

OPERATIONS & SUPPLY MANAGEMENT

Courses

OPS 220. Experiences in Operations & Supply Management. 1 Hour

Designed to immerse students into the contemporary issues of operations and supply management. Site visits and guest lectures from operations management leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.

OPS 300. Introduction to Operations & Supply Management. 3 Hours

Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, services systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Not open to students in the School of Business Administration or to those with credit in OPS 301. Student must show aptitude in quantitative materials. Prerequisites: (MTH 207 or equivalent); junior standing.

OPS 301. Survey of Operations & Supply Management. 3 Hours

Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, service systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Business majors only. Prerequisite(s): (BIZ 200 or BIZ 201); DSC 210.

OPS 350. Business Process Management. 3 Hours

Analytical and empirical tools for evaluation of operations in manufacturing/service firms. Analytical methods may include flow diagrams, Little's Law, queuing theory, theoretical flow times, critical path networks, resource capacity, and estimates of system flow. Empirical methods include quality sampling and discrete event simulation. Students receive training in simulation software. Projects or case studies require creative problem solving for realist business problems. Prerequisites: OPS 301 or OPS 300.

OPS 375. Management Science. 3 Hours

Quantitative modeling applications for managerial analysis and decision making. Develops skills to analyze and solve problems using computer-based mathematical modeling in a wide variety of business decision situations involving business functional areas such as accounting, economics, finance, human resources, marketing, management information systems, and operations management. Topics include constrained modeling techniques, simulation, and multi-criteria decision making. Prerequisites: DSC 211.

OPS 401. Operations Planning & Control. 3 Hours

Concepts and techniques in the planning and control of operations. Advanced treatment topics include: forecasting for operations, operations sequencing and scheduling, inventory and production control, production planning system design, MRP/ERP, warehouse management, purchasing and physical distribution, balanced attention to technical as well as the managerial aspects of operations planning and control. Prerequisites: OPS 301.

OPS 413. Project Management. 3 Hours

Broad coverage of technical and human management issues in projects. Emphasis on project planning, scheduling, tracking, and close-down. Task time and cost estimation and description. Use of computer software. Team building and other aspects of managing project teams. Prerequisite(s): OPS 301.

OPS 430. Quality & Just in Time Manufacturing. 3 Hours

The concepts of just-in-time manufacturing, total quality system, and statistical process control. Projects, tours, and guest speakers. Prerequisite(s): OPS 301.

OPS 440. Continuous Improvement. 3 Hours

Theory and practice of continuous improvement especially as applied in manufacturing; comparison to the traditional operations management approach, tools and techniques, the KAIZEN approach. Prerequisite(s): OPS 301.

OPS 480. Supply Chain Management Strategies. 3 Hours

Concepts, analytical techniques, and solution methods for designing and managing integrated supply chains. Strategic issues of integrated supply chain design and management, including inventory management, logistics network design, distribution systems, strategic alliances, value of information for centralized decisions and risk-pooling, information technology and decision support, and international supply chain management. Prerequisites: OPS 301 and (DSC 375 or OPS 375).

OPS 481. Principles of Procurement. 3 Hours

Examination of strategic issues in procurement, purchasing documents and processes, the procurement cycle, supplier management programs, negotiations, sourcing, and value analysis. Prerequisite(s): OPS 301.

OPS 482. Supply Chain Analytics. 3 Hours

Overview of decision making in supply chain management. Problem solving steps and algorithms. Introduction to specialized data analytics software. Emphasis on predictive analytics. Prerequisites: OPS 301.

OPS 485. Capstone Operations & Supply Management Project I. 1 Hour

This course centers on the preparation for an experiential operations improvement project. Students evaluate real-world project proposals from clients, develop clear understanding of operations improvement opportunities, and select projects at hand. Student teams learn about process improvement project design and develop well-defined project plans for execution in OPS 495. Students taking OPS 485 in the fall must take OPS 495 in the subsequent spring semester. Corequisites: OPS 350, OPS 401, OPS 480.

OPS 491. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent and original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

OPS 492. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent original, research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

OPS 494. Seminar in Operations & Supply Management. 3 Hours

Study of selected topics or issues in operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

OPS 495. Capstone Operations & Supply Management Project II. 5 Hours

This course centers on the execution of an experiential project applying operations and supply management concepts and techniques to practical problems with faculty supervision. Student teams address significant operational problems and opportunities in real-world service and manufacturing firms. Teams write recommendation/implementation reports and make presentations of their work. Students are guided to reflect about how their UD educational experience has influenced understanding of their major in terms of vocation. Prerequisites: OPS 485.

OPS 497. Laboratory Work Experience. 1-6 Hours

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, government, or other organization, practical experience in work associated with the student's major. (See internship coordinator for details.) May satisfy OPS elective, with chairperson approval.

OPS 498. Cooperative Education. 1-6 Hours

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details). Permission of chairperson required.

OPS 499. Independent Study in Operations & Supply Management. 1-6 Hours

Research in conjunction with a faculty member on a subject within the general area of operations management. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required.

OPS 615. Analytics: Processes and Applications. 3 Hours

Main phases of the life-cycle of analytics, including information requirements determination, data acquisition, analysis with descriptive, predictive, and prescriptive models, visualization, analysis presentation, and delivery. Selected cases illustration use of various analytics methods to solve specific business problems. Prerequisite(s): MBA 791.

OPS 616. Project Management for Professionals. 3 Hours

Project-oriented work makes up the bulk of managerial activity in organizations and consequently knowledge of project management principles is valued highly. This course offers a broad review of issues and approaches to contemporary professional project management useful for any MBA student and future manager. Graduate Standing.

OPS 617. Business Process Improvements. 3 Hours

Study of the concepts and techniques of business process analysis and improvements as building blocks for all operations improvement strategies, using a range of tools from simple process-mapping to computer-based process-modeling. Balancing technical/analytical and organizational/behavioral aspects of business process improvements are highlighted. The class will include a business process analysis/improvement project using a process modeling software. Prerequisites: (MBA 511 or MBA 611); (MBA 512 or MBA 612).

OPS 619. Special Topics in Operations Management. 1.5,3 Hours

Advanced or special topics in the analysis, design, operation, and maintenance of manufacturing and service systems. Topics vary. Prerequisite(s): Permission of instructor.