Descriptions - LYMAN BRIGGS COLLEGE
of Courses

361. Philosophy of Technology
Fall, Winter. 4(4-0) Sophomores or approval of college. Interdepartmental with the Department of Philosophy, Interdepartmental with the Department of Economics. Is our technology desirable? Are its social forms desirable? What alternatives are there? Students will develop and defend their own appraisals of technology.

372. Introduction to Symbolic Logic
Fall, Winter. 4(4-0) Sophomores or approval of college. Concepts, notation and application of truth-functional and quantification, logic. Special topics may include axiomatics, metalogic, modal logic, fallacies, paradoxes, inductive argument, the justification of logic.

373. Introduction to the Philosophy of Science
Winter, Spring. 4(4-0) Juniors or approval of college. Philosophical problems about the character and justification of scientific knowledge. Possible topics: concept formation, theory construction, scientific explanation, confirmation theory, “logic” of discovery, philosophical implications of physical theories.

374. Historical Problems in the Biological Sciences
Fall, Winter. 4(4-0) Juniors or approval of college. Various themes or periods in the biological sciences. The course may emphasize the pattern of theoretical development, changes in explanatory ideals, the interaction of external factors and scientific ideas, etc.

375. Historical Problems in the Physical Sciences
Spring. 4(4-0) Juniors or approval of college. Various themes or periods in the physical sciences. The course may emphasize the pattern of theoretical development, changes in explanatory ideals, the interaction of external factors and scientific ideas, etc.

376. Historical Problems in Technical Change
Fall, Spring. 4(4-0) Juniors or approval of college. Factors which influence technical change. Exploration of both historical and contemporary problems of technology and technical change.

377. The Natural Environment: Perceptions and Practices
Spring. 4(4-0) Sophomores. Factors which have influenced U.S. environmental attitudes as reflected in art and literature. Ways in which changing attitudes have led to changes in legislation and practice.

378. Popular Culture and Technical Change
Winter. 4(4-0) Juniors or approval of college. Interdepartmental with American Studies. Interrelationships among elements of mass culture and technical change. Introduction to relevant research methods.

483. Philosophy of Physical Science
Fall. 4(4-0) Nine credits in physical science or approval of department. Interdepartmental with the Department of Philosophy. Philosophical problems of the physical sciences. The topics will be taken from such areas as quantum mechanics, space-time, classical mechanics, relativity.

484. Philosophy of Biological Sciences
Winter, Spring. 4(4-0) Nine credits in science received in more advanced courses in the biological sciences. Interdepartmental with the Department of Philosophy. Methodological notions and problems of the biological sciences such as: observation and measurement, classification, teleological and functional explanation, teleological systems, emergentism, vitalism, value neutrality.

490. Directed Study
Fall, Winter, Spring. 1 to 6 credits. May reenroll for a maximum of 12 credits. Juniors and approval of college. Faculty directed studies for students who are normally enrolled in regular course offerings.

A. Directed Study—General
B. Directed Study—Biology
C. Directed Study—Chemistry/Physics
D. Directed Study—Mathematics
E. Directed Study—Science Studies

491. Senior Seminar I
Fall, Winter, Spring. 3(3-0) Seniors or approval of college. Selected interdisciplinary problems concerned with the interface between science and society or science and man are identified and formulated. A bibliography is generated and an outline for a thesis prepared.

492. Senior Seminar II
Fall, Winter, Spring. 3(3-0) LBC 491. The thesis planned in LBC 491 is written and evaluated.

493. Field Experience
Fall, Winter, Spring. 1 to 15 credits. May reenroll for a maximum of 15 credits. Juniors and approval of college. Experimental learning related to the public or private practice of science and technology.

495. Independent Study
Fall, Winter, Spring. 1 to 12 credits. May reenroll for a maximum of 12 credits. Juniors and approval of college. Student conceived individual courses of study in curricular areas. Preliminary faculty approval and continuing guidance.

A. Independent Study—General
B. Independent Study—Biology
C. Independent Study—Chemistry/Physics
D. Independent Study—Mathematics
E. Independent Study—Science Studies

302. Organization and Administration
Fall, Winter, Spring, Summer. 4(4-0) Junior Business majors; EC 203 and FA 201. Analysis of the internal organization structure and of executive roles and functions in the business enterprise and other goal-directed institutions. Examines administrative and managerial concepts in the context of behavioral research in business. Cases and outside research reports are used for specific analyses.

303. Materials and Logistics Management
Fall, Winter, Spring, Summer. 4(4-0) Juniors in the College of Business or approval of department. Interdepartmental with the Department of Marketing and Transportation Administration. Management concepts and techniques for purchasing, operations and distribution processes. Productivity and profit contributions. Planning, analysis and control of purchasing, production and transportation/distribution.

304. Operations Planning and Control
Fall, Winter. 4(4-0) MGT 303 or approval of department. Interdepartmental with the Department of Marketing and Transportation Administration. Managing the production system. Product development, process selection, facilities location and layout; staffing; materials, cost and quality control.

305. Purchasing Management
Fall, Winter, Spring. 4(4-0) MGT 303 or approval of department. Interdepartmental with the Department of Marketing and Transportation Administration. Planning, organizing and controlling the purchasing function within organizations. Purchasing responsibilities, objectives, policies. Source selection and evaluation. Price, cost and value analysis. Negotiation. Managing purchase inventories.

306. Analysis of Processes and Systems
Fall, Winter. 4(4-0) CPS 110. Analysis of some fundamental systems and processes concepts which are basic to industrial management. The course is oriented toward computer model building, acquainting the student with the use of the computer as an instrument for analysis of complex problems in industry. Course includes consideration of criteria for efficiency and optimization, and program planning.

310. Fundamentals of Personnel Administration
Fall, Winter, Spring. 4(4-0) Juniors. Organization, functions, and policy administration of employee relations activities in the business enterprise; consideration of new techniques of employment, training, wage, payment, morale-building, and employee security.

341. Transportation Systems
Fall, Winter, Summer. 4(4-0) MGT 303 or approval of department. Interdepartmental with and administered by the Department of Marketing and Transportation Administration. Application of economic and business principles to transportation and distribution systems. Functional analysis of all major transport modes. Identification of major issues, analysis of alternatives and discussion of probable future outcomes.
412. Compensation and Motivation
Spring 4(4-0) MGT 310.
Manpower motivation and compensation problems in all business organizations—performance appraisal, job evaluation, wage and salary administration, non-financial incentives and the impact of job content and job context factors on performance.

413. Occupational Safety and Health Administration
Fall, Winter 4(4-0) MGT 302 for majors.
Programs and procedures for control of work accidents and maintenance of health in business and other organizations. Analysis of costs related to employee and product safety. Administration of a safety program in compliance with new Federal law.

414. Human Relations in Business
Fall, Winter, Summer 4(4-0) MGT 310. Seniors and approval of department. Students may not receive credit in both MGT 414 and PSY 336.
Human problems in business administration: examination of the empirical research dealing with organizational and administrative problems in business, including morale, motivation, authority, power, centralization, commitment, and mobility.

415. Managerial Approaches to Collective Bargaining
Winter, Spring 4(4-0) MGT 302 or Junior non-business majors.
Union-management problems and managerial strategy and tactics in collective bargaining—the union challenge, legal constraints, negotiations and operating guidelines. Dimensions of cooperation and conflict.

417. Minorities and Women in the World of Work
Fall, Spring 4(4-0) Senior majors or approval of department. Interdepartmental with the Department of Racial and Ethnic Studies and the School of Social Work.
Racial, ethnic, sexual, and other minority experiences and problems in the world of work. Awareness training approach (what it's like to be...) featuring movies, guests, subgroup discussions and encounter-type exercises.

445. Physical Distribution Management
Fall, Winter, Spring 4(4-0) MTA 303 or approval of department. Interdepartmental with and administered by the Department of Marketing and Transportation Administration.
Analysis of comprehensive cases incorporating topical coverage of the entire materials and logistics management program.

468. Field Studies
Fall, Winter, Spring, Summer Variable credit. May reenroll for a maximum of 8 credits. Business administration majors and approval of department.
Planned program of observation, study, and work in selected business firms. Designed to supplement classroom study in such a way as to make maximum contribution to students' total educational experience. Field work may be arranged in finance, insurance, marketing, personnel management, purchasing, real estate, retailing, transportation and banking.

800. Materials and Logistics Management
Fall, Winter, Spring, Summer 4(4-0) Graduate students. Interdepartmental with the Department of Marketing and Transportation Administration.
Management concepts of frameworks for acquisition, conversion and distribution processes, impact on business and social systems, productivity and profit. Emphasis on planning, analysis and control of purchasing, production and physical distribution.

801. Operations Management
Winter, 4(4-0) MGT 800 or approval of department. Interdepartmental with the Department of Marketing and Transportation Administration.

803. Purchasing Administration
Winter, Spring 4(4-0) MGT 800. Interdepartmental with the Department of Marketing and Transportation Administration.
Purchasing objectives, responsibilities, policies and organization. Source selection, evaluation and development—Negotiations. Purchase-planning and evaluation.

806. Organization and Administration
Fall, Winter, Spring, Summer 4(4-0) Approval of department.
Dynamics of organization. the organization seen as an open system interacting with a rapidly changing environment, as a structure of organized human cooperation, as an instrument of managerial strategy; current theory and research applied to organizational process and design.

807. Administrative Policy
Fall, Winter, Spring, Summer 4(4-0) MGT 806; MGT 808, MGT 480, MGT 484, MGT 889. Last term MBA students or approval of dean.
Application of administrative theory and techniques to business situations through cases cutting across major functions within business organization. Cases viewed from standpoint of general management with consideration of social and physical environmental forces surrounding the firm.

808. Seminar in Management, Organization, and Administration
Fall, Winter, Spring, Summer 4(4-0) May reenroll for a maximum of 12 credits.
Philosophy, practice, research, and current problems in management, organization, and administration. Historical and current literature, lectures, discussion, individual research. Case studies and plant visits are methods of study used in various terms.

History of Management Thought
Fall.
Development of management concepts as evidenced in the writings of major contributors. Environment factors and relation of early ideas to current thought.

Contemporary Issues in Administration
Spring.
Recent and current developments in the administration of business enterprises. Examination of theory and practice.
Critical and comparative consideration of organization structure and administrative organization theory with special reference to practice in the management of business concerns. Emphasis on detailed examination of component parts of the movement storage system.

806. Principles and methods of recruiting, selecting, training, evaluating, motivating, and rewarding personnel. Fringe benefits, retirement, absenteeism, and other employee benefit problems. Advanced studies in selected administrative and technical policies and practices in employee relations, with individual and group project work and research.

810. Interdepartmental with and administered by the Department of Marketing and Transportation Administration.


815. Transportation Distribution Strategies.

821. Production and Inventory Planning and Control. Focus on computer based planning systems for material requirements including aggregate planning, master scheduling, capacity planning, shop floor control and inventory planning.

832. Statistical Methods for Business.

834. Linear Optimization Models. MTH 111 and STT 315 or concurrently; STT 135 or concurrently; or 12 credits of college mathematics.

835. Nonlinear Optimization Models. MTH 352; AFA 840 or concurrently. MTH 352; AFA 840 or concurrently.

841. Materials and Logistics Management Policy. Interdepartmental with and administered by the Department of Marketing and Transportation Administration.

860. Corporation Management and Society. Interdepartmental with and administered by the Department of Economics.

880. Organization and Control in the Political Economy: Institutions and Theory. Approval of instructor. Interdepartmental with and administered by the Department of Economics.

907. Seminar in Organizational Behavior.

Organization Theory
Winter, Summer
Critical and comparative consideration of organization theory with special reference to industrial organizations. Problems of organization structure and administrative practice in the management of business concerns are analyzed in the light of objectives, environment, and current theories.

Transportation Policy and Plans
Fall, Winter. 4(4-0) MGT 800. Interdepartmental with and administered by the Department of Marketing and Transportation Administration.

Supervisory and Executive Development
Fall, Spring, Summer. 4(4-0) MGT 806 or MGT 808.

Production and Inventory Planning and Control
Winter, Spring. 4(4-0) MGT 800 or approval of department.

Computers and Systems Analysis for Business
Fall, Spring. 4(4-0) MGT 831 or concurrently; MTH 111 and STT 315 or concurrently; or 12 credits of college mathematics. Open only to selected MBA candidates.

Decision-Making Models
Fall, Winter, Spring. 4(4-0) MGT 831 and MGT 832 or concurrently; or 12 credits of college mathematics.

Linear Optimization Models
Fall, Spring. 4(4-0) MTH 833, MTH 228, STT 422.

Nonlinear Optimization Models
Winter, Summer. 4(4-0) MGT 833 or concurrently; or knowledge of linear programming. Interdepartmental with and administered by the Department of Chemical Engineering.

Applied Stochastic Processes for Business
Spring. 4(4-0) MGT 833, MTH 228, STT 422.

Materials Forecasting
Fall. 4(4-0) MGT 800.

Organization and Control in the Political Economy: Selected Problems
Winter of odd-numbered years. 4(4-0)

Organization and Control in the Political Economy: Institutions and Theory
Winter of even-numbered years. 4(4-0)

Behavioral Research: Organization
Winter. 3 credits. MTA 4905.

Seminar in Organizational Behavior
Fall. 4(4-0) MGT 806.
908. Seminar in Organization Theory
Winter. 4(4-0) MGT 806; doctoral candidates; master's candidates with approval of department.
Directed reading and research on issues in contemporary organization theory.

911. Seminar in Personnel Research
Spring. 4(4-0) MGT 810; doctoral candidates; master's candidates with approval of department.
Directed reading and research on issues in contemporary personnel administration theory and practice.

937. Systems Simulation
Fall. 4(4-0) MGT 836, STT 423, MTH 228. Interdepartmental with the Department of Statistics and Probability.
The concept of a model, model building, characteristics of simulation models. Techniques of computer simulation. Simulation models in research and management planning/control. Validation and experimental design. Special purpose languages.

948. Mathematical Programming
For Business
Spring. 4(4-0) MGT 836, MTH 334, MTH 426, STT 863. Interdepartmental with the Department of Statistics and Probability.
Large mathematical programs with special structure. Duality and decomposition in mathematical programming. Basic theory of dynamic programming; malistage decision processes and the principle of optimality. Risk, uncertainty, and introduction to stochastic and adaptive control processes.

949. Advanced Applied Stochastic Processes
Winter. 4(4-0) MGT 836, MGT 937. Interdepartmental with the Department of Statistics and Probability.
Selected topics from the following areas: Semi-Markov, Markov-renewal and regenerative process models; Markov and semi-Markov decision processes; decision theory, applications from production, inventory, reliability, queueing, and gaming theory.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

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MARKETING AND TRANSPORTATION ADMINISTRATION MTA

College of Business

292. Selected Topics
Fall, Winter, Spring. 3(3-0) or 4(4-0) May reenroll for a maximum of 8 credits when a different topic is taken.
Selected subject matter of current interest in marketing; social, institutional, and managerial, etc., topics. Subject varies by terms.

300. Marketing Management in Business and Society I
Fall, Winter, Spring, Summer. 4(4-0) EC 200, AFA 201 or AFA 330.
Firm and consumer roles in the exchange system for goods and services. Competitive analysis of marketing structures and marketing management. Fitting product-service offerings to various customer group needs.

301. Marketing Management in Business and Society II
Junior, MTA 300.
Development of distribution, communication and pricing policies. Integration of product, distribution, communication and price policies into a marketing plan. Emphasis on financial aspects of marketing and impact on society.

302. Consumer and Buyer Behavior
Fall. 4(2-0) MGT 836, MGT 937.
Consumer-buyer behavior characteristics, theories and research methods for marketing and strategies and problem solving. Emphasis on predicting and understanding purchase behavior for best firm/buyer needs match.

303. Materials and Logistics Management
(MGT 300). Fall, Winter, Spring. 4(4-0) Juniors in the College of Business or approval of department. Interdepartmental with and administered by the Department of Management.

304. Operations Planning and Control
(MGT 301.) Winter. 4(4-0) MGT 303 or approval of department. Interdepartmental with and administered by the Department of Management.
Managing the production system. Product development, process selection, facilities location and layout; staffing; materials, cost and quality control.

305. Purchasing Management
Fall, Winter, Spring. 4(4-0) MGT 303 or approval of department. Interdepartmental with the Department of Management.
Planning, organizing and controlling the purchasing function within organizations. Purchasing responsibilities, objectives and policies. Source selection and evaluation, Price, cost and value analysis, Negotiation, Managing purchase inventories.

311. Personal Selling
Fall, Winter, Spring, Summer. 3(3-0) MTA 300.
Theories, principles, methods and techniques of personal selling with application to different buying-seller situations. Development of interpersonal communication skill. Career opportunities in selling.

313. Sales Management
Fall, Winter, Spring. 4(4-0) MTA 300.
Organization and administration of the firm's personal selling. Topics include: recruitment, selection, training, compensation, evaluation, development, and motivation of salesmen; market assessment, territory alignment, and quotas; segment analysis and budgeting.

316. Fundamentals of Statistical Inference
Fall, Winter, Spring. 4(3-0) STT 115 Primary for students in the College of Business. Interdepartmental with and administered by the Department of Statistics and Probability.
Description of sample data, applications of probability theory, sampling, estimation, tests of hypotheses.