

371. Introduction to the History of Science
Fall, Winter, Spring. 4(4-0) Juniors
or approval of college.

Historical study of the origins, growth and influence of scientific ideas, techniques and knowledge in relation to the main currents of culture.

372. Introduction to Symbolic Logic
Fall, Winter. 4(4-0) Juniors or approval of college.

Rigorous introduction to the concepts, laws and metatheory of sentential and quantificational logic. Some attention shall be paid to philosophical implications and to practical applications of the systems treated.

373. Introduction to the Philosophy of Science
Winter, Spring. 4(4-0) 372.

Philosophical analysis of scientific knowledge. Topics treated shall include concept formation and theory construction, methods of discovery and justification, logic of testing and confirmation, logic of explanation.

MANAGEMENT

MGT

College of Business

101. Introduction to Business
Fall, Winter, Spring. 4(4-0) University College students or approval of department.

Functions performed by business and the role of administration in our economy as a whole and in the operation of a specific business. Four major objectives: to aid students in choosing a vocation, to help Business majors select a field of concentration, to show the place of specialized techniques presented in more advanced business courses, and to give some familiarity with common business practices and terminology.

300. Production Management
Fall, Winter. 4(4-0) CPS 110, STT 121, AFA 202.

Production management in manufacturing, service and distributive firms. Operations processes, analyses and decisions. Coordination of inventories, operations and quality. Work layout, methods and standards.

302. Organization and Administration
Fall, Winter, Spring, Summer. 4(4-0) Junior Business majors; EC 201 and AFA 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.

305. Materials and Purchasing Management
Fall, Winter. 4(4-0) 302 or MTA 300 or Juniors; non-majors.

Planning, organizing and controlling materials; acquisition in industrial enterprises, institutions, and government. Management of purchasing, materials movement, storage and control. Value analysis, purchasing research, vendor relations and purchase forecasting.

306. Analysis of Processes and Systems
Fall, Winter, Spring. 4(4-0) CPS 110, STT 316.

Analysis of some fundamental systems and process 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
(303.) Fall, Winter, Spring, Summer. 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.

400H. Honors Work
Winter. 1 to 15 credits. Approval of department.

Investigates models, concepts and research findings of particular significance to effective decision-making in administration, organization and management.

401. Planning and Control of Production
Winter. 4(4-0) 300, 306; Seniors.

Production planning. Inventory control, machine loading, scheduling, expediting and critical path scheduling.

402. Product Reliability and Quality Control
Spring. 4(4-0) MTA 316.

Methods of achieving satisfactory standards of product quality and reliability at minimum cost.

405. Manufacturing Policy
Spring. 4(4-0) 300, 302; Seniors.

Policy formulation in production management. Coordinating staff functions and integrating production with other activities in the firm.

409. Business Policy
Fall, Winter, Spring, Summer. 4(4-0) Seniors in business administration and 302; AFA 391; MTA 300.

Problems, methods, and analytical frameworks for building and maintaining consistent and effective policy frameworks in the business enterprise. Written and oral analyses are made of comprehensive cases cutting across the major functions within business organizations. Team and individual reports are required.

411. Personnel Selection and Development
Winter. 4(4-0) 310; MTA 317.

Manpower input problems of business organizations — manpower planning, recruitment, selection, placement, training and development at all levels. Focus is on policy issues, research findings, and advanced techniques.

412. Compensation and Motivation
Spring. 4(4-0) 310.

Manpower motivation and compensation problems in 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. Safety, Health and Employee Benefits
(403.) Fall, Winter. 4(4-0) Juniors: 302 for majors.

Manpower maintenance problems in business organizations — organization and operation of safety and health programs, practices and trends in employee benefit plans. Focus is on issues and relevant research and techniques.

414. Human Relations in Business
(404.) Fall, Winter, Summer. 4(4-0) 302; approval of department.

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
(307.) Winter, Spring. 4(4-0) 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 under the contract, dimensions of cooperation and conflict.

468. Field Studies
Fall, Winter, Spring, Summer. Variable credit. May re-enroll 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, production management, purchasing, real estate, retailing, transportation and banking.

499. Senior Seminar
Spring. 4(4-0) Senior majors; approval of department.

Directed reading and student research in contemporary management problems.

801. Work Design and Administration
Fall. 4(4-0)

Design, improvement, and problems in the administration of work systems with emphasis on repetitive operations. Criteria for evaluating systems. Tools for developing, analyzing, and improving procedures. Cases and projects.

802. Materials Management
Spring. 4(4-0)

Advanced study of the policies, practices and problems relating to the procurement and control of materials in business organizations.

803. Seminar in Industrial Relations
For course description, see Interdisciplinary Courses.

806. Administration: Theory and Action II
Fall, Winter, Spring, Summer. 4(4-0) MTA 805.

Organization structure and executive behavior and their interrelationships are examined. Focus is on internal structure and managerial processes through the examination of research literature on organization theory, and executive behavior. Organization systems and subsystems, group and individual interaction, administrative models and executive values.

- 807. Administrative Policy**
Fall, Winter, Spring, Summer. 4(4-0)
806; EC 860; AFA 840; MTA 802.

Application of administrative theory and observational and analytic techniques to actual business situations through the use of cases. Analysis, decisions, formulation of plans for action. Cases viewed from standpoint of general management.

- 808. Seminar in Management, Organization, and Administration**
Fall, Winter, Spring, Summer. 4(4-0)
May re-enroll 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, cases 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.

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.

- 810. Personnel Management**
Fall, Winter, Summer. 4(4-0) 806.

Principles and methods of recruiting, selecting, training, evaluating, motivating, and rewarding personnel. Fringe benefits, retirement, absenteeism, and other employee benefit problems.

- 811. Advanced Problems in Personnel Management**
Spring, Summer. 4(4-0) May re-enroll for a maximum of 8 credits. 810.

Advanced studies in selected administrative and technical policies and practices in employee relations, with individual and group project work and research.

- 812. Manpower Measurement and Management**
(804.) Spring of even-numbered years. 4(4-0) 801 or approval of department.

Emphasis on utilization of manpower as a factor of production. Manpower is viewed as a productive resource to be measured, programmed and controlled in routine and non-routine work.

- 815. Linear Programming in Management**
Fall, Spring. 4(4-0) MTA 802.

Theory, formulation and application of the general linear, transportation and integer programming models.

- 816. Simulation of Production Systems**
Winter, Summer. 4(4-0) MTA 802.

Use of digital computer for management decisions. Development of skills in computer programming and use of simulation models to study behavior and design of systems.

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

Theory and research of developmental stages of executive careers. Special emphasis on: impact of organization on executive potentiality; forces influencing development of executive skills and abilities; studies of antecedents of executive role performance; role of training programs.

- 820. Quality and Reliability**
Fall of odd-numbered years. 4(4-0) MTA 802.

Specification of reliability and quality criteria; methods of evaluation and control; particular emphasis on cost minimization models.

- 821. Production Control**
Winter. 4(4-0) 801.

Planning and control of production operations. Inventory management, production and work force smoothing, job shop scheduling and project scheduling.

- 822. Manufacturing Strategy and Policy**
Spring. 4(4-0) Approval of department.

Major production operations and policy decisions in the total business strategy of the firm. Viewpoint of top administrator responsible for production.

- 860. Corporation Management and Society**
Spring. 4(4-0) 806.

Analysis of the emerging character of administrative structure of the large corporation. Administrative autocracy, corporate government, stockholder and director relationships. Examination of ethics of decision-making, strategic values and priorities basic to resource allocation decisions.

- 890. Special Problems**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

- 906. Behavioral Research: Organization**
Winter. 3 credits. MTA 905.

Concepts and methods of behavioral science research that are applicable to the study of organization as a strategic device in the development of tangible and intangible values and in the control of elements of business enterprise.

- 907. Behavioral Research: Business Executive**
Spring. 3 credits. 906.

Concepts and methods of behavioral science research in the study of the agents of enterprise decision-making and action. Attention is focused on the way in which decisions are made in business organizations and the multiple influences operating on the executive. Modes of adjustment to the decision environment are examined.

- 908. Seminar in Organization Theory**
Winter. 4(4-0) 806; doctoral candidates; master's candidates with approval of department.

Directed reading and research on issues in contemporary organization theory.

- 910. Topics in Operations Research**
Spring. 4(4-0) 815.

Advanced mathematical and computational theory and methods in operations research. Emphasis on the formulation of problems and interpretation of results.

- 911. Seminar in Personnel Research**
Spring. 4(4-0) 810; doctoral candidates; master's candidates with approval of department.

Directed reading and research on issues in contemporary personnel administration theory and practice.

- 999. Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

MARKETING AND TRANSPORTATION ADMINISTRATION MTA

College of Business

- 300. Consumption and Marketing Organization**
Fall, Winter, Spring, Summer. 4(2-2) EC 200.

Adjustment of the firm to its market environment with emphasis on competitive strategy. Assessment of market forces and opportunities with reference to social, political, economic and technological forces affecting distribution methods and institutions. Structural organization of marketing system-functions involved in effective market performance. Small group problems involving analysis of costs and efficiency.

- 301. Management of Marketing Effort**
Fall, Winter, Spring. 4(2-2) 300.

Market management in relation to total enterprise. Problems, analytical tools and approaches to decisions concerning allocation of funds to various means of market cultivation. Development of promotional strategy, price policy and management of field selling effort. Particular attention to role of marketing research, forecasting, budgets, organization arrangements and control techniques. Use of cases in small groups.

- 311. Principles of Selling**
Fall, Winter, Spring, Summer. 3(2-1)

Nature of personal selling and its requirements. Functional relationships of selling in marketing mix. Buyer motivations and selling theories, with application to various buyer-seller situations.

- 313. Sales Management**
Fall, Winter, Spring, Summer. 4(4-0) 300.

Techniques and policies in the administration of the personal sales organization with respect to the marketing strategies involved. Emphasis on the sales management problems of manufacturers.

- 316. Fundamentals of Statistical Inference**
Fall, Winter, Spring, Summer. 4(3-2) STT 121.

Primarily for students in the College of Business. Interdepartmental with and administered by the Statistics and Probability Department.

Description of sample data, applications of probability theory, sampling, estimation, tests of hypotheses.

- 317. Quantitative Business Research Methods**
Fall, Winter, Spring, Summer. 4(3-2) STT 316.

Interdepartmental with the Statistics and Probability Department.

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