

492. Senior Seminar
Fall, Spring. 4(4-0)
P: LBS 239 or LBS 332 or LBS 333 or LBS 334 or LBS 335 or LBS 355 or LBS 490E. R: Open only to juniors and seniors in Lyman Briggs School. Completion of Tier I writing requirement.
Selected problems in the study of science and technology as human activities, using philosophical, historical, literary, social science or interdisciplinary perspectives or methods. Development and defense of thesis paper.

493. Field Experience
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
R: Not open to freshmen and sophomores. Open only to Lyman Briggs School majors.
Experiential learning related to the public or private practice of science and technology.

MANAGEMENT

MGT

Department of Management The Eli Broad College of Business and The Eli Broad Graduate School of Management

302. Management and Organizational Behavior
Fall, Spring, Summer. 3(3-0)
P: EC 201 or EC 251H; ACC 201 or ACC 230 or ACC 251H. R: Open only to juniors and seniors.
Managerial roles and functions in goal-directed institutions. Organization design, analysis of organizational structure. Leadership, motivation, work attitudes, conflict management, and management of diversity.

303. Materials and Logistics Management
Fall, Spring, Summer. 3(3-0) Interdepartmental with Marketing and Logistics.
P: EC 201 or EC 251H; ACC 202 or ACC 230 or ACC 251H. R: Open only to juniors and seniors.
Role of manufacturing, operations, purchasing, sourcing, and transportation and distribution in determining organizational competitiveness. Quality, flexibility, cost, and lead time.

304. Operations and Purchasing Management
Fall, Spring, Summer. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 303. R: Open only to juniors and seniors.
Functions of operations and purchasing managers. Tactical issues in implementing internal and external resource plans.

306. Decisions Making Models
Spring. 3(3-0)
P: ML 317, MTH 120 or approval of department.
Quantitative techniques used for analyzing business decision situations. Optimal resource allocation decision models. Forecasting, planning, and computer simulation. Decision analysis under risk. Project management. Use of computer software.

310. Human Resource Management (W)
Fall, Spring, Summer. 3(3-0)
P: MGT 302 or concurrently. R: Open only to juniors and seniors. Completion of Tier I writing requirement.
Formulation and administration of human resource policies in the business enterprise. Personnel planning, job analysis and evaluation, staffing. Compensation and labor relations. Employee safety. Training, development, and performance appraisal. Issues of diversity and ethics.

345. Logistics Management
Spring. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: MGT 303. R: Open only to juniors and seniors in College of Business.
Activities and decisions necessary to plan, implement, and control private and public physical distribution and transportation channel systems. Physical, human, informational, and organizational system components.

401. Procurement and Supply Management
Fall, Spring, Summer. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 304, ML 345. R: Open only to juniors and seniors.
Strategic issues in procurement and supply management. Purchasing process, procurement cycle, purchasing research, relationships with suppliers, negotiation, and commodity planning. Cost, price, and value analysis.

402. Manufacturing Planning and Control
Fall, Spring, Summer. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 304, ML 345. R: Open only to juniors and seniors.
Production planning, demand management, master scheduling, materials requirements, and capacity planning. Shop floor control, computer-integrated manufacturing, and just-in-time systems.

403. Topics in Purchasing and Sourcing Management
Fall of even-numbered years. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 304, ML 345. R: Open only to juniors and seniors.
Current topics in sourcing and negotiation strategy such as price and cost analysis, and purchasing research techniques.

404. Topics in Operations Management
Spring of odd-numbered years. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 304, ML 345. R: Open only to juniors and seniors.
Managerial aspects of current issues such as total quality, computer integrated manufacturing and simultaneous engineering.

409. Business Policy and Strategic Management
Fall, Spring, Summer. 3(3-0)
P: MGT 302, MGT 303, FI 311, ML 300. R: Open only to seniors in the College of Business.
Techniques for building and maintaining consistent and effective policy and strategy. Content cuts across the major functions within a firm. Strategic integration, ethics, and international competition.

411. Organizational Staffing
Fall. 3(3-0)
P: MGT 310 or concurrently.
Job and organizational analysis. Personnel planning, recruitment, selection and placement. Employment interviewing and testing. Validation of selection procedures, EEO guidelines, and affirmative action. Diversity and ethics issues.

412. Compensation and Reward Systems
Spring. 3(3-0)
P: MGT 310 or concurrently. R: Open only to juniors and seniors.
Designing compensation systems. Job evaluation, internal and external equity. Pay-for-performance plans and financial incentives. Wage and salary surveys. Benefits administration. Diversity and ethical considerations.

413. Personnel Training and Development
Spring. 3(3-0)
P: MGT 310 or concurrently. R: Open only to juniors and seniors.
Designing and implementing training and development programs. Career stages and career planning. Needs analysis. Experimental design and program evaluation. Learning theories. Diversity and ethics issues.

414. Diversity in the Workplace
Fall. 3(3-0)
P: MGT 310 or concurrently. R: Open only to juniors and seniors.
Problems experienced in work organizations by racial, ethnic, physically handicapped, and other minorities. Awareness training for managers. Ethical issues.

442. Traffic and Transportation Management
Fall. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: MGT 304, ML 345. R: Open only to juniors and seniors in College of Business.
Analysis of purchasing and operating transportation services including carrier selection, pricing and rates, and negotiation. Managing the transportation function including consolidation, fleet management, and transportation strategies. International and intermodal distribution.

446. Physical Distribution Operations
Spring. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: MGT 304, ML 345. R: Open only to juniors and seniors in College of Business.
Analysis of distribution operations from a firm and facility perspective. Customer service strategy. Information and order processing systems. Warehouse design and operations. Material handling systems and assessment of performance.

470. Materials and Logistics Policy
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: MGT 304, ML 345, one additional course in materials and logistics management. R: Open only to juniors and seniors in College of Business and in programs for which MTA 470 is a catalog-listed requirement.
Case studies of strategic and tactical decisions in materials and logistics management. Identification and definition of problems, evaluation of integrated alternatives, and development of recommendations.

491. Special Topics in Human Resource Management
Spring of even-numbered years. 3(3-0)
P: MGT 310 or concurrently. R: Open only to juniors and seniors in the College of Business or in programs for which MGT 491 is a catalog-listed requirement.
Topics of interest to specialists in human resource management, such as advanced organizational behavior, managing labor relations, organizational development, and organizational theory and design.

493. Field Studies
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
R: Open only to seniors.
Program of observation, study, and work in selected business firms to supplement classroom study. Supervised independent research on special topics in Management.

**Descriptions — Management
of
Courses**

- 800. Materials and Logistics Management**
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Logistics.
R: Open only to graduate students in Business. Fundamentals of materials and logistics management. Strategic impact of the transformation process in a global economy. Quality, inventory management, logistics strategy, customer service, international procurement, management of technology.
- 801. Materials Management: Tactical and Strategic Perspectives**
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 800. R: Open only to graduate students in Business.
Integration of procurement and operations management for competitive advantage. Strategic and tactical approaches to customer requirements. Management of supply-chains procurement, process assessment, quality, manufacturing planning and control, and technology.
- 802. Procurement and Sourcing Strategies**
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 800. R: Open only to graduate students in Business.
Sourcing strategies and applications. Negotiation planning and execution.
- 803. Operations Management Strategy**
Fall. 3(3-0) Interdepartmental with Marketing and Logistics.
P: MGT 801. R: Open only to graduate students in Business.
Operations management issues including quality, technology, group technology, computer integrated manufacturing, and just-in-time manufacturing.
- 806. Management and Organizational Behavior**
Fall, Spring. 3(3-0)
R: Open only to graduate students in Business or students in programs for which MGT 806 is a catalog-listed requirement.
Micro and macro models of organizational behavior applied to the management of organizational processes and design. Motivation, leadership, structural design, and workforce diversity.
- 808. Business as an Institution**
Fall. 1(1-0)
R: Open only to students in the Advanced Management Program.
Institutional goals and control of the business enterprise. Positioning of the firm in the marketplace. Ethical foundations of business.
- 809. Logistics and Transportation Strategy**
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: MGT 800. R: Open only to graduate students in College of Business.
Planning, control and measurement for logistics and transportation systems. Customer service, transportation, inventory, order processing, warehousing and materials handling.
- 810. Human Resource Management**
Fall, Spring. 3(3-0)
P: MGT 806 or concurrently. R: Open only to graduate students in the College of Business or in programs for which MGT 810 is a catalog-listed requirement.
Design, administration, and evaluation of the human resource function. Job analysis, planning, staffing, training, performance appraisal, and career development. Labor relations, safety and health programs. International human resource management.
- 811. Organizational Staffing**
Spring. 3(3-0)
P: MGT 806; MGT 810 or concurrently. R: Open only to graduate students in the College of Business or in programs for which MGT 811 is a catalog-listed requirement.
Scientific, legal, and administrative issues in the selection, placement and promotion of individuals in organizations. Topics include job analysis, recruitment, testing, interviewing, performance appraisal, and affirmative action.
- 812. Logistics Research and Analysis**
Fall. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: ML 809. R: Open only to graduate students in College of Business.
Research methodology in the design and analysis of transportation and distribution systems. System design, customer service, and policy studies.
- 813. Human Resource Training and Individual Development**
Spring. 3(3-0)
P: MGT 810. R: Open only to graduate students in the College of Business or in programs for which MGT 813 is a catalog-listed requirement.
Planning, implementing and evaluating training programs. Career stages and career planning. Matching individual and organizational development needs.
- 815. Special Topics in Human Resource Management**
Spring of even-numbered years. 3(3-0)
P: MGT 806; MGT 810 or concurrently. R: Open only to graduate students in Business.
Advanced organizational behavior, organizational theory and design, labor relations, and organizational development.
- 816. Transportation Policy and Plans**
Spring. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: ML 809. R: Open only to graduate students in College of Business.
Policy models and managerial perspectives on future national and corporate transportation policies. Interaction of government, carrier management, and user logistics and distribution strategies.
- 819. Organization Design and the Management of Change**
Fall. 2(2-0)
P: MGT 808. R: Open only to students in the Advanced Management Program.
Alternative methods of organization. Dividing tasks and coordinating divided parts. Strategies for implementing new organizational forms and for changing strategies in general.
- 822. Management of Compensation**
Fall. 3(3-0)
P: MGT 810 or concurrently. R: Open only to graduate students in the College of Business or in programs for which MGT 812 is a catalog-listed requirement.
Application of compensation principles to organizational objectives. Strategic use of compensation systems for attracting, motivating, and retaining employees. Managerial aspects of paying employees at all organizational levels. Course stresses policy as distinct from statistical and computer applications.
- 823. Operations Management**
Spring. 3(3-0) Interdepartmental with Marketing and Logistics.
R: Open only to students in the Advanced Management Program.
Strategic issues in manufacturing operations, purchasing, and distribution. Impact of business systems on productivity and profits. Competitive strategies in an international economy.
- 830. Contemporary Management Issues**
Spring, Summer. 2 credits. A student may earn a maximum of 4 credits in all enrollments for this course.
R: Open only to students in the Advanced Management Program.
Emerging issues in business management of critical importance to executive managers. Topics may involve ethics, quality, diversity, and globalization.
- 833. Decision Support Models**
Fall, Spring. 3(3-0)
R: Open only to graduate students in Business.
Analytical models to support decision making. Topics include multiple regression, linear optimization, decisions under uncertainty, and forecasting.
- 834. Optimization Models I**
Fall of odd-numbered years. 3(3-0)
P: MGT 833 or approval of department.
Linear optimization models and algorithms. Theory of linear programming. Simplex algorithm and variations. Duality theory and sensitivity analysis. Linear programs with special structure.
- 835. Optimization Models II**
Spring of even-numbered years. 3(3-0)
P: MGT 834.
Advanced optimization techniques. Network and integer programming models and algorithms. Dynamic programming. Analysis of computational complexity. Heuristic procedures.
- 836. Management in the Global Marketplace**
Summer. 3(1-4)
R: Open only to students in the Advanced Management Program.
Economic, social, political, and cultural factors associated with patterns of trade and direct investment in global industries. Focus on various specific economic regions of the world.
- 837. Introduction to Computer Simulation**
Fall of even-numbered years. 3(3-0)
P: STT 442.
Discrete computer simulation and its use in research and planning. Simulation approaches and computer simulation languages. Design and interpretation of simulation experiments. Internal mechanics of simulation programs.
- 838. Design and Analysis of Statistical Experiments**
Spring of odd-numbered years. 3(3-0)
P: STT 442 or COM 905.
Basic experimental design. Non-parametric and multivariate methods. Elementary sampling theory. Response surface methodology. Data analysis using statistical packages such as BMD and SPSS.
- 841. Materials and Logistics Policy**
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Logistics. Administered by Marketing and Logistics.
P: ML 801, MGT 809. R: Open only to graduate students in College of Business.
Case study of strategy, policy, and planning. Customer satisfaction, quality, organization, information use, and strategic alliance issues.

846. Organizational Behavior and Personnel Administration
Fall. 3(3-0)

R: Open only to students in the Advanced Management Program.

Management of human resources. Leadership, motivation, communications, employee perceptions, individual and organizational learning. Staffing, interviewing, training, development, appraisal, terminating, and legal issues.

847. Managerial Decision Support Models
Fall. 3(3-0)

R: Open only to students in the Advanced Management Program.

Development and application of analytical models to support decision making. Topics include multiple regression, linear optimization, decisions under uncertainty, forecasting.

855. Labor and Management Relations
Spring. 2(2-0) Interdepartmental with Labor and Industrial Relations.

R: Open only to students in the Advanced Management Program.

Industrial relations in American union and management collective bargaining. Compensation issues. Grievance concepts and arbitration. Dispute resolution.

858. Applied Strategic Management
Spring. 2(2-0)

R: Open only to students in the Advanced Management Program.

Capstone integration and application of previous course work from the general manager's perspective. Topics include environmental analysis, competitive strategies, and strategy formulation and implementation.

870. Strategic Management
Fall, Spring. 3(3-0)

R: Open only to second-year M.B.A. students.

Determination of the strategic direction of the firm and management of strategic processes in the firm. Integration of environmental factors and organizational functions in the analysis and solution of management problems.

890. Independent Study

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.

R: Open only to graduate students in Business. Approval of department.
Faculty-supervised independent study.

906. Seminar in Organizational Research Methods
Spring. 3(3-0)

R: Open only to Ph.D. students.

Methods for scientific research in the areas of organizational behavior, personnel and organizational theory. Theory building, hypothesis formation and testing, reliability theory, construct validity, external validity, research design.

907. Seminar in Organizational Behavior
Fall of even-numbered years. 3(3-0)

R: Open only to Ph.D. students.

Directed readings on the behavior of individuals within organizations. Theory and empirical research on perception, decision-making, work motivation, work attitudes, leadership and group dynamics.

908. Seminar in Organizational Theory
Fall of odd-numbered years. 3(3-0)

P: MGT 906. R: Open only to Ph.D. students.

Formal organizations viewed as rational, natural and open systems. Survey of contemporary theory and empirical research.

909. Seminar in Human Resource Management

Spring of odd-numbered years. 3(3-0)

R: Open only to Ph.D. students.

Classic and current empirical research. Job analysis, personnel selection, training, and incentive systems.

910. Seminar in Strategic Management
Fall of even-numbered years. 3(3-0)

R: Open only to Ph.D. students.

Review of recent research literature. Topics include developments in strategic types, identification of strategic groups, strategy formulation, implementation, and decision making.

912. Special Topics Research Seminar
Spring of even-numbered years. 3(3-0)

P: MGT 906. R: Open only to Ph.D. students.

Research in timely and specialized topics in organizational behavior, organization theory, human resource management, organizational policy and strategy.

918. Procurement and Sourcing Theory
Fall of even-numbered years. 3(3-0)

R: Open only to Ph.D. students.

Theoretical models explaining procurement and sourcing strategy. Frameworks to guide research.

919. Procurement and Sourcing Management Strategy

Spring of odd-numbered years. 3(3-0)

P: MGT 918. R: Open only to Ph.D. students.
Management issues affecting the contribution of procurement and sourcing strategies to the competitiveness of the firm.

920. Seminar in Manufacturing Strategy
Fall of even-numbered years. 3(3-0)

P: MGT 801, MGT 803. R: Open only to Ph.D. students.
Research in manufacturing strategy. Quality, technology, flexibility, innovation. Theory building.

921. Seminar in Inventory Management
Fall of odd-numbered years. 3(3-0)

P: MGT 801, MGT 803. R: Open only to Ph.D. students in Business.
Classical, just-in-time, and multi-echelon inventory control models. Forecasting.

922. Seminar in Production Planning and Scheduling

Spring of even-numbered years. 3(3-0)

P: MGT 801, MGT 803, MGT 834. R: Open only to Ph.D. students in Business.
Aggregate and disaggregate planning, master scheduling, material requirements planning, lot-sizing, short-term capacity planning, and scheduling.

923. Topics in Operations Management
Spring of odd-numbered years. 3(3-0)

P: MGT 801, MGT 803. R: Open only to Ph.D. students in Business.
Current research in the field. Topics vary.

999. Doctoral Dissertation Research

Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.

R: Open only to Ph.D. students in Management.

MARKETING AND LOGISTICS

ML

**Department of Marketing and Logistics
The Eli Broad College of Business
and The Eli Broad Graduate
School of Management**

300. Managerial Marketing

Fall, Spring, Summer. 3(3-0)

P: EC 201 or EC 251H; ACC 201 or ACC 230 or ACC 251H. R: Open only to juniors and seniors.

Analysis of and strategic integration of buyer behavior, segmentation, positioning, demand analysis, information, pricing, promotion, channels, product policies, and ethics in consumer, reseller, industrial, and service markets.

302. Consumer and Organizational Buyer Behavior

Fall, Spring, Summer. 3(3-0)

P: ML 300. R: Open only to juniors and seniors.

Application of consumer behavior principles to customer satisfaction, market planning, and marketing mix decisions. Ethical, diversity, and international issues.

303. Materials and Logistics Management

Fall, Spring, Summer. 3(3-0) Interdepartmental with Management. Administered by Management.

P: EC 201 or EC 251H; ACC 202 or ACC 230 or ACC 251H. R: Open only to juniors and seniors in the College of Business or in programs for which MGT 303 is a catalog-listed requirement.

Role of manufacturing, operations, purchasing, sourcing, and transportation and distribution in determining organizational competitiveness. Quality, flexibility, cost, and lead time.

304. Operations and Purchasing Management

Fall, Spring, Summer. 3(3-0) Interdepartmental with Management. Administered by Management.

P: MGT 303. R: Open only to juniors and seniors in Materials and Logistics Management.

Functions of operations and purchasing managers. Tactical issues in implementing internal and external resource plans.

310. International and Comparative Dimensions of Business

Fall, Spring, Summer. 3(3-0)

P: EC 202 or EC 251H; MGT 302 or concurrently, ML 300 or concurrently. R: Open only to juniors and seniors.

International and cross-cultural study of business decisions, enterprises, markets, and institutions. Globalization of industries and firm competitiveness. International business transactions and entry strategies.

317. Quantitative Business Research Methods

Fall, Spring, Summer. 3(3-1) Interdepartmental with Statistics and Probability.

P: STT 315. R: Open only to juniors and seniors.

Application of statistical techniques, including forecasting, to business decision making. Includes applications of linear regression and correlation, analysis of variance, selected non-parametric tests, time series, and index numbers.

319. Marketing Research

Fall, Spring. 3(3-0)

P: ML 300, STT 315. R: Open only to juniors and seniors.

Research methods designed to obtain information for marketing decisions. Research design, data collection, and interpretation of information to provide a customer orientation.