This is the Course Descriptions section of the 1996-1999 University of Minnesota Carlson School of Management Bulletin.
**Symbols**—The following symbols are used throughout the course descriptions.

§ ....... Credit will not be granted if credit has been received for the course listed after this symbol.

¶ ....... Concurrent registration is required (or allowed) in the course listed after this symbol.

# ....... Approval of the instructor is required for registration.

∆ ....... Approval of the department offering the course is required for registration.

☑ ...... Approval of the college offering the course is required for registration.

, ........ The comma, used in prerequisite listings, means “and.”

UC .... University College (formerly CEE)

A prerequisite course listed by number only (e.g., prereq 5246) is in the same department as the course being described.

*Note:* The prerequisite for all 3xxx and 5xxx CSOM courses is 90 quarter credits and a 2.80 overall GPA or admission to a CSOM upper division major program.

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**Accounting (Acct)**

*645 Management & Economics*

Accounting has been termed “the language of business.” It is an essential tool for planning and controlling both profit-seeking and nonprofit organizations. The growing complexity and internationalization of business and the need for more efficient and effective approaches to solving business problems increases the demand for professional accountants. Effective operations planning demands that relevant data be collected, analyzed, and reported systematically and coherently. Management needs assistance directing activities to meet objectives and adjust operations to fit new conditions.

Providing information for planning and control is the function of the controller, the chief accounting officer of the firm.

Accountant-prepared data such as financial statements and schedules and related notes, are used extensively by investors, financial analysts, and credit grantors as input for their investment decisions and recommendations. Credibility of the accountant-prepared financial representations is enhanced by the auditors’ attestation as to their fairness.

Some B.S.B.-accounting students go on to M.B.A. programs, law school, or doctoral programs. Employment opportunities for accountants extend to public accounting, industry, nonprofit organizations, and government units.

Certified public accountant (C.P.A.) is the professional designation for those who analyze operations and financial position to provide an independent opinion on the financial statements of an organization. Certified management accountant (C.M.A.) is the professional designation for those accountants who serve as internal financial advisers to management. The certified internal auditor (C.I.A.) serves management and corporate boards of directors by analyzing and reporting on internal controls and the implementation and effects of management policies. The C.P.A. designation is issued by the state of Minnesota, the C.M.A. by the Institute of Management Accounting, and the C.I.A. by the Institute of Internal Auditors. Each requires practical experience and passing scores on extensive qualifying examinations. Completion of the accounting program serves as the basic preparation for these examinations and enables graduates to take the examinations in the area of their career interest immediately after graduation.

Courses offered develop students’ analytical abilities as well as present the usefulness and limitations of accounting procedures and reports. Students interested in becoming a professional accountant should refer to the B.S.B.-accounting program requirements described in this bulletin beginning on page 16.

**Acct 3101 Pre-‘Test**—If you take your lower division financial accounting course(s)—equivalent to Acct 1050—at an institution other than the University of Minnesota or you earned
less than a B- in Acct 1050 and plan to take Acct 3101, you must pass a pre-test to register for Acct 3101. Contact the Undergraduate Studies Office in 290 Hubert H. Humphrey Center for details.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

**Acct 1050. Introduction to Financial Reporting.** (5 cr; prereq 40 cr; A-F only)

**Acct 3001. Introduction to Management Accounting.** (4 cr; prereq 1050; A-F only)
Management accounting as the main information collection and analysis technology in an organization. Analysis of cost-volume-profit relationships, budgeting and analysis of variances from budgeted performance, issues relating to decentralized organizational design, activity-based costing.

**Acct 3101. Intermediate Financial Reporting.** (4 cr; prereq minimum grade of B- in 1050; A-F only)
Relationships between economic events and their representation in financial statements aimed at external users. Income determination, revenue recognition, asset valuation, capitalization of corporations, cash flow statements.

**Acct 3199. Internship in Public Accounting.** (3 cr; prereq 5125, #: S-N only)
Full-time work for a public accounting firm plus a written report on the work experience.

**Acct 3201. Intermediate Management Accounting.** (4 cr; prereq 3001; A-F only)
Incentives and management control in the presence of uncertainty and asymmetric information. Incentive properties of accounting measurements in large decentralized organizations. Moral hazard, adverse selection, informational rents. Accounting control mechanisms such as variance analysis, budgeting, standard setting, and transfer pricing developed for informationally complicated environments. Recent developments in accounting and economics literature.

**Acct 3299. Internship in Management Accounting.** (3 cr; prereq 3201, #: S-N only)
Full-time work in general accounting, cost accounting, or internal auditing in an industrial or governmental organization plus a written report analyzing the work experience.

**Acct 5101. Corporate Financial Reporting.** (4 cr; prereq 1050 or MBA 8030, MBA student; A-F only; should not be taken by students who have completed 3101)
Preparing and interpreting corporate financial reports. Income determinations, revenue recognition, income tax allocation, inventories, fixed assets, long-term debt, leases.

**Acct 5102. Advanced Financial Reporting I.** (4 cr; prereq 3101 or 5101; A-F only)
Valuation problems in financial reporting with emphasis on liabilities. Leases, deferred taxes, pensions, other post-retirement benefits, debt restructuring, earnings per share.

**Acct 5125. Auditing Principles and Procedures.** (4 cr; prereq 3101 or 5101; A-F only)
Auditing financial information systems. Independent audits and internal auditing. Ethics. Legal responsibilities.

**Acct 5126. Internal Auditing.** (4 cr; prereq 5102, 3201 or 5201; A-F only)
Financial and operational auditing. Standards. Managing the function.

**Acct 5135. Income Tax Accounting.** (4 cr; prereq 1050; A-F only)
Principles of federal income taxation of various taxpaying entities.

**Acct 5160. Financial Statement Analysis.** (4 cr; prereq 1050 or MBA 8030; A-F only)
Interpreting and analyzing financial statements and schedules for investors and other users.

**Acct 5180. Advanced Financial Reporting II.** (4 cr; prereq 5102; A-F only)
Partnerships, business combinations, consolidated financial statements, foreign currency transactions and translations, and reporting issues in governmental accounting.

**Acct 5201. Advanced Management Accounting.** (4 cr; prereq 3201 or MBA 8035; A-F only)
Design of internal control systems in decentralized organizations, focusing on strategic interactions among the internal control system, market share, and pricing strategies. Performance evaluation, transfer pricing, cost allocations.

**Acct 5230. Corporate Taxation.** (4 cr; prereq 5135, MBT program approval; A-F only)
Tax consequences of forming, operating, and liquidating a business corporation.

**Acct 5236. Taxation II.** (4 cr; prereq 5135; A-F only)
Corporate tax issues, partnership tax issues, estate and gift taxes, tax research.
Acct 5300. Current Topics in Managerial Accounting. (4 cr; [may be repeated for cr]; prereq 3201 or 5201; A-F only)
Selected topic(s) in managerial accounting. Topics vary quarterly.

Acct 5310. International Accounting. (4 cr; prereq 3001)
Macroeconomic concepts of international economics. Accounting policies and approaches among nations.

Acct 5340. Partnership Taxation. (4 cr; prereq 5135, MBT program approval; A-F only)
Tax consequences of forming, operating, and dissolving a partnership.

Acct 5390. Current Topics in Taxation. (Cr ar; prereq 5135 or equiv, MBT program approval; A-F only)
Selected topics in taxation. Topics vary quarterly.

Business Administration (BA)

290 Hubert H. Humphrey Center

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

BA 1001. Information Technology Skills. (2 cr; prereq CSOM student; S-N only)
Self-paced course to assess students’ computing skills and identify resources to help them develop necessary skills in word processing, spreadsheets, presentation software, e-mail, LUMINA, remote access, and the World Wide Web.

BA 1350. Introduction to Business and Business Careers. (4 cr; prereq 45 cr, CSOM student; A-F only)
A contemporary introduction to issues related to the purpose of business; business career opportunities; basic skills for a successful business career.

BA 1550. Business Statistics: Data Sources, Presentation, and Analysis. (4 cr; prereq 30 cr, college algebra; A-F only)
Understanding and applying exploratory data analysis, basic inferential procedures, statistical sampling and design, and regression and time series analysis. Improving statistical thinking capabilities; how these abilities lead to better decision making.

BA 3000. Orientation for Managers. (2 cr; required of students planning to use the CSOM Career Services Center; S-N only)
Integrated approach to career exploration, values clarification, and self-development for students seeking management careers. Internal and external factors that shape personal life and professional careers.

BA 3040. International Environment of Business. (4 cr; prereq Mgmt 3001; A-F only)
Critical issues and concepts influencing the conduct of business in a global society. Should be completed before additional CSOM international business courses.

BA 3998. Independent Study. (Cr ar [may be repeated for cr]; prereq consent of faculty member willing to supervise study, Q)
Student-initiated project and/or independent course of study.

Business, Government, and Society (BGS)

835 Management & Economics

The business, government, and society area examines the complex relationships between business and its economic, social, political-legal, and technological environments. With close intellectual ties with strategy formulation and implementation, the area focuses on interactions from the perspectives of both the practicing manager and public policy. It also emphasizes international aspects of business management.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

BGS 3002. Business and Society. (4 cr; UC only)
Basic economic and social goals and various attempts to meet them, with emphasis on American society. Business as an institution; its relationships to other institutions and society. Ethical and practical conflicts in the role of firm and manager examined in the context of the public policy process. Current social issues and their impact on business.

BGS 3004. International Business. (4 cr)
World business with emphasis on the global economy, international concepts, global business structures, comparative cultures and environments, global business strategies, multinational corporations and technology, and personnel and operations in host nations. Resource questions in their global contexts: quantities, demands, distribution.
COURSE DESCRIPTIONS

BGS 3014. Topics in International Business, Government, and Society. (4 cr)
Selected topics and problems of current interest considered in depth. Class discussions and course projects. Topics vary quarterly depending on instructor.

BGS 3019. Topics in Business, Government, and Society. (4 cr)
Selected topics and problems of current interest considered in depth. Class discussions and course projects. Topics vary quarterly depending on instructor.

Business Law (BLaw)
645 Management & Economics

Courses in business law provide students with an understanding of legal processes and the principles of legal reasoning and decision-making techniques. They also aid students in recognizing legal pitfalls involved in the specific functions of business, such as finance, marketing, and personnel management. The American legal system is scrutinized within its historical, philosophical, and societal contexts via lectures, readings, analysis of judicial decisions, and class discussions.

Business law is not offered as a separate field of specialization in CSOM. Rather, the courses in this area provide a sequence of elective offerings for management students.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

BLaw 3058. Introduction to Law, the Law of Contracts and Sales Contracts. (4 cr, §8158; prereq Econ 1101 or equiv)
Origin of law, its place in and effect on society; history and development of law; system of courts; legal procedure. Law of contracts as the basic law affecting business transactions. Laws affecting the sale of goods and contracts.

BLaw 3078. Agency, Partnerships, Corporations, and Commercial Paper. (4 cr, §8278; prereq 3058)
Law affecting relationship between principal and agent, master and servant, employer and employee. Partnership and corporate forms of business entities, including methods of creating the relationships. Law developed to regulate and control these organizations and their members and contracts referred to as commercial papers (negotiable instruments), with emphasis on effect of the Uniform Commercial Code.

BLaw 3088. Law of Personal Property, Real Property, Wills, and Estates. (4 cr, §8288; prereq 3058)
Basic concepts of personal property, including rights of possessors, bailees, and finders and holders of security interests. Real property law. Transfers of ownership, control of and encumbering such interests. The law of wills and estates in passing rights to property in event of death.

Finance (BFin)
735 Management & Economics

Principles of finance are critical to making the right financial decisions and all finance courses acquaint students with these principles.

Finance majors may have an emphasis in one of two areas. For students who want positions in treasury or controller offices, Track 1 is recommended: BFin 3000 (core), BFin 3100, BFin 3200, BFin 3300, BFin 3400, BFin 3500, and any two from Acct 3101, Acct 3201, Acct 5135, Acct 5160, and BFin 3504.

For students who want money management positions, Track 2 is recommended: Acct 5160, BFin 3000 (core), BFin 3100, BFin 3200, BFin 3300, and any three from BFin 3400, BFin 3501, BFin 3502, BFin 3503, and BFin 3504.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

BFin 3000. Finance Fundamentals. (4 cr, §MBA 8040; prereq Acct 1050)
Survey of financial markets and comprehensive introduction to finance, including valuation theory and management decision making with respect to sources and uses of funds.

BFin 3100. Financial Management. (4 cr; prereq 3000)
Continuation of BFin 3000. Corporate financing and dividend policies, cost of capital estimation, leasing, financial planning. Viewpoint of a corporation’s chief financial officer used. Lectures, balanced by case discussions and readings, prepare students to apply finance principles to actual business situations.

BFin 3200. Financial Markets and Interest Rates. (4 cr; prereq 3000 or #)
BFin 3300. Securities Analysis and Portfolio Management. (4 cr; $3300; prereq 3000)
Decision procedures in a variety of financial markets. Banking system and other financial intermediaries, risk-return relationships of various marketable securities, analytical techniques of portfolio management in the context of the nation’s changing financial markets.

BFin 3400. International Financial Management. (4 cr; prereq 3000 or #; BFin 3100 recommended)
Implications of modern finance theory for multinational corporations. Alternative exchange rate regimes. Risks to which each regime subjects any multinational corporation and how different risks influence basic financial decisions.

BFin 3500. Advanced Corporate Finance. (4 cr; prereq 3000, 3100 or #)
Use of corporate finance theory to decide courses of action for a variety of case companies, each with its own problem and setting. Investment and the cost of capital. Capital structure. Dividend policy. Financing decisions. Corporate restructuring.

BFin 3501. Futures: Markets and Uses. (4 cr; prereq 3300 or #)

BFin 3502. Options: Markets and Uses. (4 cr; prereq 3300 or #)

BFin 3504. Investment Banking. (4 cr; prereq 3000, 3100 or #)

BFin 3601. Financial Management of Depository Institutions. (4 cr; prereq 3000 or #)
Comprehensive introduction to principles of bank financial management. Bank risk analysis, lending, investments, liquidity, asset-liability management. Lectures, case discussions.

Foreign Studies (FoSt)
290 Hubert H. Humphrey Center

Through foreign studies management courses, students can receive residence credit for a number of study abroad programs sponsored by the Council on International Educational Exchange (CIEE), the Institute of European Studies (IES), and the Denmark International Study Program. Inquiries concerning these programs should be directed to the study abroad adviser in the Undergraduate Studies Office, 290 Hubert H. Humphrey Center (612/624-3313).

Industrial Relations (IR)
537 Management & Economics

Industrial relations is an interdisciplinary field that uses the specialized knowledge and methods of various disciplines for an integrated approach to problems of employment relationships, employment and unemployment, wage levels, collective bargaining, and the recruitment and maintenance of employee work teams in industry. These problems are diverse and many disciplines contribute to their understanding and solution.

Professional training in industrial relations is offered in graduate programs leading to M.A. and Ph.D. degrees in industrial relations.

No undergraduate degree major or specialization is offered. However, various industrial relations courses may be taken as electives and included in programs for undergraduate degrees in business administration, engineering, and the liberal arts.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

IR 3002. Personnel and Industrial Relations. (4 cr, $8002; prereq Econ 1101, Econ 1102, Psy 1001)

IR 3007. Collective Bargaining and Labor Relations. (4 cr)
Analysis of roles of unions and collective bargaining in contemporary American society. Negotiations and related policies and practices of employers, employees, unions, legislative bodies, and the public in dealing with questions of worker representation in the private and public sectors. Impact and transference of collective bargaining principles from the union sector to the non-union sector. Lecture presentations, discussion, case studies, bargaining simulations.
IR 3010. The Individual and the Organization. (4 cr)
The human side of organizations, focusing on workers and how they enter and succeed in the work setting. Theories and techniques of employment interviewing; training needs analysis; career planning; management development; turnover, outplacement, and retirement; understanding leadership roles and styles; work motivation; organization culture and job design; planning for change. Lecture presentations, discussion, case studies, simulation exercises.

IR 3032. Governing the Workplace: Comparative Perspectives. (4 cr)
Workplace governance: Who should be allowed to make the rules governing the employment relationship. Alternative systems (e.g., business, government, employees, unions, market forces, mixed models), U.S. and international experiences. Models for the future.

IR 5000. Topics in Personnel and Industrial Relations. (Cr ar [may be repeated for cr])
Selected topics of current relevance to human resource management.

IR 5002. Systems of Conflict and Dispute Resolution. (4 cr)
Theoretical and practical treatment of resolving conflict in interpersonal, work-related, community, business, and international settings. Lecture presentations, discussion, observation of actual dispute resolution sessions, and lab exercises, with participation in various dispute resolution simulations applied to real-world conflicts.

IR 5006. Labor Policy. (3 cr, §PA 5430)
Analysis of public policies regarding employment, unions, and labor markets. Public programs affecting wages, unemployment, training, worker mobility, security, and quality of work life. Policy implications of changing nature of work.

IR 5990. Independent Study in Personnel and Industrial Relations. (Cr ar [may be repeated for cr])
Individual readings or research topics in human resource management.

Information and Decision Sciences (IDSc)
395 Hubert H. Humphrey Center

Information systems, according to Nobel Laureate Herbert Simon, are “the infrastructure of the global economy.” The management information systems (MIS) program at the Carlson School was the first in the nation and is currently rated as one of the top programs of its kind.

Management information systems focuses on problems and activities associated with the use of information systems and information and communication technology resources. Information and decision sciences includes methods, tools, and approaches used for acquiring, storing, manipulating, retrieving, and presenting information to support individual, group, and organizational communication and decision making. The MIS undergraduate major prepares students to be leaders in conceptualizing, prescribing, developing, and delivering information systems applications that support business processes and management decision making. Students learn the design, operation, management, and functions of information systems in organizations. The curriculum enables students to understand various MIS methods, including systems analysis and design, database systems, telecommunications, and decision support. MIS graduates are often employed as business application programmers and information systems consultants.

Several IDSc courses may be of interest to non-MIS majors. IDSc 3110 and 3120 provide students with an in-depth knowledge and understanding of a specific information systems environment. IDSc 3420 focuses on information technology in the financial function and IDSc 5410 focuses on the use of information technology to support decision making across all functions.

The MIS major consists of the following coursework: IDSc 3110*, IDSc 3120, IDSc 3130, IDSc 3140, IDSc 3150, IDSc 3160, and one of the following: IDSc 3420, IDSc 3430, IDSc 3450, IDSc 3990**, or IDSc 5410. Students must take these courses in the sequence in which they are offered.

*The prerequisite for this course is IDSc 3030, which must be completed no later than fall quarter of your junior year.

**An optional internship is available. Internship credits vary from one to four and a grade is assigned using A-F grading. Generally, the internship requires part-time work during one or more quarters. Students must have completed or be registered in IDSc 3120 to apply for an internship through IDSc 3990. The internship usually begins spring quarter and ends during fall quarter and is custom-designed to meet established learning objectives. A “work practice” plan is required and must be approved by the sponsoring organization and the Department of Information and Decision Sciences. Contact the department for more information.
Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

**IDSc 3030. Information Systems and Information Management.** (4 cr; prereq CSOM computer skill module or equiv exper; A-F only) Concepts and approaches for developing and using information systems in support of business processes. Basic technology components of modern information systems (hardware, software, databases, and telecommunications), the impact of information systems and organizations, the processes by which they are created and changed, and selected managerial issues. Business management understanding of the techniques for designing systems, including several techniques for documenting business processes, designing databases to support those processes, and using those databases to satisfy business information needs. Issues in managing information technology, including systems development alternatives, business process redesign, appropriate use of technology standards, security, ethical considerations, and societal impacts.

**IDSc 3110. Information Systems Application Development I.** (4 cr; prereq 3030; A-F only) User interface design and development, database design and querying, distributed computing networks, operating environments. Hands-on experience with selected application systems development tools.

**IDSc 3120. Information Systems Application Development II.** (4 cr; prereq 3110; A-F only) Continuation of IDSc 3110. Follow a systems development life cycle through technical design and construction to testing and quality assurance.

**IDSc 3130. Business Process Analysis and Design.** (4 cr; prereq 3110 or #; A-F only) Concepts and methods of information requirements determination, systems analysis, and business process design. Hands-on experience developing information systems (IS) specifications. Enterprise analysis (IS strategic planning, IS architectures, enterprise modeling), operational process modeling (business process, entity relationship, and object modeling), and managerial information requirements determination.

**IDSc 3140. Management of Business Application Development Projects.** (4 cr; prereq 3120, 3130, MIS major; A-F only) Concepts, techniques, activities, and issues for systems development projects. Held almost entirely off-site with assistance of corporate sponsors. Student teams carry out structured projects for software cost estimation, project scheduling, and quality assurance. Use of tools and managerial techniques in support of these activities.

**IDSc 3150. Information Technology Infrastructure.** (4 cr; prereq 3120; A-F only) Information technology (IT) including networks, computing hardware and operating systems, database systems, and application development systems. Tools to analyze, design, build, operate, and maintain these elements. Processes to identify, evaluate, and select appropriate platforms and tools. Role of the information systems specialist and the organization in developing, deploying, and managing the IT infrastructure. CASE and other analytic and descriptive tools for data, process, platform, and network modeling.

**IDSc 3160. Information Systems Management.** (4 cr; prereq 3140, 3150; A-F only) Roles, organizational structures, relationships with functional units of business, information systems planning, and business strategy. Developing skills and career paths. Systems development management: acquisition, subcontracting, outsourcing, systems construction. Project management: project staffing and leadership, cost and effort estimation, project tracking and reporting, configuration and change management.

**IDSc 3420. Financial Information Systems and Technologies.** (4 cr; prereq 3030 or Acct 1050 or BFin 3000; A-F only) Information systems in financial services and corporate financial operations, financial markets, managerial accounting, and auditing. Traditional versus electronic financial markets, domestic and international markets, computerized trading, financial and managerial accounting; electronic corporate financial reporting, electronic financial commerce, and personal investing and money fund management.

**IDSc 3430. Advanced Database Development and Management.** (4 cr; prereq 3120; A-F only) Developing, using, and managing information resources in an organization. Advanced topics in database design and management systems. Data planning and information architectures. Data modeling methodologies and computerized database design support tools (CASE). Advanced data manipulation languages, comprehensive DBMS facilities, and Object-Oriented DBMS. Data warehousing and OLAP tools. Deploying and managing databases in a distributed environment. Issues of data integrity, security, and privacy. Role, organization, functions, and tools of the database administrator.
IDSc 3450. Telecommunications. (4 cr; prereq 3120; A-F only)
Telecommunications media, signaling, data linking and networking concepts and protocols.
Telecommunications technology, including fiber optics, satellites, and radio. Structure of Wide Area Networks (WAN)—public, private, circuit, packet. Local Area Network (LAN) architecture and protocols, including internetworking technology such as bridges, routers, and WAN interconnections via frame relay and ATM. LAN software, including client and server operation. Common LAN operating systems structure and operation. Network protocols. Internet and Internet tools, including Telnet, File Transfer Protocol (FTP), e-mail, X.400, X.500, Gopher, and World Wide Web (WWW). Internet information access and retrieval. Client/server computing. Telecommunications environment, including history, legislation, regulation, standards, and globalization.

IDSc 3460. Information Systems Special Topics. (4 cr; prereq 3120; A-F only; offered when feasible)
Current topics and developments in information systems.

IDSc 3990. Information Systems Industry Internship. (1-4 cr; prereq 3120 or ¶ 3120, ∆; A-F only)
Learning by participating in information systems activities and receiving appropriate training from the sponsoring organization. Custom-designed to meet pre-established learning objectives. “Work practice” plan is required and must be approved by the sponsoring organization and the Department of Information and Decision Sciences undergraduate director before registering.

IDSc 3995. Independent Study in Information Systems. (Cr ar; prereq #)

IDSc 5410. Decision Support and Expert Systems. (4 cr; prereq 3030 or MBA 8225 or equiv; open to nondegree students with equiv exper; A-F only)
Modern decision technologies, including artificial intelligence, expert systems, genetic algorithms, neural networks, electronic meeting systems, and group decision support. How highly effective decision support systems can be developed using traditional approaches and tools (e.g., specialized extensions to popular spreadsheet packages or using standard software development approaches). Software demonstrations and applications of decision technologies to problems in finance, marketing, manufacturing, services and healthcare management, and information systems consulting. Individual or group projects based on interests and career goals.

Logistics Management (LM)

1235 Management & Economics

Logistics management deals with managing the flow of physical goods in a business firm or other organization. Logistics activities are vital in controlling costs and providing appropriate service to customers and include transportation, warehouse operation, inventory management, production scheduling, materials handling, packaging, order processing, plant and warehouse location, and customer service.

Logistics activities cut across several management areas in a business firm or other organization, which results in unique coordination, jurisdictional, and management problems. Logistics management is often referred to as an “interdisciplinary” activity or field. Its closest relationships are with operations management, marketing, and finance, although there are logistics relationships with accounting, information systems management, personnel management, and other areas of an organization.

Increasing recognition given to the logistics function in American business firms and other organizations over the past 25 years has led to increasing job opportunities and rising incomes for those engaged in logistics management.

Courses offered in logistics management provide a useful background and preparation for a variety of careers with business firms, government agencies, and other organizations that have logistics systems, and also with transportation companies and consulting firms. Research and teaching opportunities in logistics management are available.

The logistics management track within the marketing and logistics management major prepares students for entry-level positions in logistics and distribution. Students in this track must take LM 3000, LM 5020, Mktg 3000, Mktg 3010, Mktg 3040, Mktg 3060, and Mktg 3080.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.
LM 3000. Introduction to Logistics Management. (4 cr; prereq Econ 1101 or equiv)
Managing the flow of an organization’s physical products (physical supply and distribution) and the linkages between the process of controlling the physical flow of products and the organization’s major functions, i.e., finance, marketing, and operations management. Logistics topics and analysis of the impact of logistics topics on other functional areas. Simulation exercise.

LM 5010. Topics in Logistics Management. (4 cr [may be repeated for cr]; prereq 3000 or 5020 or 5030, #)
Specialized topics in logistics management; topics vary quarterly. Simulation exercises.

LM 5020. Advanced Logistics Management. (4 cr; prereq 3000 or 5030 or equiv)
Managing the flow of an organization’s physical products (physical supply and distribution). Transportation alternatives, customer service, inventory management, location decisions, warehousing, logistics information systems, international logistics, logistics system design. Case problems.

LM 5030. Principles of Transportation. (4 cr; prereq Econ 1101 or equiv)
Organizational, economic, and service aspects of the U.S. transportation system, including rail, highway, water, pipeline, and air transportation. Decision making in transportation companies. Government promotional and regulatory policy regarding transportation.

Management (Mgmt)

835 Management & Economics
Management and organizational principles are involved whenever people work toward a common objective. Management functions are analyzed using case examples of organizational situations and research evidence and theory to develop insights, skill in knowledge applications, and professional attitudes that enhance management and leadership performance. Most of the course content is applicable to administrative situations in either business or nonbusiness environments.

Mgmt 3001 is an introductory course and may be followed by more specialized and advanced courses. Mgmt 3004 is a general policy course that helps students develop skills in identifying, analyzing, and solving problems, strategic planning, and direction setting. These skills require students to apply knowledge of frameworks developed in Mgmt 3001 and knowledge acquired in other subject areas such as accounting, economics, finance, and marketing. Mgmt 3001 is recommended for students who have completed or are completing the last of the other “functional core” courses.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

Mgmt 3001. Fundamentals of Management. (4 cr, §8001)
Leadership and management functions required to establish goals, policies, procedures, and plans. Motivation, planning and control systems, concepts of organizational structure and behavior.

Mgmt 3002. Psychology in Management. (4 cr, §8006)
Behavior principles, methods, and skills fundamental to managerial competence in preventing and solving problems within and between individuals and groups and aiding in effective use of human resources. Various lab procedures used to study these principles, methods, and skills and furnish practice in applying them to management problems.

Mgmt 3004. Business Policy: Strategy Formulation and Implementation. (5 cr; prereq sr, completion of or concurrent regis in other functional core courses)
Identifying and analyzing strategic issues and problems, establishing corporate or divisional goals, and designing realistic programs of action. Case analysis and discussion. Students meet in small groups to prepare cases and presentations. Concepts and concepts, tools, and theories previously presented in other courses applied to solve goal selection and strategy implementation problems. Viewpoint of the general line manager (department, division, or executive level) used.

Mgmt 3006. Small Business Management. (4 cr, §5101 if topic was small business mgmt)
Role of small business, alternative entry strategies, functional expertise required as the firm competes in its environment.

Mgmt 3008. Entrepreneurship and the Smaller Enterprise. (4 cr; prereq completion of functional core courses or #)
Assessing opportunities and constraints in establishing and managing one’s own firm; structuring a new venture, buying into an existing enterprise, owning an enterprise vs. becoming a principal employee in a new venture. Case method.

Mgmt 5050. Management of Innovation and Change. (4 cr)
Application of theories and research on how new organizational programs, products, and technologies are developed and implemented and what paths in these journeys lead to success and failure. Readings, cases, lectures, and projects used to build diagnostic skills and principles for managing organizational innovation and change. Offered concurrently with Mgmt 8050.
Mgmt 5101. Advanced Topics in Management. (Cr ar [may be repeated for cr]; prereq sr or grad, #)
Specialized topics in management; topics vary quarterly.

Marketing (Mktg)
1235 Management & Economics

Marketing is concerned with the flow of goods and services through the economy and the distribution of both industrial and consumer goods. Because more than half the consumer’s dollar goes to pay for marketing services, marketing is a very significant part of the economy and the efficiency with which marketing activities are carried out has major social implications.

Manufacturers, wholesalers, retailers, and other business firms are faced with the need to formulate and implement marketing policies by developing and executing marketing strategies and programs. Among the major marketing decision areas are product development and product line expansion, selection of distribution channels, maintenance and control of a sales organization, development of a promotional program, and establishment of service policies and pricing policies and methods.

Marketing offers a wide range of employment opportunities in sales, advertising, retailing, sales promotion, brand management, international marketing, and marketing research. If you are interested in a career in marketing research or brand management, consider completing an M.B.A. degree.

The marketing and logistics management major (MLM) provides a coherent, broad-based study leading to job market and professional opportunities. Within the MLM major, students choose one of the following career tracks.

Advertising management
Logistics management
Marketing management
Retail sales/buying
Sales management

MLM majors must take Mktg 3000, Mktg 3010, Mktg 3040, and Mktg 3080. Students must select three more courses from an approved list to provide specialization needed for specific job opportunities. These courses include those offered by the Department of Marketing and Logistics Management, as well as several courses outside the department and/or school. (See descriptions of career tracks and approved courses earlier in this bulletin.)

You may also take electives outside of CSOM to complete a program that best meets your needs. Agricultural economics, economics, geography, home economics, journalism, psychology, sociology, and speech-communication may be of interest. Consult an Undergraduate Studies Office adviser in 290 Hubert H. Humphrey Center for assistance in choosing these electives.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

Mktg 3000. Principles of Marketing. (4 cr; prereq Econ 1101 or equiv)
Terms, concepts, and skills used in analyzing marketing problems. Legal, behavioral, ethical, competitive, economic, technological, and international factors affecting product, pricing, promotion, and marketing channel decisions.

Mktg 3010. Marketing Research. (4 cr; prereq 3000, BA 1550 or OMS 1020 or equiv)
Methods for collecting and analyzing data to solve marketing problems. Emphasis on survey research techniques. Research design, secondary and primary data collection, sample design, data analysis, and marketing management applications.

Mktg 3030. Sales Management. (4 cr; prereq 3000)
Managing sales as an integral part of an organization’s overall marketing program, with emphasis on sales force organization, selection, training, motivation, compensation, forecasting, budgeting, and control.

Mktg 3040. Buyer Behavior. (4 cr; prereq 3000)
Using behavioral sciences to understand customer behavior in the marketplace. Perception, learning, persuasion, motivation, consumer and organizational decision-making models, social and cultural influences. Managerial implications and applications.

Mktg 3050. Marketing Communications. (4 cr; prereq 3000)
Managing the communication aspect of marketing strategy. Emphasis on advertising and sales promotion. Setting advertising objectives and budgets, media selection, creative strategy, sales promotion techniques.
Mktg 3060. Marketing Channels and Distribution. (4 cr; prereq 3000)
Designing and managing channels of distribution in both consumer and industrial settings. Analysis of the interrelationships between marketing institutions in channels of distribution.

Mktg 3065. Retail Management. (4 cr; prereq 3000)
Principles, problems, and trends as they relate to various types of retail institutions. Merchandise, inventory, financial planning, pricing, retail location and layout, vendor relationships.

Mktg 3080. Marketing Strategy. (4 cr, §3020; prereq 3000; sr status recommended)
Determining product-markets where organization should compete and developing sustainable competitive advantages. Matching marketing strategy with the environment and firm’s capabilities.

Mktg 3090. Marketing Topics. (4 cr [may be repeated for cr]; prereq 3000, #)
Selected topics and problems of current interest considered in depth. Class discussion and course projects. Topics vary quarterly depending on instructor.

Operations and Management Science (OMS)

Operations and management science deals with the production of goods and services and the associated methods used to analyze and improve operations. Operations, which exist in all organizations, create value by converting economic inputs into products or services. Managing operations is becoming increasingly important in society as global competition increases, productivity lags, and resources become more scarce. The operations function in the firm manages the majority of the physical and human resources and is therefore a critical organizational function. Operations functions exist in both manufacturing and service firms.

The OMS department focuses on decision-making activities in operations and supporting analytical methods. Course topics include strategic management of operations, capacity planning, quality improvement, process design, inventory control, project management, statistical analysis, and analytical methods.

Operations careers are available in all types of organizations, public and private. Typical operations positions include inventory control, operations scheduling, quality manager, project manager, operations manager, and operations analyst. The operations job market is very solid and there are many opportunities in service industries as well as manufacturing.

Because operations are basic to all enterprises and interface with all other business functions, students expecting to pursue any type of business career will benefit from OMS courses as electives. These courses are also a good base for students planning to pursue graduate study.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

OMS 1020. Data Analysis and Statistical Inference for Managers. (4 cr, §MSci 1020; prereq IDSc 1010; Math 1131 recommended; BA 1550 will replace OMS 1020 after wrt qtr 1997)
Probabilistic and statistical techniques for decision making, including data analysis, sampling, estimation, and hypothesis testing and regression. User computer software and computer-stored data in statistical analysis. Modeling and linear programming.

OMS 3000. Introduction to Operations Management. (4 cr, §OM 3000)
Concepts and principles related to the managing operations functions, including operations strategy, process design, just-in-time, forecasting, inventory management, principles of scheduling, and quality improvement. Examples from service industries, nonprofit organizations, and manufacturing. Relationships between operations and environment taught from a managerial perspective.

OMS 3041. Project Management. (4 cr, §OM 3041; prereq 3000 or #; generally UC only)
Principles and methods useful for planning and controlling a project, including project plan development, resource planning and scheduling, and project monitoring and control. Selected computerized packages, including PERT and CPM, and examples of different types of projects from manufacturing and service industries.

OMS 3056. Production and Inventory Management. (4 cr, §OM 3056; prereq 3000 or #; generally UC only)
Inventory planning, production planning, Materials Requirements Planning (MRP), just-in-time concepts, finite loading systems, distribution systems, forecasting, master scheduling, capacity management, production activity control and purchasing. Taught from a planning and control systems point of view with managerial orientation.
OMS 3059. Quality Management. (4 cr, §OM 3059; prereq 3000 or #; generally UC only)
Key issues of quality management, including planning and organizing for quality improvement, cost of quality, customer and vendor relation, process control, quality control, managing the improvement process. Concepts and principles relevant to both service and manufacturing environments. Lecture and case instruction.

OMS 5100. Manufacturing for Competitive Advantage. (4 cr; prereq 3000 or IEOR 3000 or MBA 8050 or #; generally UC only)
The manufacturing function, particularly as it contributes to the firm’s competitiveness. Manufacturing strategy, technology issues, quality issues, and integration of the work force into the manufacturing effort. Primarily for students in engineering disciplines.

OMS 5155. Methods for Quality and Productivity Improvement. (4 cr, §DSci 5055; prereq 1020 or BA 1550 or MBA 8020 or #)
Statistical methods for on- and off-line quality control. Quality management philosophy, Pareto analysis, control charts, experimental design, sampling inspection. Applications to administrative, service, and production operations.

OMS 5850. Topics in Operations and Management Science. (4 cr [may be repeated for cr]; prereq 1020 or BA 1550, 3000 or #)
Topics vary.

Risk Management and Insurance (Ins)

537 Management & Economics

The school offers a risk management and insurance major and minor. Risk management identifies, assesses, and addresses asset and human resource loss, legal liability, applying risk control, and risk transfer and risk financing techniques. Insurance services and risk transfer are important risk management tools.

Career opportunities in risk management and insurance include 1) underwriters, claims adjusters, actuaries, investment analysts, accountants, office managers, pension consultants, agents, brokers, and other positions in the private insurance industry; 2) corporate risk managers for large private and public organizations; 3) consultants, including consulting actuaries, employee benefits specialists, risk management consultants, and personal financial planners; 4) employees of state and federal government agencies that regulate the private insurance industry or administer social insurance programs; and 5) educators and research personnel.

Majors should begin one of the following professional designation tracks after graduation: Certified Financial Planner (CFP), Chartered Financial Consultant (ChFC), Chartered Life Underwriter (CLU), Chartered Property and Casualty Underwriter (CPCU), Fellow, Life Insurance Management Institute (FLMI) for people entering management positions in life insurance companies, Associate in Risk Management (ARM) for corporate risk managers. Attending the following professional organization meetings and seminars is recommended: Minnesota Chapter of the Risk and Insurance Management Society (RIMS), and local chapters of CLU, CPCU, or the International Association of Financial Planners (IAFP).

The risk management and insurance major applies theory to practice using principles of finance, law, and mathematics in the transfer and reduction of risk for individuals, corporations, and government. Students must take BFin 3100 or BFin 3200, BLaw 3058, Ins 5100, and Ins 5200.

Other courses may be taken to enhance the major, such as BA 3998, Ins 5990, or Math 5056.

CSOM students may also earn a minor in risk management and insurance by completing the following 12 credits: Ins 5100, Ins 5200, and one from BLaw 3058, BFin 3100, BFin 3200, and Math 5056.

Actuarial Science Major and Minor

Actuarial science applies mathematics to insurance problems. Practicing actuaries calculate insurance premiums, policy and loss reserves (liabilities), and estimate costs of future losses.

There are many career opportunities in life, health, pension, and property/casualty insurance, including pension systems, group life insurance, group health benefits, property risks, liability risks, and workers’ compensation.

Students typically take at least two professional actuarial examinations before graduation and start internships that frequently result in job placement after graduation.
Students are introduced to professional designation tracks, including The Society of Actuaries, American Academy of Actuaries, Casualty Actuarial Society, Conference of Consulting Actuaries, and American Society of Pension Actuaries.

Prerequisite courses include Math 1251, 1252, and 3252. Major courses include Ins 5100 or Ins 5200, Math 5056, Ins 5230/Math 5057, Ins 5231/Math 5058, Math 5473 or 5059, Math 5679 or Stat 5131, and Stat 5121-5122 or Stat 5132-5133.

Similar/comparable math and statistics may be substituted by petition.

Actuarial students may also earn a minor by taking Ins 5100 or Ins 5200, Math 5056, Ins 5230/Math 5057 or Ins 5231/Math 5058, and Math 5473 or 5059.

Note: In addition to prerequisites listed, for all 3xxx and 5xxx CSOM courses students must have 90 quarter credits and a 2.80 overall GPA or be admitted to a CSOM upper division major program.

**Ins 5100. Risk Management and Insurance.** (4 cr, §8100)
How to recognize and evaluate the property, liability, and personnel risks facing a business, nonprofit organization, government unit, or individual or family. Tools of risk management—mainly retention, loss control, and insurance—and conditions under which they should be used. How to select and deal with an insurer. Public policy issues such as availability of insurance, insurance pricing, and social insurance.

**Ins 5210. Economic and Social Security.** (4 cr, §8210, §Econ 5534)
Nature and causes of economic insecurity and poverty. Details and economic and social implications of private employee benefits and public programs, with emphasis on Old Age, Survivors, Disability and Health Insurance (Social Security), workers’ compensation insurance, and unemployment insurance.

**Ins 5230. Actuarial Mathematics I.** (4 cr, §Math 5057; prereq Math 1252 or #, one probability or statistics course)
How to calculate net premiums, gross premiums, reserves, and nonforfeiture values for major life insurance contracts. Impact of assumed mortality, interest, and expense assumptions on these items.

**Ins 5231. Actuarial Mathematics II.** (4 cr, §Math 5058; prereq 5230 or #)
Economics of insurance, measurement of mortality, life insurance, annuity premiums and reserves. Multilife functions. Population problems and multiple-decrement theory.

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A Carlson School of Management alumna, now a General Mills Inc. marketing representative, works with a current Carlson School student in the Undergraduate Mentorship Program.