Virtually every sector of the economy has been shaken by revolutionary changes in the ways firms provide customers with goods and services. Firms are responding to these changes by reengineering their operations. Operations management enables firms to gain a competitive advantage by, at a minimum, cost leadership, quality superiority, flexible response to customer needs, and getting products and services to market quickly.

Our mission is to equip 21st-century managers with the ability and analytical skills to lead and manage organizations with complex operations.

Our faculty is known for cutting-edge research on critical, emerging operations and strategic issues. This research is reflected not only in the foundation core course but also in the several unique advanced electives offered. We are a multidisciplinary group with expertise in mass customization, business process design, service operations, value chain management, environmental management, quality, distribution channel management, risk analysis and management, manufacturing systems design, and global operations strategy.

We consult and conduct research on real-world problems in a variety of industries and government agencies. These include banking, automobiles, telecommunications, electronics, machine tools, cosmetics, chemicals, pollution control, waste management, consumer goods, airlines, health care, steel, retailing, computers, utilities, and NASA.

We emphasize active learning through internships, experiential exercises, real-world cases, guest speakers, field visits and hands-on field projects. We constantly stress the relationships between analytic and strategic perspectives.

A working knowledge of today’s key operations issues provides the skills to build successful careers in many fields. As firms restructure in response to global challenges in the marketplace, ample opportunities exist for managers in every function to excel by analyzing and improving business operations. For example, an operations consultant or manager would acquire the skills necessary to undertake business process improvements, total quality management initiatives, and customer service improvements. A financial analyst or management consultant would be in a better position to evaluate a firm’s strengths, weaknesses, and valuation by understanding how operations affect its competitive position and long-term cash flow. A marketing manager who understands operations would be better positioned to take multiple, simultaneous product development projects from conception through delivery, on time and on budget. This would allow firms to bring products to market more quickly, cheaply, and with better quality. A chief information officer or logistics director who understands operations would be in a better position to design and implement state-of-the-art manufacturing and service delivery systems.
CONCENTRATION IN
OPERATIONS MANAGEMENT
The Operations Management Group of the Department of Information, Operations, and Management Sciences offers one core course (Competitive Advantage from Operations, C60.0001) and three electives (Supply Chain Management, C60.0005; Decision Models, C60.0007; and Technology and Innovation Management, C30.0008) at the undergraduate level. Students interested in pursuing advanced study may request permission to enroll in graduate operations management electives that would be taken together with M.B.A. students. (Such students are expected to take two elective courses.)

Students interested in a concentration in operations management must make an appointment to see the undergraduate program coordinator so that an appropriate set of courses, which includes advanced electives, can be crafted.

Courses

Competitive Advantage from Operations
C60.0001 4 points.
Prerequisite: V31.0002, C22.0103 (or C22.0001 and C22.0003), and junior standing. Corequisite: C10.0102 (or C10.0001 with C10.0002).
Designed to give students a better understanding of how firms can gain competitive advantage from their operations function. Typically this requires the firm to achieve, at a minimum, cost, quality, and ecological parity; responsiveness and adaptability to customer needs and desires; rapid time to market; process technology leadership; and sufficient and responsive capacity. A problem-solving framework is developed that enables students to undertake managerial and technical analysis that should result in the desired comparative advantage. Both service and manufacturing case examples are utilized.

Supply Chain Management
C60.0005 3 points.
Prerequisite: C60.0001.
The function of supply chain management is to design and manage the processes, assets, and flows of material and information required to satisfy customers’ demands. Logistics-related costs account for 20 to 25 percent of a typical firm’s total costs. On the revenue side, the supply chain decisions have a direct impact on the market penetration and customer service. Globalization of economy and electronic commerce have heightened the strategic importance of supply chain management and created new opportunities for using supply chain strateg-