#### 290F. Directed Study—Computing

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to students in Lyman Briggs School.

Directed studies in computing.

# 330. Topics in Science and Technology Studies

Fall, Spring. 4(4-0) P: (LBS 133) and completion of Tier I writing requirement. R: Open only to students in Lyman Briggs School majors.

Topics in history, sociology, and philosophy of science and technology. Science policy. SA: LBS 239

### 331. Literature and Science

Spring. 4(4-0) P: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in Lyman Briggs School.

Representations of science and technology in texts drawn from science fiction, Gothic, and utopian literature or mainstream writings.

### 332. Technology and Culture

Fall. 4(4-0) Interdepartmental with American Studies. P: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the American Studies major in Lyman Briggs School. History of technology with special emphasis on the interaction of technical innovation and other elements of culture.

### 333. Topics in History of Science

Fall, Spring. 4(4-0) A student may earn a maximum of 8 credits in all enrollments for this course. P: Completion of Tier I writing requirement. R: Open only to juniors or seniors in Lyman Briggs School.

Various themes or periods in physical/biological science. May emphasize patterns of theory development, changes in explanatory aims and standards or interaction of social and cultural factors with scientific ideas, practices, instrumentation or experimentalism.

# 334. Science, Technology and Public Policy

Spring. 4(4-0) P. Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in Lyman Briggs School.

Science and technology in public policy formation considered from the perspectives of the history, philosophy, and sociology of science and technology.

# 335. The Natural Environment: Perceptions and Practices

Spring. 4(4-0) Interdepartmental with American Studies. P: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in the American Studies major or in Lyman Briggs School.

American attitudes toward the natural environment and related public and private institutions.

# **336. Gender, Science, Technology (W)**Fall. 4(4-0) P: (LBS 133) RB: (LBS 144 and LBS 145)

Topics such as: impacts of gender on the development of sciences and technologies; feminist critiques of science and technology; barriers to women's participation in science and technology; scientific constructions of sex, gender, and sexuality.

### 347. Advances in Applied Biology

Fall. 3(2-3) P: (LBS 145) or (BS 111 or concurrently and BS 111L) or (LBS 149H or concurrently and LBS 159H) and completion of Tier I writing requirement. R: Open only to juniors or seniors in Lyman Briggs School.

Advances in cell and molecular biology and application: plant and animal breeding, environment, and therapeutics.

### 355. Philosophy of Technology

Spring. 4(4-0) Interdepartmental with Philosophy. P: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in Lyman Briggs School or the Department of Philosophy.

Examination of the desirability of technology, its social forms, and its alternatives. Conventional productivist, ecological progressive, and radical humanist outlooks.

#### 425. American and European Health Care since 1800

Spring. 4(4-0) Interdepartmental with History. Administered by History. P: Completion of Tier I writing requirement. R: Not open to freshmen. Social and cultural transformation in health care delivery since 1800, primarily in North America and western Europe. Therapeutic revolutions. Medical education and professionalization. Social and alternative medicine. Managed care.

# 470. Clarion Science Fiction and Fantasy Writers' Workshop

Summer. 4 credits. R: Approval of school. Application required..

A six week, intensive workshop for science fiction writers early in their careers. Taught by professional writers and directed by MSU faculty. Competitive admission based on review of applicant manuscripts. Enrollment limited to 15-18.

### 483. Literature and Medicine

Spring. 3(3-0) Interdepartmental with English; Psychology. Administered by English. P: Completion of Tier I writing requirement. R: Not open to freshmen or sophomores.

Human dimensions of medicine as seen in literature. Health, illness, mortality. Medical dilemmas. Physical and psychological self. Psychological theories used in interpreting literature.

#### 490A. Advanced Directed Study— Multidisciplinary

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to juniors or seniors in Lyman Briggs School.

Directed advanced studies involving at least two LBS curricular areas: biology, chemistry, physics, mathematics, science and technology studies, computing.

#### 490B. Advanced Directed Study— Biology

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to juniors or seniors in Lyman Briggs School.

Directed advanced studies in biology.

#### 490C. Advanced Directed Study— Chemistry or Physics

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to juniors or seniors in Lyman Briggs School.

Directed advanced studies in chemistry or physics.

#### 490E. Advanced Directed Study— Science and Technology Studies

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to juniors or seniors in Lyman Briggs School.

Directed advanced studies in science and technology studies.

#### 492. Senior Seminar

Fall, Spring. 4(4-0) P: (LBS 239 or LBS 330 or LBS 331 or LBS 332 or LBS 333 or LBS 334 or LBS 335 or LBS 355 or LBS 490E or HST 425 or ENG 483) and completion of Tier I writing requirement. R: Open only to juniors or seniors in Lyman Briggs School.

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: Open only to juniors or seniors in Lyman Briggs School.

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

Fall, Spring, Summer. 3(3-0) R: Open only to juniors or 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.

# **310.** Human Resource Management (W) Fall, Spring, Summer. 3(3-0) P: (MGT 302 or

concurrently) and completion of Tier I writing requirement. R: Open only to juniors or seniors. 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.

# Descriptions—Management of Courses

#### 409. Business Policy and Strategic Management

Fall, Spring, Summer. 3(3-0) 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) R: Open only to juniors or seniors.

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 or 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 or 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 or seniors.

Problems experienced in work organizations by racial, ethnic, physically handicapped, and other minorities. Awareness training for managers. Ethical issues.

#### 491. Special Topics in Human Resource Management

Spring of even years. 3(3-0) P: (MGT 310 or concurrently) R: Open only to juniors or seniors.

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 juniors or seniors. Approval of department; application required.

Program of observation, study, and work in selected business firms to supplement classroom study. Supervised independent research on special topics in Management.

### 804. International Management

Spring of even years. 3(3-0) R: Open only to students in the Graduate School of Management or with departmental permission.

Management challenges and roles in a multinational business. Strategic planning in global firms, managing people in international organizations, leadership, and the future of international management.

### 805. Special Topics in Management

Spring of even years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to students in the Graduate School of Management or approval of department. Advanced topics in organizational behavior, organizational theory and design, human resource management, and strategic management. SA: MGT 815

# 806. Management and Organizational Behavior

Spring. 3(3-0) R: Open only to master's students in the Business Management of Manufacturing major or approval of department.

Micro and macro models of organizational behavior applied to the management of people, group processes, and organization design. Motivation, diversity, leadership, group performance, organization structure and culture.

#### 808. Business as an Institution

Fall. 2(2-0) 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.

#### 810. Human Resource Management

Fall. 3(3-0) P: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.

Design, administration, and evaluation of the human resource function. Needs assessment, program implementation and evaluation, information management and decision support, international human resource management.

#### 811. Human Resource Staffing

Spring. 3(3-0) P: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.

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.

### 813. Human Resource Training

Spring. 3(3-0) P: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.

Planning, implementing and evaluating training programs. Career stages and career planning. Matching individual and organizational development needs.

# 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.

## 820. Managing the Internetworked Firm

Spring, Summer. 2(2-0) R: Open only to MBA students.

Managing the domestic and international uses of the Internet. History, technology, ownership, and regulation of the Internet. Modes of communication via the Internet. Legal and technical suitability of the Internet. Privacy, security, and access issues.

### 821. Managing Internet Commerce

Spring. 3(3-0) RB: Familiarity with a web browser. R: Open only to students in the Graduate School of Management or with departmental permission. Not open to students with credit in MGT 820.

Managing Internet access and use. Evolution, infrastructure, technology and governance of the Internet. Commercial applications of the Internet. New business opportunities. Security of transactions. Legal issues.

#### 822. Human Resource Compensation

Fall. 3(3-0) P: (MBA 824) R: Open only to graduate students in the College of Business or approval of department.

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.

# 829. Managing Structure and Culture in Organizations

Fall. 3(3-0) R: Open only to students in the Graduate School of Management or with departmental permission.

Analyzing contingencies and factors that shape organizational structure and culture. Assessing strengths and weaknesses of alternative structures and cultures. Promoting effectiveness through structural modification and cultural change.

### 831. Managing Power, Empowerment, and Involvement

Fall. 3(3-0) P: (MBA 824) R: Open only to students in the Graduate School of Management or with departmental permission.

Assessment and evaluation of power and empowerment in organizations. High involvement management and organizational effectiveness. Ethical issues in the use of power and empowerment as managerial tools.

### 832. Managing Conflict and Change Spring. 3(3-0) P: (MBA 824) R: Open only to stu-

Spring. 3(3-0) P: (MBA 824) R: Open only to students in the Graduate School of Management or with departmental permission.

Developmental processes, stages, and types of conflict. Approaches to conflict management and resolution. Analyses of relationships between conflict and change. Management of change in organizations.

# 839. Leadership: An Executive Challenge

Fall. 2(2-0) R: Open only to students in the Advanced Management Program.

Motivating others toward a shared vision. Classic and popular theories of leadership. Fundamental practices of exemplary leadership. Examination of personal leadership styles and development of a personal plan for leadership development.

### 840. Leadership: A Personal Challenge

Fall, Spring. 3(3-0) R: Open only to students in the Graduate School of Management or with departmental permission.

Review and evaluation of classic and popular theories of leadership. Guided self-assessment of current leadership style and strengths. Further development of leadership abilities through case analyses and class exercises.

#### 846. Organizational Behavior and Human Resource Management

Spring. 3(3-0) R: Open only to students in the Advanced Management Program.

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

#### Entrepreneurship: New Business Planning and Initiation

Fall. 3(3-0) R: Open only to students in the Graduate School of Management or with departmental permission.

Assessment of the viability of a business idea. Development of a market analysis, project strategy, and plan to initiate the business. Identification and analysis of factors critical to new business financing and success.

#### 853. Entrepreneurship: Managing Business Growth and Development

Spring. 3(3-0) R: Open only to students in the Graduate School of Management or with depart $mental\ permission.$ 

Evolution of a firm from an entrepreneurial business to a mature organization. Topics include entrepreneurial leadership, family ownership, management succession, and managing growth.

### **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.

#### 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.

#### Seminar in Organizational 907. Behavior

Fall of even 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.

#### Seminar in Organizational Theory Fall of odd 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 years. 3(3-0) R: Open only to Ph.D. students

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

# Seminar in Strategic Management

Fall of even 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.

### **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 SUPPLY CHAIN MANAGEMENT

**Department of Marketing** and Supply Chain Management

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

#### 101. Introduction to Business

Fall, Spring. 3(3-0) R: Not open to juniors or seniors in the College of Business.

Role of business in society. Activities and functions of business organizations. Major issues and challenges facing business: globalization, social responsibility, diversity. Contemporary management practices.

SA: ML 101

#### 300. Managerial Marketing

Fall, Spring, Summer. 3(3-0) R: Open only to juniors or 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.

SA: ML 300, MTA 300

#### Consumer and Organizational 302. **Buver Behavior**

Fall, Spring, Summer. 3(3-0) P: (MSC 300) R: Open only to juniors or seniors.

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

SA: ML 302, MTA 302

#### 303. Introduction to Supply Chain Management

Fall, Spring, Summer. 3(3-0) R: Open only to iuniors or seniors

Objectives, processes, and functions of supply chain management activities including procurement, manufacturing, and logistics. The role of supply chain processes in creating competitive advantage with respect to quality, flexibilty, leadtime, and cost.

SA: MGT 303, ML 303, MTA 303

#### **Supply Chain Management**

Fall, Spring, Summer. 4(4-0) P: (MSC 303) R: Open only to juniors or seniors.

Supply chain operating practices and principles. Strategies for customer service, quality, procurement, manufacturing, logistics, and integrated supply chain management.

#### 310. **International and Comparative Dimensions of Business**

Fall, Spring, Summer. 3(3-0) R: Open only to iuniors or 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.

SA: ML 310, MTA 310

#### Personal Selling and Buying 313. Processes

Fall, Spring. 3(3-0)

The nature of channel relationships. Buying behavior and sales processes. Applications to differing industries and kinds of channel relationships.

SA: ML 313

MSC

#### 317. Quantitative Business Research

Fall, Spring, Summer. 3(3-1) Interdepartmental with Statistics and Probability. P: (STT 315) R: Open only to juniors or 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.

SA: ML 317, MTA 317

### Marketing Research

Fall, Spring. 3(3-0) P: (MSC 300 and MSC 317 or concurrently) R: Open only to juniors or seniors. Research methods designed to obtain information for marketing decisions. Research design, data collection, and interpretation of information to provide a customer orientation.

SA: ML 319, MTA 319

#### Food Marketing Management 335.

Spring. 3(3-0) Interdepartmental with Food Systems Economics and Management. P: (FSM 200 or MSC 300) R: Open only to juniors or seniors. Management decision-making in food industry organizations (processors, wholesalers, retailers). Marketing and sales in response to customer and consumer needs. Distribution and merchandising systems in domestic and international contexts. SA: ML 335, MTA 335