

## **DIS Decision Science and Information Systems**

### **DIS 300 QUANTITATIVE ANALYSIS IN OPERATIONS MANAGEMENT. (3)**

A study of quantitative approaches to operations management, including decision support systems in decision making applications and efficiency considerations in both service and manufacturing operations. Prereq: CS 101, ACC 202, ECO 201, STA 291, MA 113 or MA 123, 162.

### **DIS 310 BUSINESS COMPUTING SYSTEMS. (3)**

The course provides an understanding of how systems can be utilized to improve computer-based organizational productivity and effectiveness. Prereq: CS 101; open only to Business Minors. Not available for credit for Business and Economics majors.

### **DIS 320 MANAGEMENT INFORMATION SYSTEMS. (3)**

An introduction to information systems for management. Includes basic systems concept, methodology of systems analysis, and implementation of management information systems. Also provides an introduction to decision support systems, data base management concepts and design methods, with emphasis on managerial problems related to these systems. Prereq: CS 101; admission to upper division B&E.

### **DIS 350 QUANTITATIVE ANALYSIS IN MANAGEMENT. (3)**

An introduction to quantitative techniques in management decisions. Includes basic linear programming, Monte Carlo, and waiting line theory. Prereq: MA 113 (or MA 162 and 123), STA 291 (or STA 292, 293, 294).

### **DIS 390 SPECIAL TOPICS IN DECISION SCIENCE AND INFORMATION SYSTEMS (Subtitle required). (3)**

Readings, projects, lectures and/or discussions to illuminate current topics of special interest or concern in decision science and information systems. May be repeated to a maximum of six credits. May not be repeated under the same title. Prereq: DIS 300.

### **DIS 395 INDIVIDUAL WORK IN DECISION SCIENCE AND INFORMATION SYSTEMS. (1-3)**

Students confer individually with the instructor. Written paper usually expected and filed in chairperson's office. May be repeated to a maximum of six credits. Prereq: Approval of instructor and chairperson.

### **DIS 406 PRODUCTION AND INVENTORY CONTROL. (3)**

This course covers advanced topics in inventory and production control including forecasting, planning horizon issues, dynamic lot sizing, reorder point determination, optimal periodic and continuous review policies, multiproduct and multifacility inventory problems, multistage shop scheduling, flow-shop scheduling. Prereq: DIS 300, 350, ECO 391.

### **DIS 450 INFORMATION TECHNOLOGY FOR ORGANIZATIONAL DECISION MAKING. (3)**

The purpose of this course is to integrate analytical techniques and information technology in developing tools to assist in organizational decision making. In prior courses, students are introduced to analytical techniques that are commonly used in organizational decision making as well as current information technologies. As the capstone course in Decision Sciences and Information Systems, the objective of this course is to combine students' abilities in both areas. Specifically, this course enhances students' abilities in developing computer-based tools that employ analytical techniques for the purpose of aiding organizational decision-makers. Prereq: Senior standing in the College of Business and Economics and DIS 350 plus two other DIS courses.

#### DIS 506 PRODUCTIVITY AND QUALITY CONTROL. (3)

This course covers advanced topics in productivity and quality control including acceptance sampling, manufacturing control, process control, reliability, product design and process selection, job design, work measurement, and time and motion studies. Prereq: DIS 300, ECO 391.

#### DIS 520 ADVANCED BUSINESS DATA PROCESSING AND INFORMATION. (3)

An examination of the use of computers as an aid to business and economic decision making, information, and related problems in business and economics. Prereq: DIS 320 or equivalent, DIS 350.

#### DIS 600 PRODUCTION MANAGEMENT. (3)

This course exposes the MBA generalist to the functional area of production in both manufacturing and service sectors. Topics include tactical decisions in production and operative relationships with corporate strategy. The course emphasizes operations planning and control. Prereq: Graduate standing; MGT 611, ECO 610, ACC 628, DIS 650, ECO 611, FIN 600, DIS 651, MKT 600.

#### DIS 611 THE MANAGEMENT OF COMPUTER INTEGRATED MANUFACTURING. (3)

This course is to provide a broad introduction to the state of the art developments in computer integrated manufacturing systems and the problems of managing such technologies and systems. Topics dealing with the evolving "factory of the future" such as computer aided design, computer aided manufacturing, group technology, flexible manufacturing systems, etc., will be studied. Strategic and managerial implications will be emphasized. Prereq: DIS 600.

#### DIS 620 MANAGEMENT INFORMATION SYSTEMS IN DECISION MAKING. (3)

In-depth consideration of the value of information in managerial decision making. Topics include issues in design and evaluation of management information systems, decision support systems, and business expert systems. Prereq: DIS 651.

#### DIS 621 BUSINESS EXPERT SYSTEMS. (3)

Introduction to expert systems and artificial intelligence in the business setting. Discussions include past and current applications of expert systems in business and considerations of future application possibilities. Prereq: DIS 620.

DIS 622 BUSINESS DATA SYSTEM  
ANALYSIS AND DESIGN. (3)

An introduction to the comparative analysis and business use of various data models. Topics include the theory and design of information storage and retrieval procedures in the context of business information needs. Prereq: DIS 620, CS 101 or consent of instructor.

DIS 623 BUSINESS DECISION SUPPORT SYSTEMS. (3)

Discussion of business decision support system concepts and the applications of these concepts in business organizations. The theoretical development of the decision support system concept is analyzed through review of important literature in this area. Emphasis is placed on the impact of technological advances which form the basis of decision support system software. Current decision support systems are studied and future likely applications considered. Prereq: DIS 620.

DIS 624 MANAGEMENT OF  
INFORMATION RESOURCES. (3)

The course is designed to prepare students to understand and analyze major issues related to the management of information resources, evaluate the current state of information resources management within an organization, and participate in the management of such resources. Prereq: DIS 620 or consent of instructor. (Same as MGT 624.)

DIS 651 QUANTITATIVE ANALYSIS  
IN BUSINESS DECISION MAKING. (3)

A study of key problem formulation and solution procedures in business decision making. The topics studied include statistical techniques integrated in decision making under uncertainty, decision trees, queuing problems, and value of information. A major segment of the course is devoted to the study of linear programming problems, sensitivity analysis, assignment problems and transportation problems. Prereq: MBA standing.

DIS 695 INDIVIDUAL WORK IN DSIS. (3)

Students confer individually with instructor. May be repeated to a maximum of six credits. Prereq: Consent of the instructor.

DIS 700 TOPICS IN OPERATIONS MANAGEMENT. (3)

To review the various topics of operations management and to survey the status of the art research in each topic area. Research methodology and research opportunities in each topic area will be identified. May be repeated to a maximum of nine credits.

DIS 720 MANAGEMENT INFORMATION  
SYSTEMS THEORY. (3)

A theoretical consideration of the role of MIS in managerial decision making. Emphasis is placed on current research in MIS and interrelationships with management science and operations management. Prereq: Consent of instructor.

DIS 753 SEMINAR IN MANAGEMENT SCIENCE. (3-6)

Each semester some topic in management science such as simulation, queuing theory, stochastic processes, numerical methods, and Bayesian Decision Theory will be studied intensively. Prereq: DIS 751, 752.

**DIS 780 STUDIES IN DECISION SCIENCE  
AND INFORMATION SYSTEMS. (3)**

This course will analyze the current research topics of interest in the decision sciences. Possible areas of study may include: network management, multiple-criteria decision making; data envelopment analysis, combative decisions, and models for service organizations. May be repeated to a maximum of nine credits. Prereq: DIS 751 or consent of instructor.

**DIS 790 SPECIAL TOPICS IN MANAGEMENT DECISION  
SYSTEMS (Subtitle required). (3)**

This is a variable topic course enabling focused doctoral student investigation of current research areas. It is anticipated that the course grade will be based on individual student semester research papers in the course topic area. May be repeated to a maximum of 12 credits under different subtitles. Prereq: Consent of instructor.