firm’s strategy. The operational issues and decisions that we will cover include developing competitive advantage through operations, process design, development of operational capabilities such as responsibility, quality, and job specific capacity and revenue management. We will consider strategy, design and tactical decisions in the various cases we cover and explore the interplay between them. The students will also obtain hands-on real world consulting experience at leading firms with operations in Southern California.

IOM 594 Global Operations Management (3 units, Spring)

This course will help students gain an exposure to the spectrum of issues that are crucial in the globalization of operations and describe successful (and unsuccessful) operations management approaches in both developed and developing countries. The course covers basic trade-offs associated with making operations decisions in a global context and highlight the crucial role of inter-functional coordination in successful global operations. The students will develop the ability to identify strategic issues in global operations, link these to business strategy and competitive advantage, and create action plans to implement the firm’s strategy.

IOM 584 Global Policies and Operations Management (3 units, Spring)

This course aims to provide an understanding of the impact that policies and operations management have on the success and profitability of firms in today’s business environment. This course will increase levels of outsourcing and offshoring make correct selection of suppliers and their quality along with development of relationships between suppliers and producers, more crucial than ever. We will look at some of the factors that need to be considered when making sourcing and supplier decisions (relationships, contracts, globalization, risks, sustainability) and discuss the influence that sourcing and supply management have on other functional activities, such as product design, inventory management, electronic commerce, etc. This class format includes lectures, case discussions, simulations, and movie clips.

GSEA 516 Digital Strategies for Sustainability in Global Emerging Markets (3 units, Spring)

This course brings together the intersection of these managerial issues. It provides an understanding of business strategies for sustainability that encompasses social, environmental, and economic issues. It relates why digital platforms and digital business models to enable sustainability strategy.

GSEA 518 Business Models for Interactive Digital Media & Services (3 units, Spring)

This course teaches current approaches for generating, designing, and assessing new business models for services offered through interactive digital platforms. It takes a strategy approach to understanding dynamics, business models, and digital business ecosystems. It uses a business development perspective for assessing new and growing niches in the dynamically evolving digital mediatertainment/commerce/leisure market space. It prepares the MBA to effectively contribute to new business development initiatives in that dynamic ecosystem. The course uses case studies, articles, videos, industry reports, and features executive guest speakers.