

Curtis L. Carlson
School of Management
University of Minnesota Bulletin
1988-90



Curtis L. Carlson

School of Management

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Introduction

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624-0011

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Finance and Insurance

735 Management and Economics
624-2888

Industrial Relations

537 Management and Economics
624-2500 (Graduate Programs, 624-5810)

Employer Education Service

430 Management and Economics
624-5525

Labor Education Service

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Reference Room

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Undergraduate Studies

290 Humphrey Center
624-3313

Policies

Bulletin Use—The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice. University offices can provide current information about possible changes.

Admissions—The Carlson School of Management is committed to providing equal opportunity to all who seek access to its programs, facilities, and services; establishing fair educational standards and applying them equitably in making decisions about admission and academic standing; and taking affirmative action to assure that previously under-represented groups will be fairly represented in its programs.

Equal Opportunity—The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation act of 1973; by Executive Order 11246, as amended: 38 U.S.C. 2012; by the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be addressed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547); to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202; or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.

Access to Student Educational Records

—In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, students must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information center in Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

Postal Statement

Volume 91, Number 8
June 27, 1988

University of Minnesota Bulletin
(USPS 651-720)

Published by the University of Minnesota, Student Support Services, Publications Center, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455, once in January, March, April, May, September, and October; twice in February and July; and five times in June. Second-class postage paid at Minneapolis, Minnesota. POSTMASTER: Send address

Introduction

changes to University of Minnesota Bulletin, Student Support Services, 110 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455.

General Information



General Information

History

In 1899, William Folwell, then president of the University of Minnesota, told a bankers convention that it would be "just as logical" for the University to have a school of commerce as to have a professional school of law, medicine, or engineering. During the next 20 years, courses in business areas were taught in increasing numbers by the economics faculty. This continued until 1919, when, as a "logical" next step, the Board of Regents established the School of Business Administration. The following year the new school became one of the first in the nation to be accredited by the American Assembly of Collegiate Schools of Business (AACSB). Initially, a baccalaureate degree and a master of science (M.S.) degree, principally in economics, were offered. From the start, the undergraduate curriculum called for two years of liberal education followed by two years of professional education.

The master of business administration (M.B.A.) degree was first authorized in 1935 and the doctor of philosophy (Ph.D.) degree in 1948. These programs were both immediately accredited when the AACSB began evaluating graduate programs in 1963. A separate master's program in industrial relations was established in 1956 and was followed by a Ph.D. program in industrial relations less than 10 years later. In 1960, the evening M.B.A. program was begun, making it possible for business professionals to combine a full-time job with advanced study in the field. In 1978, the college established a master of business taxation (M.B.T.) program in conjunction with Continuing Education and Extension.

In 1961, the Board of Regents recognized the growth of graduate study in business by establishing the Graduate School of Business Administration. The College of Business Administration thus became the College and Graduate School of Business Administration. In 1971 the name was again changed to the College of Business Administration and, in May

1981, the University of Minnesota Board of Regents voted to change the name to the School of Management to better reflect the broader role this institution now has in the state and nation.

Then in 1985 Dean Preston Townley proposed enhancing the school's name through identification with an individual who embodies the school's values. The logical choice was Curtis L. Carlson, 1937 alumnus, successful entrepreneur, and chairman and CEO of The Carlson Companies, Inc. A first-generation Swedish-American, Carlson built a creative idea into a small business that has grown to a \$3 billion-a-year international conglomerate. But even more importantly, Carlson has made a long, outstanding commitment to the University and the school through committee work and financial contributions. The school became the Curtis L. Carlson School of Management in October 1986.

As part of a large University located in a major metropolitan area, the school is well situated for teaching and research in business and management. The faculty and students have ready access to other University units, a progressive business community, and the state capital. Businesses and other organizations in the area provide opportunities for students to gain practical business and research experience. Leaders of business and other organizations throughout the state are selected by the dean of the school to sit on the Board of Overseers and other advisory committees, thus making their expertise available to the school.

The Carlson School continues to provide leaders trained in management to meet an increasingly complex, global business environment. Dean Townley says the school's goal is to be "equal in quality to the excellent business community where we're located. We've built a good school, but we're striving to make it even better. Our aim is to be a business school that ranks among the nation's best in the calibre of research, teaching, and responsiveness to society's needs."

Objectives

The Carlson School's primary mission is to understand and improve the process of management. It seeks a national and international reputation through the preparation and placement of its graduates and the dissemination of its research. Moreover, the school recognizes a special relationship with and responsibility to the region's business firms, labor unions, governmental units and not-for-profit agencies in furthering improved management study and practice. The school offers educational programs, conducts research, and provides service activities that focus on issues of management and its related professions, and on associated questions of public policy.

The bachelor of science in business, with both general management and accounting programs, is the first step in the continuum of business education offered by the school. The specific objectives of the undergraduate programs are:

- to provide a liberal education with a concentration in management;
- to orient students to the functional and environmental aspects of business enterprise and to equip them with basic administrative skills; and
- to prepare graduates to enter careers in business and administration as well as the not-for-profit sector: education, arts and social services, and government.

The graduate programs offered for the master of business administration, master of arts in industrial relations, and master of business taxation degrees are designed to provide advanced professional training. The school also offers doctor of philosophy degrees in business administration and in industrial relations as well as extensive noncredit programs for managers through its Executive Development Center.

Professional Education Programs

The Carlson School of Management offers a number of nondegree programs designed

to keep practitioners abreast of new information and trends as well as to broaden their educational experience for assuming new responsibilities.

Employer Education Service (430 Management and Economics)—A division of the Industrial Relations Center, this unit provides professional education and resource center opportunities to employers, focusing on personnel administration, industrial relations, human resource management, and supervision topics at both line and staff levels. For more information, call 612/624-5525.

Labor Education Service (437 Management and Economics)—A division of the Industrial Relations Center, this unit conducts conferences, institutes, and short courses for labor union representatives; produces videotapes for documentary and classroom use; and publishes reports. For more information, call 612/624-5020.

Executive Development Center (280 Humphrey Center)—This center offers a variety of noncredit professional management education programs for practitioners in both business and nonprofit organizations. These include:

- Minnesota Executive Program*: a residential program dealing with corporate strategy for senior executives.
- Minnesota Management Institute*: a residential management program for people in operating management positions and focusing on operational, behavioral, and functional management skills.
- Minnesota Management Academy*: a residential program for managers in the early stages of their careers that focuses on the essentials of management and interpersonal skills.
- Specialty Programs*: a number of seminars from one to eight days that present an in-depth study of a specific functional area of management (e.g., information systems, finance, manufacturing management, marketing) or address the professional/skill needs of specialists such

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as controllers, manufacturing managers, management information systems executives, and others.

Call 612/624-2545 for more information.

Research Centers

Accounting Research Center (645 Management and Economics)—This center was established in 1977 to coordinate the efforts of the Department of Accounting to contribute to accounting knowledge through research. It encourages significant research in accounting, acts as a vehicle for funding accounting research by members of the business community, and also offers continuing professional education programs to disseminate accounting knowledge to practitioners.

Industrial Relations Center (537 Management and Economics)—This center, established in 1945, conducts research projects on such topics as human resources and labor markets, organized labor and collective bargaining, organization theory and behavior, and personnel administration. Reprint and working paper series, both available through the center, report on research projects and results. Service activities include providing speakers and consultants; organizing professional and public service meetings; and planning, participating in, and directing conferences. This center also offers a full-time day and part-time evening master of arts in industrial relations and a Ph.D. degree in industrial relations.

See also the Employer Education Center, the Labor Education Center, and the Industrial Relations Reference Room.

The Institute for Financial Studies—Established in 1987, this research center is a focal point for the intellectual interaction of the finance faculty and students with both academic and industry finance professionals. Institute faculty are conducting research primarily in areas such as prices in financial markets, optimal financial contracts, inflation and stock returns, and financial intermediation. Although the institute's orientation is

academic, recent research in financial economics is communicated to finance professionals through annual workshops. The institute also publishes a working paper series.

Logistics Management Research Center—This center was founded in 1987 to sponsor research that will improve the management of logistics, distribution, and transportation. Important changes in how products are distributed have been occurring as a result of changing economics, technology, and the regulatory environment. This center fosters research into issues brought about by these changes.

Management Information Systems Research Center (355 Humphrey Center)—This center, founded in 1968, is the focus of research efforts in management information systems (MIS). It is supported cooperatively by a number of large companies headquartered in Minneapolis/St. Paul, the University of Minnesota, and research funds from federal, state, and private contracts.

The center is committed to educating and developing management information systems professionals and educators; conducting research addressing the managerial usage of computers in organizations today and in the future; and promoting interaction among MIS professionals, academicians, and students.

Research is conducted in four major areas—experimental, organizational, applications, and technical. Information about research efforts, working papers, and technical reports is available upon request from the department.

The center also publishes the *MIS Quarterly*, which is distributed internationally to MIS professional and academic communities.

The Marketing Management Research Center—Founded in 1988, this center enhances the understanding and practice of marketing through research on important marketing management issues confronting practitioners and academics. The center funds research, publishes a working paper series, sponsors a quarterly

symposium, and holds an annual workshop for academics and professionals.

Operations Management Center (382 Humphrey Center)—This center was founded in 1983 to further accelerate the interaction between the Twin Cities business community and the operations management program. The center is one of the few in the country, and it effectively brings together senior executives from 10 service and manufacturing companies with faculty and students. The center sponsors research programs on leading-edge problems affecting the operations management profession. These research programs include studies on quality management, technological innovation, operations strategy, people in operations, white-collar productivity, and materials management. The Operations Management Center also sponsors roundtable discussions and an annual conference on issues of current interest.

Strategic Management Research Center (830 Management and Economics)—The Strategic Management Research Center is a University-wide interdisciplinary center created as a joint venture of the Carlson School of Management, the Humphrey Institute of Public Affairs, and the Department of Agricultural and Applied Economics. The purpose of the center is to address strategic managerial problems faced by the general manager in public and private organizations, domestically and internationally. Currently 56 researchers from 11 University units are working on 34 research projects in the areas of managing innovation and change; international management; strategic planning and decision making; small business development and management; and mergers, acquisitions, and divestitures. A new area of research, government-business relations and global competition, is currently being developed.

In addition to programmatic research in these areas, a major thrust of the center is to create an intellectually stimulating community that fosters learning and research among faculty, students, and managers. This is accomplished through (1)

the Strategic Management Colloquium series in which leading national scholars as well as University faculty and students present their latest thinking and research; (2) Executive Breakfast Roundtable Discussions in which small groups of executives have opportunities for stimulating discussions with some of the colloquium speakers; (3) three paper series in which new theories and research by faculty and associates of the center are disseminated to a network of other scholars and practitioners throughout the world for review and comment; (4) several orientation sessions for faculty and students to meet with general managers in selected organizations to become aware of strategic management problems and to explore common interests and areas of study; and (5) the provision of "seed money" to faculty and doctoral students to initiate novel research on embryonic ideas that address the key issues of the center's research agenda.

Service Centers

Career Planning and Placement (190 Humphrey Center)—The college maintains a Career Planning and Placement Office for its students and alumni. Career literature, information on many companies throughout the United States, and career planning services are available at the office. As a senior or graduate student, you may interview with representatives of several hundred companies that come to the University during the recruiting season and also have access to job listings of hundreds of additional companies. You may seek part-time work, summer employment, and internships through the Career Planning and Placement Office.

Inquiries about employment should be addressed to the Director of Placement, Carlson School of Management, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455.

Computer and Technical Services (West Bank Computing Services, 93 Bleugen Hall)—Computers are available for

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use by students, staff, and faculty. Interactive mainframe computing is available through dial-up procedures or by using campus lab facilities. University mainframes include Cyber, VAX, IBM, UNIX, and CRAY machines. Microcomputer labs provide access to MS-DOS (IBM) and Apple Macintosh computers and printers, with a wide variety of available software. West Bank Computing Services also provides computer consulting, development, and related training.

Industrial Relations Reference Room (365 Blegen Hall)—A division of the Industrial Relations Center, this specialized library maintains a unique collection of resource materials covering all aspects of the employer/employee work situation, with special emphasis on collective bargaining and human resource management. The library is open to business, government, and labor representatives as well as University students and faculty.

O. Meredith Wilson Library—Books that are added to the business collection are interfiled with books on other subjects in the main collection of Wilson Library. The card catalog on the first floor of the library can be consulted for a complete listing of University-owned books dealing with business subjects.

All periodicals are kept in the Periodicals Room in the basement. Some newspaper and periodical indexes of interest to business students can also be found in the Reference Room on the first floor.

Census publications and publications by government agencies (e.g., Small Business Administration, Department of Commerce, Federal Reserve Board, Securities and Exchange Commission) are kept in the Government Publications Library on the fourth floor. Indexes, bibliographies, and reference assistance are also available there.

Students beginning research on business subjects will want to start in the Business Reference Service on the second floor of Wilson Library. Its collection includes reference materials, tax and investment advisory services, periodical

indexes, pamphlets, and a large collection of corporate annual reports. Many 10-K reports, which publicly held corporations are required to file with the Securities and Exchange Commission, are on microfiche. Several microfiche readers are available. Reference help is available, and patrons will be referred to other collections if appropriate.

The Deloitte Haskins and Sells Tax Research Room is adjacent to the Business Reference Service. It contains reference materials on tax services, tax cases, revenue rulings, and tax proceedings.

Tours of the business reference collection or of Wilson Library are available upon request.

Special Programs

Honors Program—Special opportunities for high ability students are available through research assistantships, independent study projects, and through the school's Honors Association. In addition to merit scholarships available to students performing high ability work, the school recognizes superior achievement through awards and distinctions announced at commencement ceremonies each year. Students interested in honors opportunities should contact the Undergraduate Studies Office, 290 Humphrey Center.

Study Abroad—The Carlson School of Management encourages students to broaden their educational experience by participating in foreign study programs. Information about a variety of foreign study opportunities is available through the University's International Study and Travel Center, 44 Coffman Memorial Union (612/625-1150).

The Carlson School sponsors several foreign studies programs including programs in Japan, Spain, Denmark, Austria, and Singapore. Students can receive pre-approved residence credit. These programs are sponsored by the Council on International Educational Exchange (CIEE), the Institute of European Studies (IES), and the Denmark International

Study Program. More information is listed in this bulletin under Foreign Studies Management (FSMg). Additional information can be obtained from the Undergraduate Studies Office, 290 Humphrey Center.

Professional Development Seminars—Recognizing that personal and career success often depends upon skills and awareness not specifically covered in the academic curriculum, the Carlson School offers seminars for undergraduates on topics ranging from interpersonal communication to understanding corporate culture. The seminars are taught by leaders from the local business community.

Student Organizations

As a student in the Carlson School, you may find opportunity for valuable experience and personal growth through participation in University activities outside the classroom. Within the school a variety of student groups may appeal to your professional interests. You are encouraged to take an active part in these group activities. Meeting times and contact information are available in the Undergraduate Studies Office, 290 Humphrey Center.

Business Board—This group represents the undergraduate student body in the Carlson School of Management. The Business Board channels student opinion into administrative and faculty decisions. Its members serve on various school committees and plan activities to foster interaction among students and faculty.

Representatives from student organizations as well as "at large" representatives from the student body in general are elected each spring as representatives to the Business Board. Carlson student senate representatives serve as ad hoc members of the board. All interested students are urged to run as candidates for the Business Board.

AIESEC—The International Association of Students in Economics and Management is one of the largest nonprofit stu-

dent organizations in the world. AIESEC specializes in the international exchange of students for internships in business. Students develop their communication, marketing, and management skills while interacting with the business community and are eligible for internships with corporations in foreign countries.

Alpha Kappa Psi—A national professional business fraternity, this coeducational group brings together students with a common interest in business for scholastic and social activities. This chapter has been active on campus since 1922. Prominent men and women in business are featured at the meetings throughout the year. Tours, seminars, and opportunities for participation in community service projects are available. Meetings are held on Monday nights at the chapter house, 1116 5th Street S.E., Minneapolis. Visitors are always welcome.

Beta Alpha Psi—This national, professional, honorary organization is comprised of accounting majors with grade point averages of 3.20 in accounting and 3.00 overall. Beta Alpha Psi strives to introduce the aspiring accountant to the business world by encouraging interaction among students, faculty, alumni, and area business people; sponsoring speakers from all areas of accounting; touring CPA firms, industry, and government; providing recreational sports teams and tutors for students in accounting; and participating in a Volunteer Income Tax Assistance program.

Business Association of Minorities—This multi-ethnic organization is designed to foster a sharing of ideas and concerns among people interested in business administration. While emphasizing the minority perspective and seeking to objectively view the corporate world at large, members are actively involved in various campus and community activities.

The Business Quarterly—*The Business Quarterly* magazine is published by students in the Carlson School of Management. It serves as a source of information

General Information

on the requirements, activities, and people in the school, and also provides perspectives on issues that affect business and nonprofit organizations. Students who participate gain practical experience that strengthens their communication, marketing, and organizational skills. *The Business Quarterly* welcomes the involvement of students who wish to share their ideas and time.

Delta Sigma Pi—All students majoring in the fields of business administration and economics may share their similar interests by joining this professional coeducational business fraternity. The group sponsors professional dinners and tours, community service projects, and many athletic, scholastic, and social activities. Meetings are held on Monday nights in the Management and Economics building.

Honors Association—Designed to provide recognition and opportunities for high-achieving students, the Honors Association sponsors programs and activities to foster the interaction of students with faculty, prominent community leaders, and fellow high-ability students. Students with grade point averages of 3.50 and above are encouraged to apply for membership by contacting the Undergraduate Studies Office, 290 Humphrey Center.

Iota Rho Chi—Graduate students in industrial relations are represented by this professional organization. The purpose of the group is to promote advanced study, active research, and exchange of knowledge in the field. Regularly scheduled meetings are held at which various practitioners discuss industrial relations concerns. Iota Rho Chi also sponsors an active internship program for its members.

MBA Association—Serving primarily graduate students and graduate alumni, the MBA Association provides informal learning experiences for the developing business professional and promotes interaction on a regular basis between the graduate students and faculty members in the School of Management and the business community.

Phi Delta—Minnesota Women in Management—Students interested in business administration, business education, or economics, or pursuing a business sequence in University College are invited to join this professional business organization. Each quarter the group sponsors varied activities with a professional focus and members collaborate on service projects and social events as well.

Society for the Advancement of Management—A student chapter at the University is affiliated with this international professional management organization. The chapter brings together students with common broad-based interests in all phases of business. The chapter holds weekly meetings that include speakers from business and academia, as well as self-development workshops.

Student Accounting and Finance Association—This association provides an opportunity for students to become acquainted with accounting faculty members and area business representatives. Speakers inform students of opportunities in public and private accounting and finance. Career fairs and tours of CPA firms give students the opportunity to meet professionals and ask questions on an informal basis.

University of Minnesota Marketing Association—This professional, coeducational organization caters to all business and pre-business students who have a special interest in marketing. The organization helps students increase their working knowledge of marketing through speakers, seminars, and corporate tours. Other benefits include interaction among fellow students, faculty, and local corporate leaders on social and professional levels.

Expenses

For information on current tuition, fees, and estimated total expenses, consult the quarterly *Class Schedule*.

Financial Aid

In general, application forms for financial aid are available from the Office of Student Financial Aid, 210 Fraser Hall, University of Minnesota, 106 Pleasant Street S.E., Minneapolis, MN 55455. Applications must be submitted early in the calendar year.

Loans—The loan funds described below are designed for Carlson School of Management students and the application process is initiated in the Office of Student Financial Aid.

Paul R. Doelz Emergency Loan Fund—A short-term loan for undergraduate and graduate Carlson School students with emergency needs.

F. D. Lindquist Loan Fund—For Carlson School students needing financial assistance.

Undergraduate Scholarships—A variety of scholarships are available for Carlson School students. Some are designated as need-based and are administered through the Office of Student Financial Aid; those designated as merit-based are available through the Undergraduate Studies Office, 290 Humphrey Center, or through various departments.

The following scholarships require verification of financial need and is administered through the Office of Student Financial Aid:

Earl T. Cedarleaf Memorial Scholarship in Business Administration—For a Carlson School student, preferably interested in insurance and surety bond underwriting.

Jeannette Winter Tilly Fund—For a promising student (preferably female) who has financial need but may fall short of a 4.00 GPA. This scholarship covers approximately half the cost of tuition and books. Offered alternate years.

Information and application forms for the following scholarships may be obtained in the Undergraduate Studies Office, 290 Humphrey Center. Applications are accepted February 15 through March 31 each year. Preference is given to students with a grade point average of at least 3.00. The amount of these awards is \$300-\$1,000.

Merrill and Donna Anderson Scholarship—For an undergraduate in the Carlson School awarded on the basis of academic credentials and leadership po-

tential. Preference given to students who have had employment experience in the restaurant industry.

The Jack Collins Memorial Scholarship in Management—For a full-time student in the Carlson School who, by choice or necessity, interrupted traditional educational years with career, family, or military service.

Carl H. Fritze Scholarship in Transportation—For an undergraduate student in the Carlson School whose primary area of study and/or career interest is in transportation.

Holden Graphic Arts Scholarship—For a Carlson School student whose interest is in business management in a manufacturing industry and, whenever possible, whose interest is in printing and graphic arts.

Maurice L. Rothschild Scholarship—For a Carlson School student with a strong interest in merchandising or for other School of Management students regardless of program.

Minnesota Industrial Distributors' Scholarship—For a junior or senior who shows an interest in the field of industrial distribution.

Traveler's Express Scholarship—For senior minority students.

The following scholarships are offered by academic departments in the Carlson School of Management:

Accounting Scholarships—The Department of Accounting, 645 Management and Economics, annually awards numerous scholarships to undergraduate accounting majors. Awards are based on scholarship, merit, and letters of recommendation from senior accounting faculty members. Sponsoring firms and individuals are: *Grant Thornton; Arthur Andersen and Co.; Cargill, Inc.; John B. Clark; Coopers and Lybrand; Deloitte Haskins and Sells; Robert Half Personnel Agencies of Minnesota, Inc.; Honeywell, Inc.; Larson, Allen, Weishair and Co.; Laventhol and Horwath; Main Hurdman, McGladrey, Hendrickson and Pullen; Peat, Marwick, Mitchell and Co.; C. E. Tranter; Arthur Young and Company.*

Sander D. Genis Award—Awarded to a student whose focus is preferably in collective bargaining and labor relations. Contact the Department of Industrial Relations, 537 Management and Economics, for more information.

To provide financial support for talented minority students seeking baccalaureate degrees in business and accounting, the Carlson School of Management has established the *Carlson Advantage Scholarship*. Scholarships covering the cost of tuition are awarded to talented minority and educationally or economically disadvantaged pre-management and management students. Applica-

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tions can be obtained from the Martin Luther King Advising Office, 19 Johnston Hall (612/625-9898); University learning resource centers, or the Carlson School of Management Undergraduate Studies Office, 290 Humphrey Center (612/624-3313).

In addition to the above scholarships, the Carlson School Undergraduate Studies Office occasionally announces one-time-only scholarships. Such scholarships are advertised in 290 Humphrey Center, where information and application forms may be obtained.

Graduate Fellowships and Scholarships—The Application for Financial Aid form for graduate student financial aid in the M.A.I.R. and Ph.D. programs may be obtained from the Graduate School, 307 Johnston Hall, University of Minnesota, 101 Pleasant Street S.E., Minneapolis, MN 55455. In the M.B.A. program, request for financial aid is made on the application form available from the M.B.A. program, 295 Humphrey Center. Unless otherwise noted, the application deadline for the fellowships and scholarships listed below is February 15.

American Assembly of Collegiate Schools of Business Graduate Management Admission Council National Doctoral Fellowship Program in Business and Management (NDFP)—\$10,000 fellowship to be awarded to the applicant and \$5,000 grant to the school to cover student's first-year tuition and fees.

Carlson School of Management Associates Fellowships—For new graduate students in Carlson School of Management. Amount varies.

Carlson School of Management Alumni Fellowships—For new graduate students in the Carlson School of Management. Funded by annual gifts from alumni and friends. Amount varies.

Chrysler Corporation Scholarship in Industrial Relations—Awarded to a master's student in industrial relations.

Elwell Foundation—Awarded to several Ph.D. students in finance. Amount varies.

Paul Goldsborough, Jr. Fellowship—Awarded to graduate students in the Carlson School of Management. Amount varies.

Ernest Heilman Award—An outstanding teacher award for a Ph.D. student in accounting. \$1,000.

Honeywell, Inc. Fellowships—Awarded to several two-year, full-time M.B.A. students with undergraduate degrees in engineering and technology. Amount varies.

Honeywell, Inc. Fellowships—Awarded to two-year, full-time minority/disadvantaged M.B.A. students. \$4,000 per year for two years with summer internship option at Honeywell, Inc.

Honeywell Scholarship—Awarded to an outstanding graduate student in accounting. Amount varies.

Minnesota Mining and Manufacturing Scholarship—Awarded to an outstanding graduate student in accounting. Amount varies.

Carl Nelson Doctoral Award—Awarded to a Ph.D. student in accounting. \$1,000.

Price Waterhouse Scholarship—Awarded to an outstanding graduate student in accounting. Amount varies.

Minority/Disadvantaged Fellowship—Awarded to two graduate minority/disadvantaged students annually. Variable up to \$5,000.

Rosenberg Real Estate Equity Funds (RREEF) Minority/Disadvantaged Fellowship—Awarded to new full-time minority/disadvantaged M.B.A. students pursuing a career in real estate. \$5,000.

J. Mearl Sweitzer (Wausau Insurance Companies) Scholarship—For an M.B.A. student concentrating in risk management and insurance. \$5,000.

C.E. Tranter Scholarship—Awarded to an outstanding graduate student in accounting. \$1,500.

Roland S. Vaile Fellowship in Business—Awarded to a graduate student interested primarily in marketing. Amount varies.

Degree Programs



Degree Programs

Baccalaureate Programs

The Carlson School of Management offers two programs of study leading to the bachelor of science in business (B.S.B.) degree: the General Management Program (with seven "areas of emphasis" described below) and the Accounting Program.

Note: The undergraduate program has been extensively revised. Students admitted to the Carlson School of Management before fall 1988 are responsible for the requirements published in the Management bulletin current at the time of their admission. Contact the Undergraduate Studies Office, 290 Humphrey Center (612/624-3313) for more information.

Admission Requirements

Students are considered for admission to the undergraduate curricula of the Carlson School of Management after satisfactory completion of a pre-management program. Pre-management coursework (completed in the freshman and sophomore years) may be taken at the University of Minnesota, Twin Cities; at the University of Minnesota, Morris; at the University of Minnesota, Duluth; at any state community college; or at any regionally accredited institution offering a comparable program.

Undergraduates are admitted to the Carlson School of Management twice a year. Application deadlines are June 15 for fall quarter and January 15 for spring quarter. Because of resource constraints, the Carlson School establishes enrollment limits. Although grade point averages (as described below) are the primary determinants of admission, applicants are required to provide additional information about their background and achievements to allow a broader view of their qualifications for admission.

Recent enrollment reductions have made admission to the Carlson School very competitive. To be **considered** for admission, you must have met the following requirements:

1. Completed or have in progress coursework to total 90 credits by the time of admission.
2. Completed the following management "tool" courses on an A-F grading basis by the time you enter the Carlson School (with no more than two tool courses in progress when you apply): Principles of Financial Accounting I and II (Acct 1024 and 1025); Principles of Macroeconomics, Microeconomics (Econ 1001 and 1002); Fundamentals of Computers and Information Technology in Organizations (MSci 1010); Data Analysis and Statistical Inference for Managers (MSci 1020) and Calculus (Math 1142 or 1211).
3. Earned a minimum grade point average (GPA) of 2.80 in all transferable credits and in the tool courses. *Note:* Once a passing grade (D or better) has been earned, students may not receive credit for repeating the course. The original grade of D or better will be used in calculating the GPA. In addition, Ns and Fs earned fall 1987 or later in transferable coursework are counted as zero grade points in the student's GPA. As space permits, students with strong credentials (e.g. significant leadership experience, particularly rigorous coursework), but slightly lower GPAs may be considered for admission.
4. Completed the **Pre-Management Requirements** as listed below. Equivalent courses taken at other institutions may be substituted (upon evaluation) for required University courses. You may apply lacking a total of five pre-management courses. Tool courses in progress at the time of application are included in this total.

The pre-management program includes prerequisites for Carlson School courses as well as coursework required to fulfill the liberal education distribution requirements established by the University. Generally, all credits earned in liberal education courses may be applied toward the B.S.B. degree, except that the

Carlson School accepts a maximum of 12 credits of physical education toward the degree. You are advised to consult the Undergraduate Studies Office, 290 Humphrey Center, about acceptance of such courses.

Pre-Management Requirements

Second Language Requirement—Students who graduate from high school after June 1986 and who graduate with their B.S.B. from the University after June 1991 will be required to have two years of high school or two quarters of college work in a single foreign language.

Note: The following course titles and numbers represent specific University courses, but equivalent courses taken at other institutions (upon evaluation) may be substituted. Courses in italics also fulfill the University's College of Liberal Arts (CLA) group distribution requirements. The courses may fulfill a CLA group other than the Carlson School of Management group in which they are listed. Please refer to the current *CLA Bulletin* for further information. One course cannot be used to fulfill more than one requirement.

GROUP A: COMMUNICATION, LANGUAGE, AND SYMBOLIC SYSTEMS—14-19 credits

1. Composition—5-9 credits

- Comp 1011—Writing Practice I or exemption from requirement (A-F grading required)
- Comp 1027—Intermediate Composition is required if you are applying for admission to the B.S.B. Accounting Program. (S-N grading allowed; A-F grading recommended)

2. Mathematics—5 credits (A-F grading required)

- Select one of the following options:
Math 1142—Short Calculus (OR)
Math 1211—Calculus I
- NOTE: Math 1111 is a prerequisite for Math 1142 and 1211.

3. Symbolic Systems—4-5 credits (A-F grading required)

- Computer Science
3101 3102 3104
- Linguistics
3001 3111
- Mathematics
1131 1221
- Philosophy
1001 3201

GROUP B: PHYSICAL AND BIOLOGICAL SCIENCES—9 credits

1. One laboratory science course—5 credits

- Astronomy
1011 and 1015 1021 and 1025
- Biochemistry
1301
- Biology
1009 1011 1103 1106 3011 3012
- Chemistry
1001 1002 1003 1004 1005 1031 1032
- Geology
1001 and 1021 1002 1111
- Microbiology
3103
- Physics
1001 and 1005 1041 and 1045 1042 and 1046
1061 and 1065 1071 and 1075 1104 and 1107
1105 and 1108 1106 and 1109 1271 and 1275
1281 and 1285 1291 and 1295
3801 5091

2. History or application of science—4 credits

- Biology
1008 1101 1102 1301 3051 3112 5041
- Botany
1012
- Ecology and Behavioral Biology
3001
- Genetics and Cell Biology
3002 3022
- Geology and Geophysics
1005 1007
- History of Science and Technology
1711 1712 1713 1811 1812 1813
3201 3202 3711 3712 3713 3811
3812 3813 3825 5924 5925
- Interdepartmental Studies
5402 5403
- Mechanical Engineering
5402 5403

GROUP C: THE INDIVIDUAL AND SOCIETY—13 credits

1. Psychology 1001—5 credits (A-F grading required)

2. Two additional courses (as indicated below)

- a. At least one course must be from the following list of international courses:
Afro-American Studies
1021 1441 3001 3002 3013 3418
3421 3876 5145
- American Indian Studies
3026 3036 3111 3112 3161 3211
- Ancient Near Eastern and Jewish Studies
3501 3502 3505
- Anthropology
1102 3222 3223 3241 3251 3261
3281 3003 3221 3293 3512 3521
3533 3541
- Chicano Studies
1105 3427
- Chinese
1201 1202

Degree Programs

Classics

1001-1006 1023-1025 3023-3025 3071
3073

Dutch

3510

East Asian Studies

1063 1461 1462 1463 3211 3281
3464 3465 3467 3468 3471 3472
3481

Economics

5301 OR 5331 5307 OR 5377 3315 OR 5315
5401 OR 5431 5461-5463

French

3511 3512 3590 3599 3513

Geography

1301, all 3xxx-5xxx level courses focusing on
non-U.S. geography

German

3501 3502 3511 3512 3513

History

All non-U.S. history courses

Humanities

1111 1113 1115 1117 1119 1201 1202
1211 1212 3813 3878

International Relations

3101 3105 3900

Italian

3501 3502 3590

Jewish Studies

3100 3142 3521

Journalism

5801 5825 5826

Latin American Studies

3131 5120

Middle Eastern Studies

3301 3491 3505 3507 3508 3511 3512
3541 3542 3543 3544 3612 5521 5523
5525

Music

1804 3709 3807 3808

Polish

3801

Political Science

1025 1054 3475 3477 3810 3835 5461
5463 5465 5467 5471 5473 5476 5477
5478 5479 5883 5885 5886 5889

Portuguese

3501 3502

Russian

3106 3511 3512

Scandinavian

3271-3273 3457 3501 3614 3615 5118
5173

Sociology

3315 3456 3457 3481 3551 3671 5571
5675

South and Southwest Asian Studies

1506 3501 3502 3506 5531 5532 5535

Spanish

1501 1502 1503 3501 3502 3512

Spanish/Portuguese

3610

Speech

3451

Women's Studies

1102 3402 5401

b. An additional course either from the international studies list (above) or from CLA's Individual and Society (Group C) course list.

GROUP D: LITERARY AND ARTISTIC EXPRESSION—8 credits

Choose one of the following options:

1. Any two of the following:

Hum 1001, Hum 1002, Hum 1003, 1004, 1005
OR

2. One course from each of the following areas (a and b):

a. Literature—4 credits

Afro American Studies

3253 3591 3592 3601 5301 5593
5595 5596 5597

American Indian Studies

3116

Comparative Literature

5311 5321 5531 5332

Chicano Studies

3507 3508 3510 3511

Chinese

3161 3162 3163 3165

Classics

1042 3081 3082 3083 3181 3282
5081 5082 5083

Dutch

3610

English—all courses except

3481 3710 3851 3852 3963 3970
3980 5211 5230 5481 5482 5483
5486 5487 5711 5712 5713 5714
5753 5815 5821 5831 5843 5851
5860 5871 AND THOSE LISTED IN
GROUP D2b

French

3601 3602 3603 3606 3607 5607

German

3601 3602 3603 3604 3610 5371
5601 5603 5611

Italian

5601-5603 5609

Japanese

3161 3163 3164

Jewish Studies

3315

Middle Eastern Studies

3211 3212 3213 3601 3602 5601
5602

Polish

3601 3602

Portuguese

3603

Russian

3421 3422 5401 5404 5407 5409
5421 5422 5425

Scandinavian

3505 3601 3602 3604 3605 3611
3612 3613 3614 3615 3618 5201
5202 5501 5502 5512 5602 5611
5613-5619 5631 5632

South and Southwest Asian Studies

3204 5201-5203

Spanish

3601 3602 3605 3610 3614 3615 3620

Women's Studies

3304 3306 3308 5304 5308

b. Artistic Expression and Humanities—4 credits

Afro-American Studies

1301 3105 3108 3301 5201

American Indian Studies

3221 3242 5251

Architecture

1021 1022 1023 5051-5057 5061

Art History—all courses except

3895 3940 3950 3970 3975 5895 5950

5960 5970 5990

Art Studio—all courses except

3970 3980 5970

Chicano Studies

3213

Classics

3008 3142 3152 3162 5103 5104-5109

5111 5112

Dance—all courses except

3712 3815 5616 5700

Design

1501 1521 1541

East Asian Studies

3001 3013 3808

English

1101 1104 3101 3104 5101-5106

5108 5109

French and Italian

3604 3608

Humanities—all courses except

3910 3944 3970 3980 5910 5930

5970 5990

Jewish Studies

3401 3402 3403

Music—all courses except

3970 3980 5950

Scandinavian

3606 3607 3654 5641 5644 5645

Theatre Arts—all courses except

3412 3950 3980 5718 5728 5910

5950 5970

Women's Studies

3304

MANAGEMENT-RELATED GROUP—22 credits (A-F grading required)

1. Acct 1024, 1025—Principles of Financial Accounting I, II
2. Econ 1001, 1002—Principles of Macroeconomics, Microeconomics
3. MSci 1010—Fundamentals of Computers and Information Technology in Organizations
4. MSci 1020—Data Analysis and Statistical Inference for Managers

Additional transferable credits to total 90 are required by the time you enter the Carlson School of Management. In general, credits from CLA, IT

and Ag are acceptable for credit in the Carlson School with the exception of personal skills/self development courses like efficient reading, how to study, etc.

Application Procedures

Each student receives an Acceptance Notice when admitted to the Carlson School of Management, which indicates terms of admission and credits accepted. If you apply for admission and are not accepted, you will receive a notice explaining the reasons.

When applying to the General Management Program, you must indicate your intended area of emphasis: actuarial science, banking, finance, risk management and insurance, logistics management, marketing, small business management and entrepreneurship, general management studies, or self-designed. If you wish to apply to both the Accounting Program and the General Management Program, please indicate on your application your first and second choice.

If you wish to change programs after admission, you must file a petition. Petitions must be filed in 290 Humphrey Center by the application deadlines for fall and spring quarters. Students must meet the minimum overall and tool admission GPAs currently in place at the time of their petition.

Change of College Within the University—If you are currently enrolled in another unit of the University of Minnesota, you must apply to transfer to the Carlson School of Management by June 15 for fall quarter admission and by January 15 for spring quarter admission. A Change of College Within the University form and the Activities Resume are available for this purpose at the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-2008).

Transfer From Other Institutions—If you are transferring from outside the University to the Carlson School of Management, you must submit an Application for Admission and an Activities Resume,

Degree Programs

available at the Office of Admissions, 240 Williamson Hall. You must request that an official transcript from each college you have attended be sent directly from the college to the Admissions office. In addition, a \$20 *nonrefundable* application fee must accompany your application.

Credits completed at other institutions that are acceptable for transfer to the Carlson School of Management may be used to meet admission requirements. Credits in business courses at the lower division level are accepted for transfer only if such coursework is available for credit in the College of Liberal Arts pre-management program. Junior- and senior-level business courses completed at other institutions are usually accepted for credit only by petition; you should petition for acceptance of these courses after admission to the Carlson School through the Undergraduate Studies Office, 290 Humphrey Center. An appropriate faculty member will make the evaluation.

Foreign Study Credits—Credits earned at recognized institutions of learning abroad may be transferred to the Carlson School of Management if such work meets specific lower division distribution requirements or upper division elective requirements, as determined by the coordinator of admissions. No more than 45 credits of foreign study may be used to meet degree requirements. Foreign study credits transferred are accepted on the S-N grading system only, and are applied to the maximum of 25% of a student's total program credits that may be completed on S-N grading. Credits for other study abroad experiences may be earned only through special examinations authorized by the Undergraduate Studies Office.

Adult Special Status—If you wish to take courses to meet special needs, you may be admitted under adult special status. If you desire admission in this category, you must formally apply at the Office of Admissions, 240 Williamson Hall. Adult special students are not considered candidates for degrees. If you are admitted under adult special status and later

decide to become a degree candidate, you must satisfy the admission requirements and apply for transfer to the school.

Generally, adult special students admitted to the Carlson School of Management must have a bachelor's degree or business experience and a strong undergraduate academic record. After admission as an adult special, you will be allowed to continue on a quarter-by-quarter basis for a maximum of three quarters and must have written approval from the Undergraduate Studies Office, 290 Humphrey Center, for each quarter of registration. Continued registration will not be approved if you do not maintain a satisfactory grade record.

Application deadlines for adult special students in the Carlson School are July 15 for fall quarter and February 15 for spring quarter.

Continuing Education and Extension (CEE)—Generally, undergraduate degree courses offered in the evening through the Continuing Education and Extension division of the University are accepted for full credit and grade value by the Carlson School of Management. The school offers an extensive selection of credit and non-credit undergraduate courses in the evening. You must be formally admitted to the Carlson School if you plan to complete requirements for the baccalaureate degree in business administration through evening classes. As an extension student, you should complete the pre-management requirements early in your program and apply to the school after fulfilling the 90 credits required for admission. Carlson School CEE application forms are available in the Extension Counseling Office, 314 Nolte Center, University of Minnesota, 315 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-2500); and they must be completed if you plan to take all courses through CEE during your quarter of admission, or if you wish to complete all of the B.S.B. course requirements through extension classes. If you have already been admitted to the Carlson School as a day school student and wish to complete the degree program

requirements in evening classes, you must notify the Undergraduate Studies Office.

Continuing Education and Extension offers a number of noncredit certificate programs in various business fields. These programs are described in the *Extension Classes Bulletin*. Certificate credits earned through evening classes may not be applied toward degree programs.

Extension Independent Study Credits—University of Minnesota independent study (correspondence) courses carrying degree credit may be applied toward course, credit, and grade requirements in the Carlson School of Management. The school accepts a maximum of 16 credits of upper division Carlson School coursework that has been completed through correspondence study toward the B.S.B. degree.

Bachelor of Science in Business Degree Requirements

To graduate from the Carlson School of Management you are required to:

1. Complete a minimum of 180 credits. These credits include the required pre-management coursework and the specific degree requirements listed below.

2. Complete no less than 40% and no more than 60% of all credits in business and economics coursework.

3. Complete a minimum of 40 credits of upper division courses taught by departments in the Carlson School *after* official admission to the school.

4. Complete the final 45 credits of the degree program at the University of Minnesota. (With prior approval, students may apply credits earned at an institution participating in the National Student Exchange Program and through foreign studies programs toward these 45 credits.) In addition, accounting students must complete 50% of their total number of accounting classes at the University of Minnesota.

5. Be in good academic standing with a minimum grade point average of 2.00 in all work taken after admission to the Carlson School and in all upper division courses offered by departments in the Carlson School.

Second Language Requirement: Students who graduate from high school after June 1986 and who graduate with their B.S.B. from the University after June 1991 will be required to have two years of high school or two quarters of college work in a single foreign language.

If you take a course without fulfilling a prerequisite, you may not take the prerequisite course later for credit except by permission from the Undergraduate Studies Office.

Noncredit seminars for your personal and professional development are strongly recommended. Refer to your quarterly registration instructions for further information.

General Requirements

Note: Students admitted to the Carlson School of Management before fall 1988 are responsible for the requirements published in the Management bulletin current at the time of their admission. Contact the Undergraduate Studies Office for more information.

Core-28 credits (A-F required):

- Acct 3001—Managerial Accounting
- BFin 3000—Finance Fundamentals
- IR 3002—Personnel and Industrial Relations
- Mgmt 3001—Fundamentals of Management
- MSci—3030 (formerly MIS 3300)—Information Systems and Information Management
- Mktg 3000—Principles of Marketing
- OM 3000—Introduction to Operations Management

Economics—4 credit course selected from the following (A-F required):

- Econ 3101
- Econ 3102
- Econ 3105
- Econ 3701

Senior Policy Course (A-F required):

- Mgmt 3004

Communications—8 credits

- Comp 3002—Pre-professional Writing for Business
- One course from the following (the Speech and Rhetoric departments expect students to have had an introductory speech or rhetoric course):
- Rhet 3254—Advanced Public Speaking
 - Rhet 3266—Discussion Methods
 - Spch 3605—Public Speaking (Instructor approval required)
 - Spch 3411—Small Group Communication Processes
 - Th 3950—Topics: Platform Performance

Degree Programs

International—4 credits (A-F required) selected from the following:

AgEc 3070, 3080, 5720, 5750

BGS 3004

BGS 3019 (depending on the topic offered, this course may fulfill the requirement; consult the Undergraduate Studies Office for further information)

Econ 3041, 3315, 5041, 5301 or 5331, 5307 or 5337, 5311 or 5341, 5313, 5315, 5401 or 5431

FSMg 3460, 3490, 3820, 3910, 3920

Geog 5145, 5181, 5191, 3321, 3331, 3341, 3315, 3378

IntR 5145, 5802, 5831

PolS 3477, 3810, 5889

PA 5404, 5820 (formerly 5301)

Additional General Management Program Requirements

Emphasis—20-24 credits in one of the following areas of emphasis (A-F required):
Note: Students pursuing more than one area of emphasis should expect to spend more than two years completing their degrees in the Carlson School.

Actuarial Science (20 credits)

Ins 3100—Risk Management and Insurance

Ins 5230/Math 5057—Life Contingencies I

Ins 5231/Math 5058—Life Contingencies II

Math 5473—Analysis of Numerical Methods

Math 5056—Theory of Interest

Banking (20 credits)

BFin 3601—Bank Financial Management—Spring Quarter

BFin 3602—Regulation of Depository Institutions—Fall Quarter

BFin 3603—Selected Problems in Bank Management—Winter Quarter

Two of the following:

Acct 3160—Financial Statement Analysis

BFin 3100—Financial Management

BFin 3300—Investment Management and Financial Markets

Finance (20 credits)

BFin 3100—Financial Management

BFin 3300—Investment Management and Financial Markets

Ins 3100—Risk Management and Insurance

Acct 3160—Financial Statement Analysis

Acct 3255—Managerial Cost Accounting

Small Business Management and Entrepreneurship (20 credits)

Mgmt 3002—Psychology and Management

Mgmt 3008—Entrepreneurship and the Smaller Enterprise

One of the following:

Mgmt 5101—Advanced Topics: Entrepreneurship Project

Mgmt 5101—Advanced Topics: Small Business Management

Two of the following:

Acct 3160—Financial Statement Analysis

BFin 3100—Financial Management

Mktg 3010—Buyer Behavior and Marketing Analysis

OM 3041—Project Management

Marketing (20 credits)

Mktg 3010—Buyer Behavior and Marketing Analysis

Mktg 3020—Marketing Operations Management

One of the following:

Mktg 3030—Sales and Distribution Management

Mktg 3050—Marketing Communications

Mktg 3065—Retail Management

Mktg 3090—Marketing Topics

Two additional upper division Carlson School of Management courses other than additional marketing courses.

Logistics Management (20 credits)

LM 3000—Introduction to Logistics Management

LM 3010—Principles of Transportation

LM 3020—Advanced Logistics Management

LM 5010—Topics in Logistics Management

Two advanced courses (8 credits) selected from Finance, Management Information Systems, Marketing, or Operations Management

Risk Management and Insurance (20 credits)

Ins 3100—Risk Management and Insurance

BFin 3100—Financial Management

BLaw 3058—Introduction to Law, and the Law of Contracts and Agency

Two of the following:

Ins 3200—Personal Financial Management

Ins 3210—Economic and Social Security

Ins 3220—Property and Liability Insurance

General Management Studies (20 credits)

Two of the following:

BGS 3004

BLaw 3058

DSci 3055

Ins 3100

LM 3000

Mgmt 3002

Three additional courses within the Carlson School. These may be selected from the list above. No more than two of these courses may be taken from the same department or functional area.

Self-Designed Emphasis

20 credits of upper division courses with no more than 12 credits in one designator area. Credits may be from other units within the University. Approval of the director of undergraduate studies is required. At least 12 of the 20 credits must be completed after approval.

Additional transferable electives (upper or lower division) from the Carlson School, College of Liberal Arts, Institute of Technology, or College of Agriculture to complete the 180 credits needed for graduation. Consult an adviser in the Undergraduate Studies Office before taking courses in colleges other than those listed above.

Additional Accounting Program Requirements

Core (A-F required)

Acct 3101—Financial Accounting Theory and Practice I

- Acct 3102—Financial Accounting Theory and Practice II
Acct 3201—Cost Accounting
Acct 5125—Auditing Principles and Procedures
Acct 5135—Income Tax Accounting
BLaw 3058—Introduction to Law and the Law of Contracts and Sales Contracts

Accounting Electives—8 credits of Accounting electives (A-F required; Acct 3199 and 3299 do not apply.) Acct 5180 is recommended for students planning to take the CPA exam.

Additional Electives—Additional transferable electives (upper or lower division) from the Carlson School, College of Liberal Arts, Institute of Technology, or College of Agriculture to complete the 180 credits required for graduation. Consult an adviser in the Undergraduate Studies Office before taking courses in colleges other than those listed above.

You may seek advice from accounting faculty on upper division electives. It is recommended, but not required, that you choose one of the following options:

1. Economics: Econ 3102 and one additional Economics course
2. Legal and Political Environment: BLaw 3078 and BLaw 3088
3. Management Information Systems: MIS 5102 and MIS 5103

Accounting Internships—Two internship opportunities are available in the accounting program: Acct 3199—Internship in Public Accounting and Acct 3299—Internship in Industrial Accounting. These courses require full-time work for one quarter and give students an opportunity to apply accounting concepts and methods and to obtain experience that is helpful in making career decisions. The public accounting internship, usually taken during winter quarter, emphasizes auditing and taxation. The industrial accounting internship, usually taken during the summer, involves such areas as development of cost data for specific projects, accounting procedures review, and evaluation and operation of some phase of an accounting system.

Advising

The Carlson School of Management offers centralized student personnel and advising services for undergraduate students currently enrolled in or interested in its day school or evening programs. In addition, the school works closely with the College of Liberal Arts' pre-management advisers in B-18 Johnston Hall. CLA pre-

management majors may schedule appointments in B-18 Johnston Hall (612/624-9585) or in 290 Humphrey Center (612/624-3313). Other students can call 612/624-3313 or stop into the Management Undergraduate Studies Office located in 290 Humphrey Center to schedule appointments.

Scholastic Standards and Policies

Grading Options—University regulations allow students the choice of two grading system options: A-F or S-N. You indicate the option you have chosen at the time of registration. Changes in a course registration from A-F to S-N grading or vice versa are not allowed after the second week of a quarter (first week of a summer term).

There are five permanent grades that are acceptable for the completion of a course: A (highest), B, C, D (lowest), and S (satisfactory). The grade of N (no credit) is assigned when a student does not successfully complete the work of a course. F represents performance that fails to meet basic course requirements and is unworthy of credit. In calculating grade point averages, F and N are assigned zero points.

The following rules and policies govern grading in the Carlson School of Management:

1. Carlson School departmental faculty designate courses in which students may register for S-N grading. Information on these courses is available in 290 Humphrey Center.
2. Non-Carlson School students may register for S-N grading in any Carlson School course that offers S-N grading.
3. Carlson School students must present a minimum of 75% (135 credits) of their total program requirements on A-F grading.
4. Students must complete all upper division degree requirements on A-F grading, except for upper division communications.
5. The following pre-management courses must be taken on A-F grading:

Degree Programs

Comp 1011, mathematics and symbolic systems requirements, Econ 1001 and 1002, Psy 1001, Acct 1024 and 1025, and MSci 1010/1020. High academic performance in these areas may enhance chances for admission to the school.

Dean's List Policy—The Dean's List is a method by which the Carlson School recognizes superior academic performance. A notation appears on the records of Carlson School of Management day school or combined day/CEE students who complete 12 or more credits on an A-F basis during a quarter and obtain a 3.50 or greater GPA. The student must submit documentation of credits completed through extension or independent study to be considered with the day school calculation.

Transcript Symbols—The following grade or symbol may be assigned in lieu of a permanent grade:

The temporary grade of I (incomplete) indicates there was not sufficient information immediately available to permit the assignment of a permanent grade. *In all cases, the incomplete must be made up during the next quarter of registration* (summer session is not considered a regular quarter). The instructor decides whether or not sufficient work has been completed to warrant the assignment of an I. To simply stop attending class does not guarantee you will be assigned an I.

The symbol W (withdrawal) indicates official cancellation of a course after the second week and through the first six weeks of a quarter, irrespective of your standing at that time. Cancellation must be official; you will not be assigned a W if you simply stop attending a class. Withdrawal from a class after the sixth week of a quarter is not allowed without scholastic committee approval.

GPA—Your grade point average (GPA) is defined as the sum of your grade points divided by the sum of credits for which you have earned grades of A, B, C, D, F or N. For purposes of defining academic achievement, grade points are assigned to the five permanent grades as follows: each

credit of A carries 4 grade points; each credit of B, 3 grade points; each credit of C, 2 grade points; each credit of D, 1 grade point; *each credit of F, 0 grade points; each credit of N earned after admission to the Carlson School of Management, effective fall quarter 1982, 0 grade points.* Credits of S are not computed in the GPA.

The grade point average on your University of Minnesota transcript is computed on work completed at the University of Minnesota only. Grade points for work completed at other institutions are computed by the Carlson School of Management into an overall average even though they are not reflected in the GPA on your University transcript.

Repeating Courses—The first passing grade (D or higher) earned in any course is counted for purposes of GPA and total credit. No credit is granted for a grade resulting from repeating a course in which a passing grade (D or higher) has already been earned, nor does the second grade affect your GPA.

You may repeat courses in which you receive a grade of F or N. Both the old and new grades will remain on your record and count toward your GPA. No degree credit is granted for grades of F or N. You need not repeat a course for which an F or N was received unless it is required for graduation.

If you take a course without fulfilling a prerequisite, you may not later take the prerequisite course for credit except by permission from the Undergraduate Studies Office.

Satisfactory Progress and Scholastic Probation—All students are expected to make satisfactory progress toward the bachelor's degree. Academic standing is defined by honor point accumulation which is calculated as follows:

- A = + 2 per credit
- B = + 1 per credit
- C = 0 per credit
- S = 0 per credit
- D = - 1 per credit
- N = - 2 per credit
- F = - 2 per credit

To remain in good academic standing, students must accumulate positive honor points in each of two areas: (1) all courses taken after admission to the Carlson School and (2) all upper division courses offered by Carlson School departments, plus the first course of Econ 3101, 3102, 3105, 3701 if taken after admission to the Carlson School. An accumulation of Ds, Fs, and Ns without offsetting As and Bs in either of these two areas will result in a grade point deficiency.

Students are placed on probation when their accumulated honor points are from -1 to -10. Students are placed on "Final Quarter Notice" when their accumulated grade points fall below -10. Failure to meet the terms of the "Final Quarter Notice" can result in suspension from the school according to terms set by the Undergraduate Studies Office.

Probationary action is based on University coursework only. Thus, grade point deficiencies accumulated at the University of Minnesota cannot be offset by high grades earned at other academic institutions.

Students suspended for academic reasons are normally not allowed to register in the school for a period of one year. *Any credits earned during the period of suspension are not counted toward the degree unless prior approval has been granted.*

Cancel-Adding—Cancellations are allowed through the sixth week of the quarter (third week of summer terms). No signature or approvals are required. Instructor permission is required to add accounting courses on or after the first day of the quarter. Instructor permission is required to add all other courses after the first week of the quarter. After the second week, Scholastic Committee approval is required to add any class.

Special Examination for Credit—In some instances, a student who has mastered the subject matter of a specific course outside of class may take a special examination in order to receive credit for the course. If you believe you know the subject matter as well as students success-

fully completing a course, you may apply first to the Undergraduate Studies Office and then to the instructor of the course for permission to take a special examination. A fee of \$30 per examination is charged.

Petitions—Petition forms, available in the Undergraduate Studies Office, are required to change from the B.S.B.-General Management to B.S.B.-Accounting Program or vice versa; to evaluate whether certain courses completed at other institutions are equivalent to University of Minnesota courses for transfer purposes; and to request exceptions to rules and requirements.

Petition forms are filled out in triplicate and may require the written recommendation of the department or instructors involved. Completed forms should be turned in to the Undergraduate Studies Office. After official action has been taken on the petition, a copy of the form, indicating the decision made, will be available in 290 Humphrey Center.

Academic Misconduct—The school defines academic dishonesty broadly as any act that violates the rights of another student in academic work or that involves misrepresentation of your own work. Academic dishonesty includes, but is not necessarily limited to, cheating on assignments or examinations; plagiarizing, which means misrepresenting as your own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student's work.

A committee composed of students and faculty members investigates charges of academic dishonesty referred to it by Carlson School of Management faculty members or students. When charges are upheld, the committee may place a student on disciplinary probation, fail the student in a course, suspend the student from the school, or take other action.

Degree Programs

Carlson School of Management faculty members may act on cases involving Carlson School students in their classes, but such action may not exceed modification of a course grade. Instructors must report any action to the director of undergraduate studies, and the student will be informed of the right to ask for a committee hearing. The advising staff can provide specific information about reporting and appeal procedures.

Disciplinary or conduct cases that are nonacademic in nature or that involve two or more colleges are referred to the Campus Committee on Student Behavior (624-6073).

Attendance—Each Carlson School of Management student is expected to attend classes regularly. Instructors announce their own policies regarding class attendance and are responsible for determining whether a student may make up work missed because of absence from class. Carlson School faculty members are required to allow make-up of missed examinations or other required coursework only under the following circumstances:

1. Participation in a formally approved and scheduled University activity such as intercollegiate competition in academic or athletic events. This does not include activities of student organizations of any type.
2. Performance of military or civil duty (such as jury duty) that could not be scheduled at another time.
3. Having a conflict of three or more examinations scheduled in one calendar day.
4. Having an illness or a family emergency that is attested to by a doctor's note or other acceptable evidence.

Grievance—If you have a complaint against a faculty member, you should first discuss the matter with that faculty member. If the matter cannot be resolved through this discussion, you should then present the complaint to the appropriate department chair. If a solution cannot be reached at that level, or if the grievance is

directed specifically against the department chair, you should request a meeting with the director of undergraduate studies. If this meeting fails to yield a satisfactory solution, the director will instruct you to submit a written explanation of the grievance to the dean. The dean refers the grievance to the appropriate school committee, which, under the guidance of its chair, reviews the complaint and attempts to resolve it through mediational methods. If necessary, the committee may conduct hearings on the matter and submit recommendations to the dean. If either party involved in the complaint is dissatisfied with the recommendations, it may submit an appeal to the school's Grievance Committee. Students serve as members of both the initial hearing committee and the school's Grievance Committee.

If you have a complaint against a staff member, you should first attempt to resolve the difference with that staff member. If this meeting proves unproductive, you may bring the matter to the staff member's supervisor. If you and the supervisor cannot resolve the complaint, you may request a hearing by presenting a written explanation of the grievance to the dean. Beyond this point, the grievance procedure is the same as that outlined above for a complaint against a faculty member.

Graduation

Applying to Graduate—The quarter before your intended quarter of graduation you must complete an Application for Degree in 150 Williamson Hall. Before you file the Application for Degree you should schedule an appointment to verify your degree progress with an adviser in the Undergraduate Studies Office. If you are enrolled in extension or independent study classes during the final quarter of your undergraduate program, you must notify the Undergraduate Studies Office of any classes in which you are currently enrolled (including quarter or semester, course number, and section number); *your graduation may be delayed if such notifi-*

ation is not received. A final check of graduation requirements is made by an adviser after you have completed all coursework. If you do not meet the graduation requirements at that time, you will be notified by the Undergraduate Studies Office.

Graduation With Honors—The B.S.B. degree may be awarded “with distinction” or “with high distinction” upon final review of coursework. Honors listed in the commencement program are not final until all grades have been received. To be eligible for graduation with honors, you must:

1. Complete a minimum of 44 upper division Carlson School of Management credits on an A-F grading basis after admission, and

2. Meet the following specific requirement for one of the two honors:

With Distinction—Rank in the upper 4 to 10% of your graduating class based on all coursework completed while enrolled in the Carlson School of Management.

With High Distinction—Rank in the upper 3% of your graduating class based on all coursework completed while enrolled in the Carlson School of Management.

Graduation honors are calculated using the Carlson School of Management GPAs of the students who have graduated fall quarter through summer session II of the preceding year.

Honors and Awards—The following honors and awards are presented annually and are announced at the Carlson School of Management spring commencement or other event.

Alpha Kappa Psi Scholarship Medal—Awarded by Alpha Kappa Psi to the graduating senior in the school who has maintained the highest scholastic average in the upper division Carlson School of Management courses. In the case of a tie, the student who has completed the most upper division Carlson School credits on an A-F grading basis will be awarded the medal.

Alpha Kappa Psi Tablet—Awarded to the four seniors in the school “who in scholarship and service to the school have been most outstanding.” The Student Awards Committee, composed of representatives from the Business Board, selects the recipients. The first tablet was presented by Alpha Kappa Psi in 1926, and the second was given in 1947.

Beta Alpha Psi—Membership in this national honorary accounting society is awarded to accounting majors on the basis of performance in specific accounting courses and overall grade point average.

Beta Gamma Sigma—This national honorary business society is recognized by the American Assembly of Collegiate Schools of Business as the official honorary society in the business field. Membership is offered to the upper 5% of the juniors and upper 10% of the seniors enrolled in the school, and to the upper 20% of those receiving master’s degrees during the year.

Business Association of Minorities Outstanding Achievement Award—Awarded by the Business Association of Minorities to one or two multiethnic (Hispanic, Asian American, Native American, or Black) graduating business seniors who have contributed to the political, social, and academic development of multiethnic students, and who have worked in developing and implementing minority programs within the Carlson School of Management.

Delta Sigma Pi Scholarship Key—Awarded by Delta Sigma Pi to the graduating senior in the school who has the highest scholastic average for work completed in the prescribed pre-management areas and in the Carlson School of Management.

Phi Beta Kappa—Students are selected for this national liberal arts honorary society on the basis of scholarship by members of the society. Students who have completed the College of Liberal Arts distribution requirements, have earned 150 or more credits, and have achieved a grade point average of 3.50 or higher may apply.

Degree Programs

Study of a foreign language is also required. Annual elections are held during spring quarter. Questions concerning the society should be addressed to Student Relations, 150 Williamson Hall.

Phi Delta Junior Scholarship Award—Awarded by Phi Delta to the junior in the school who has maintained the highest scholastic average during the first two quarters (24 credits minimum) of her or his junior year.

The Pillsbury Scholastic Achievement Award—The Pillsbury Scholastic Achievement Award is sponsored by the Pillsbury Company to recognize the senior who ranks highest academically among those students who have pursued advanced marketing coursework as well as overall scholastic achievement in the Carlson School of Management.

The 3M Marketing Leadership Award—The 3M Marketing Leadership Award recognizes a graduating senior who has demonstrated leadership service and scholastic achievement while pursuing the study of marketing. The award is sponsored by the 3M Company and is presented to the outstanding senior as selected by the marketing faculty.

Tomato Can Loving Cup Award—Awarded annually to the person the dean deems to have performed the most distinctive service to the school. A plaque was donated several years ago by the local chapter of Delta Sigma Pi to make possible a more permanent record of this very distinctive and highly valued award.

Wall Street Journal Achievement Award—Awarded annually to a graduating undergraduate student and to a graduating graduate student and sponsored by the *Wall Street Journal*. Presented to the student in each area, as selected by the finance faculty, who ranks highest scholastically among those who have expressed a special interest in finance and have pursued advanced coursework in that area.

Graduate Programs

The Carlson School of Management, in conjunction with the Graduate School, offers programs leading to the degrees of master of business administration (M.B.A.), master of business taxation (M.B.T.), and doctor of philosophy (Ph.D.). The Department of Industrial Relations, in conjunction with the Graduate School, offers programs in industrial relations leading to the degrees of master of arts (M.A.I.R.) and doctor of philosophy (Ph.D.). Complete descriptions of these programs and of graduate-level courses in these areas are presented in the *Graduate School Bulletin*.

Eligibility Examination—All applicants seeking admission to graduate programs in business administration, except those interested in industrial relations, are required to present a report of their performance on the Graduate Management Admission Test (GMAT—formerly Admission Test for Graduate Study in Business) as part of their application for admission. A report of performance on the Law School Admission Test (LSAT) may be submitted in lieu of the GMAT score for M.B.T. program applicants. Test scores on the Graduate Record Examination (GRE) may be submitted in lieu of the GMAT score for Ph.D. in Business Administration applicants. All applicants seeking admission to graduate programs in industrial relations must present a report of their performance on the Graduate Record Examination (GRE) and the Miller Analogies Test (MAT) as part of their application for admission. Applications cannot be processed without the reports. Since the GMAT and GRE are given at limited times and places during the year, you are advised to register early to take the examinations. For information concerning registration for the examinations, write to the Educational Testing Service, P.O. Box 966, Princeton, New Jersey 08540. For information concerning the MAT, contact the University Counseling Services, 301 Eddy Hall, University of

Minnesota, 192 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/624-9853).

Master of Business Administration (M.B.A.)

Two programs are offered for the M.B.A. The Minnesota M.B.A., consisting of 78 credits, is designed for students without prior education in business administration. The accelerated M.B.A. option, consisting of 54 credits, is designed for students with an undergraduate degree in business administration. These programs are offered through both full-time day and part-time evening study.

A part-time evening program leading to the master of business administration degree is also offered by the Carlson School of Management and the Graduate School for persons who are employed full-time.

To be admitted to the M.B.A. program, you must have completed an undergraduate degree in any field plus introductory courses in microeconomics and calculus or finite mathematics. You must take the Graduate Management Admission Test (GMAT). If your native language is not English, you are required to score 550 or higher on the Test of English as a Foreign Language (TOEFL).

Selection for admission is based primarily on five factors: the applicant's aptitude for graduate work in business administration, the quality of the applicant's prior academic experience, a statement of the applicant's career goals, managerial or administrative work experience, and two letters of recommendation are taken into consideration.

Full-time day students may enter the regular program in the fall; they may start the accelerated program in the summer. Part-time evening students in either program may begin fall or spring.

You are encouraged to apply six months in advance of the quarter you wish to enter.

The Minnesota M.B.A. Program (two year program) consists of a carefully structured group of core courses to be com-

pleted in the first year followed by coursework in an area of concentration, a sequence of three required courses, and three elective courses. Included in the second year is a field project in which students work with Twin Cities business firms and other organizations to solve current problems. The program requires completion of the following courses:

- MBA 8005—Computer Access and Programming for Business Analysis (first five weeks)
 - Communications Skills Program (second five weeks)
 - MBA 8010—Management and Organizational Behavior
 - MBA 8015—Human Resources Management
 - MBA 8020—Business Statistics: Sources, Presentation, and Analysis
 - MBA 8025—Decision Sciences and Information Systems
 - MBA 8030—Financial Accounting
 - MBA 8035—Managerial Accounting
 - MBA 8040—Financial Management
 - MBA 8045—Marketing Management
 - MBA 8050—Operations Management
 - MBA 8055—Business, Government, and Macroeconomics
 - MBA 8060—Strategy and Policy
 - MBA 8065—Field Project
- Plus four concentration and three elective courses

In the full-time day school program, these courses will take two years to complete. The core courses must be taken in sequence with at least three courses each quarter, and must be completed in three quarters.

Part-time evening students must take the courses in sequence but are not required to take a minimum number of courses per quarter. In this program MBA 8070, Problem Formulation and Decision Making, is taken instead of MBA 8065, Field Project. If you take two courses per quarter, the program may be completed in approximately ten quarters.

The Accelerated M.B.A. Option (one-year program) consists of an introductory quarter of coursework that complements the student's background followed by coursework in an area of concentration and a sequence of three required courses. The program requires completion of the following 14 courses:

- Four of the following eight:
- MBA 8015—Human Resources Management
- MBA 8025—Decision Sciences and Information Systems

Degree Programs

MBA 8035—Managerial Accounting
MBA 8040—Financial Management
MBA 8045—Marketing Management
MBA 8050—Operations Management
MBA 8005—Computer Access and Programming for Business Analysis
Communications Skills Program
MBA 8055—Business, Government, and Macroeconomics
MBA 8060—Strategy and Policy
MBA 8065—Field Project
Plus four concentration and one elective courses

In the full-time day school program, this program requires four quarters to complete (summer-fall-winter-spring).

Part-time evening students must take the courses in sequence but are not required to take a minimum number of courses per quarter. In this program MBA 8070, Problem Formulation and Decision Making, is taken instead of MBA 8065, Field Project. If you take two courses per quarter, the program may be completed in approximately seven quarters.

Additional Requirements—Each day and part-time evening M.B.A. student must select an area of concentration. This area of concentration is selected at the time of application for admission. Concentrations available to part-time evening students are identified with an asterisk. The available concentrations are:

Accounting*
Business, Government, and Society*
Decision Sciences
Finance*
General Management*
Insurance
Logistics Management
Management Information Systems*
Management Support Systems*
Marketing Management*
Marketing Research*
Operations Management*
Organizational Leadership
Elective courses may be taken in Industrial Relations.

Plan B Projects—Two Plan B projects are required for the M.B.A. degree. One project is completed as part of MBA 8065, Field Project (for day students), or MBA 8070, Problem Formulation and Decision

Making (for part-time evening students). This project enables you to work on current problems of an actual organization. A second project must be completed as part of a course within your area of concentration.

Graduation Requirements—A minimum grade point average of 3.00 must be earned in the 78 prescribed graduate credits for the regular program or in the 54 prescribed graduate credits for the accelerated program. The degree must be completed within seven years of initial registration in the program.

Further information about the M.B.A. day and evening programs is available from the M.B.A. Program, Carlson School of Management, 295 Humphrey Center, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455 (612/624-0006).

Master of Business Taxation (M.B.T.)

This degree program is designed to help students acquire a conceptual understanding of taxation and to develop technical competence in the practical application of the rules of taxation in business and personal decision making.

The program is offered only in the evening through Continuing Education and Extension. It is designed to accommodate nontraditional students who are employed during the day and enrolled in the program on a part-time basis during the evening. Students enrolled on a part-time basis can expect to complete the program in approximately two years. Students who choose to enroll in the program on a full-time basis can complete the program in a shorter period of time.

Application forms for and additional information about the M.B.T. program may be obtained from the Director of Graduate Studies in Taxation, 645 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455 (612/624-7511).

Common Body of Knowledge—All students are required to possess a common

body of knowledge in the business areas listed below. This requirement may be met through appropriate courses completed in your undergraduate program. If you are lacking courses in any of these areas, you must make up the deficiencies. Any deficiencies may be completed while enrolled in the M.B.T. program. Graduate credit will not be granted for courses used to satisfy these requirements. The common body of knowledge requirement can be met by completing introductory courses in the following areas:

- Finance
- Marketing
- Macroeconomics
- Microeconomics
- Managerial Statistics
- Management Information Systems
- Financial Accounting
- Managerial Accounting
- Management
- Law of Contracts and Sales Contracts
- Operations Management

Graduation Requirements—All students must complete 46 graduate credits, excluding credits earned in completing the required common body of knowledge coursework in business, and must maintain a 3.00 grade point average in these degree credits. The following courses must be completed:

Required Courses—General

- Acct 8150—Financial Accounting, Issues (or equivalent)
- Econ 8221—Principles of Public Finance (or equivalent)
- MBA 8055—Business, Government, and Macroeconomics
- MBA 8060—Strategy and Policy

Required Courses—Taxation

- Acct 5135—Income Tax Accounting (or equivalent)
- Acct 8220—Tax Research
- Acct 8225—Tax Procedure and Practice
- Acct 8230—Taxation of Corporations I

Elective Courses—Taxation: complete 16 credits selected from the following courses

- Acct 8330—Taxation of Corporations II
- Acct 8335—Tax Effects on Business Decision Making
- Acct 8340—Taxation of Partners and Partnerships
- Acct 8350—Taxation of Estates, Gifts, and Trusts
- Acct 8354—Tax Planning for Families and Organizations
- Acct 8356—Taxation of Deferred Compensation and Fringe Benefits

- Acct 8360—State and Local Taxation
- Acct 8370—Taxation of Property Transactions
- Acct 8380—Tax Aspects of International Business
- Acct 8390—Current Topics in Taxation

Plan B Project—Credits must be earned in courses providing the opportunity to prepare written reports of the quality, but not the range, of a master's thesis.

Examination—All candidates are required to take a final oral or written examination, or both, at the discretion of the faculty examining committee.

Doctor of Philosophy in Business Administration

Details about admission and degree requirements for the Ph.D. program in business administration are explained in the *Graduate School Bulletin* and in the Ph.D. Program brochure, available from 295 Humphrey Center, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455 (612/624-0875).

Master of Arts in Industrial Relations

The M.A. degree program is designed to prepare students for professional employment in industrial relations in business, government, and labor organizations. The program also serves as preparation for further graduate work in industrial relations or in related fields of study. The degree is offered through full-time day and part-time evening programs.

Candidates for this program are selected on the basis of demonstrated interest and aptitude in industrial relations and the quality of their undergraduate work. A social sciences background is desirable for students seeking admission to graduate work in industrial relations. You will be expected to have completed, or to subsequently complete, coursework prerequisite to courses selected for your graduate program.

Completion of the full-time day master's program normally requires six quarters in residence, or its equivalent in summer terms. Evening program students usually take one or two courses per quarter and thus could finish within eight quarters. Most students, however, can expect that three to three and one-half years are necessary when work schedules must be balanced. If you are adequately pre-

Degree Programs

pared and devote full time to graduate study, you can complete the program in less than two years. If you are less prepared or a part-time student, you should anticipate a longer period of study.

Application forms for and additional information about the M.A. degree program in industrial relations can be obtained from the Director of Graduate Study in Industrial Relations, 537 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455 (612/624-5810).

Plan A—Thesis Program—A minimum of 48 course credits, 16 thesis credits, and an accepted thesis are required. Additional coursework may be required by your adviser to insure adequate preparation in the major field.

The major coursework consists of a minimum of 32 credits that include IR 8002, IR 8001, one course in each of at least three areas in industrial relations, and one additional industrial relations course.

A minimum of 12 credits are required in an approved field of study related to industrial relations. However, more than 12 credits may be required, depending upon previous preparation. Commonly selected fields are business administration, psychology, sociology, or economics.

A thesis dealing with a specialized topic in the major field must be approved for the degree.

There is no language requirement.

A final oral examination is required of all M.A. students. Candidates will be admitted to the examination only after they have completed all course requirements and their Plan A thesis has been approved.

Plan B—Nonthesis Program—A minimum of 64 credits and completion of three Plan B projects are required. The major coursework consists of a minimum of 48 credits that include IR 8001, 8002, 8003, 8004, 8005, 8006, 8007, 8012, and four additional industrial relations courses.

The remaining coursework consists of a minimum of 16 credits earned in at least

two related fields. A minimum of 8 credits must be earned in one related field. Commonly selected fields are business administration, psychology, sociology, or economics. A 12-credit core of management courses is recommended for students having limited or no business administration background. The core consists of MBA 8030, MBA 8025 *or* MBA 8035, and MBA 8040 *or* MBA 8050.

Three papers of the quality, but not the scope, of a master's thesis must be prepared involving independent work under faculty supervision. Two papers will be written in conjunction with IR 8001 and IR 8012 and are expected to require individual research roughly equivalent to 40 hours beyond normal requirements for a 4-credit course. The third paper can be written in conjunction with any course appearing on the approved program.

There is no language requirement.

A final oral examination is required of all M.A. students. Candidates will be admitted to the examination only after they have completed all course requirements and their Plan B projects have been approved.

Doctor of Philosophy in Industrial Relations

Details about admission and degree requirements and application forms for the Ph.D. program in industrial relations can be obtained from the Director of Graduate Study in Industrial Relations, 537 Management and Economics, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455 (612/624-5810).

Course Descriptions



Course Descriptions

Symbols—The following symbols are used throughout the course descriptions in lieu of page footnotes:

- § Credit will not be granted if the equivalent course listed after this symbol has been taken for credit.
- ¶ Concurrent registration is allowed in the course listed after this symbol.
- # Consent of instructor and a Registration Override Permit, completed and signed by the college office, is required prior to registration.
- △ Registration Override Permit, completed and signed by the college office is required prior to registration.

Accounting (Acct)

645 Management and 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 of American businesses and the need for unconventional approaches to business problems have increased the demand for professional accountants within individual firms. Effective operations planning demands that relevant data be collected, analyzed intelligently, and reported coherently. Management needs assistance in directing activities to meet objectives and in adjusting operations to fit new conditions. Providing information for planning and control is the function of the controller, the chief accounting officer of the firm. Employment opportunities for accountants extend to nonprofit organizations and government units—organizations that have needs similar to those of private firms and recognize increasingly the value of the basic tools of accounting in managing their development. Professional accountants are also needed in industry, teaching, and public accounting.

Certified public accountant (C.P.A.) is the professional designation of those who analyze operations and financial position in order to provide an independent opinion on the financial statements of an orga-

nization. Certified management accountant (C.M.A.) is the professional designation of 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 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 you to take the examinations in the area of your career interest immediately before or after graduation.

Courses offered are designed to develop the analytical abilities of students as well as to present the usefulness and limitations of accounting procedures. If you are interested in becoming a professional accountant, you should refer to the B.S.B.-Accounting program requirements described in the second section of this bulletin.

If you have prior background or training in accounting, you may receive credit for Acct 1024 and/or 1025 by passing a special examination. A \$30 fee is required in advance for each examination you wish to take. The examinations are given in August, November, and February; contact Continuing Education and Extension Counseling (612/625-2500) for exact dates. To allow time for processing the necessary forms, you must contact your current college office *at least* one week before the date of the examination.

1024. PRINCIPLES OF FINANCIAL ACCOUNTING I. (3 cr; prereq 3rd-qtr fr; not offered S-N)

Introduction to basic concepts and definitions in accounting. Transaction analysis. Statement presentation.

1025. PRINCIPLES OF FINANCIAL ACCOUNTING II. (3 cr; prereq 1024; not offered S-N)

Valuation and measurement problems. Emphasis on inventories, marketable securities, property plant and taxes, leases.

3001. MANAGERIAL ACCOUNTING. (4 cr; prereq 1025; not offered S-N)

Accounting analysis and reports for managerial decisions. Information for planning and controlling of operations.

3101. FINANCIAL ACCOUNTING THEORY AND PRACTICE I. (4 cr; prereq 1025)

Development of generally accepted accounting principles. Income determination. Asset valuation. Statement of changes in financial position. Price level accounting.

3102. FINANCIAL ACCOUNTING THEORY AND PRACTICE II. (4 cr; prereq 3101)

Accounting for and reporting of current and long term liabilities, owner's equity. Leases. Pensions. Income tax accounting.

3160. FINANCIAL STATEMENT ANALYSIS.

(4 cr; not for accounting majors; prereq 1025)
Analysis and interpretation of financial statements and schedules for investors and other users.

3199. INTERNSHIP IN PUBLIC ACCOUNTING.

(3 cr; offered S-N only; prereq 5125 and #)
Full-time work for a public accounting firm plus a written report on the work experience.

3201. COST ACCOUNTING. (4 cr; prereq 3001)

Process and standard costs, behavior of costs under varying conditions, cost allocations, variance analysis.

3255. MANAGERIAL COST ACCOUNTING.

(4 cr; not for accounting majors; prereq 3001)
Cost concepts and their application from the point of view of the executive who uses cost information in decision making. Management control systems.

3299. INTERNSHIP IN MANAGEMENT ACCOUNTING. (3 cr; offered S-N only; prereq 3201 and #)

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.

5125. AUDITING PRINCIPLES AND PROCEDURES. (4 cr; prereq 3102)

The auditor's role and function. Includes audit standards, ethics, procedures, legal responsibilities.

5126. INTERNAL AUDITING. (4 cr; prereq 3102 and 3201)

Financial and operational auditing. Standards. Management of the function.

5127. EDP AUDITING. (4 cr; prereq 5125, MIS 3300 or MSci 3030)

Audits of computerized data processing systems. Computer audit tools and techniques. General and application controls.

5135. INCOME TAX ACCOUNTING. (4 cr; prereq 1025)

An introduction to principles of federal income taxation of various taxpaying entities.

5180. ADVANCED ACCOUNTING. (4 cr; prereq 3102)

Consolidated statements. Partnerships. Fiduciaries. International operations. Governmental accounting. Accounting for not-for-profit entities.

5210. FINANCIAL ACCOUNTING THEORY. (4 cr; prereq 3102)

History of financial accounting, alternative concepts of income, measurement theory, presentation of financial condition.

5230. CORPORATE TAXATION. (4 cr; prereq 5135, #)

The tax consequences of the formation, operation, and liquidation of a business corporation.

5236. TAXATION II. (4 cr; prereq 5135)

Income taxation of corporations. Partnerships. Tax research.

5270. REPORTING FOR MANAGEMENT CONTROL. (4 cr; prereq 3201)

Management accounting tools and techniques applied to medium and large organization problems. Management control systems.

5271. ACCOUNTING SYSTEMS. (4 cr; prereq 3102 or 3201)

Applications of electronic data processing systems in accounting, including modeling, financial planning, auditing, and data security. Analysis and design of accounting information systems.

5281. ACCOUNTING FOR GOVERNMENTAL AND NONPROFIT SEEKING ENTITIES. (3 cr; prereq 3102)

Accounting concepts and practices appropriate for managing and reporting of activities and positions of governmental units and not-for-profit organizations.

5290. PERSPECTIVES OF TOP FINANCIAL EXECUTIVES. (4 cr; prereq 3201 or MBA 8035)

Opportunity to study in depth problems faced by top financial executives, to better understand the work of a financial executive, and to interact with executives in analysis of a problem. Designed to sharpen skills in library research, written and oral expression, and ability to raise relevant questions.

5300. CURRENT TOPICS IN MANAGERIAL ACCOUNTING. (4 cr [may be repeated for cr]; prereq 3201)

Selected topic(s) in managerial accounting. Topics vary from quarter to quarter.

5310. CURRENT TOPICS IN FINANCIAL ACCOUNTING. (4 cr [may be repeated for cr]; prereq 3102)

Current topic(s) in financial accounting. Topics vary from quarter to quarter.

5340. PARTNERSHIP TAXATION. (4 cr; prereq 5135)

The tax consequences of the formation, operation, and dissolution of a partnership.

Course Descriptions

5390. CURRENT TOPICS IN TAXATION. (Cr ar; prereq 5135 or equiv, #)
Current tax legislation problems. Topics vary from quarter to quarter.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8050. PRINCIPLES OF ACCOUNTING I

8051. PRINCIPLES OF ACCOUNTING II

8101. CORPORATE FINANCIAL REPORTING

8102. CORPORATE FINANCIAL REPORTING—ADVANCED TOPICS

8125. SECURITY, CONTROL, AND AUDIT OF FINANCIAL INFORMATION SYSTEMS

8128. ANALYTIC REVIEW AND AUDIT SAMPLING

8135. MANAGERIAL ISSUES IN TAXATION

8150. FINANCIAL ACCOUNTING ISSUES

8160. FINANCIAL STATEMENT ANALYSIS

8201. ACCOUNTING FOR MANAGERIAL DECISIONS AND CONTROL

8220. TAX RESEARCH

8225. TAX PROCEDURE AND PRACTICE

8230. TAXATION OF CORPORATIONS I

8255. MANAGERIAL COST ACCOUNTING

8330. TAXATION OF CORPORATIONS II

8335. TAX EFFECTS ON BUSINESS DECISION MAKING

8340. TAXATION OF PARTNERS AND PARTNERSHIPS

8350. TAXATION OF ESTATES, GIFTS, AND TRUSTS

8354. TAX PLANNING FOR FAMILIES AND ORGANIZATIONS

8356. TAXATION OF DEFERRED COMPENSATION AND FRINGE BENEFITS

8360. STATE AND LOCAL TAXATION

8370. TAXATION OF PROPERTY TRANSACTIONS

8380. TAX ASPECTS OF INTERNATIONAL BUSINESS

8390. CURRENT TOPICS IN TAXATION

8805. SEMINAR I

8810. SEMINAR II

8820. SEMINAR III

8825. AUDITING: SEMINAR

8990. READINGS IN ACCOUNTING

8995. RESEARCH IN ACCOUNTING

Business Administration (BA)

290 Humphrey Center

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

3998H. HONORS COURSE: INDEPENDENT STUDY. (Cr ar [may be repeated for cr]; prereq consent of faculty member willing to supervise the study; School of Management honors student or #, and Δ)
See BA 3998.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8159. QUANTITATIVE APPROACHES TO ADMINISTRATIVE PROBLEMS

8200. LIBRARY ACCESS FOR BUSINESS RESEARCH

8210. Ph.D TEACHING SEMINAR

8220. Ph.D. RESEARCH SEMINAR

Business, Government, and Society (BGS)

835 Management and Economics

This curricular area was developed because of the growing concern of business about its relationship to other social institutions and issues. Many companies now have public affairs departments, centrally responsible for their social efforts. In other companies, various social relationships are handled by relevant departments. If you are anticipating a management career, you will find these courses useful, whatever the nature or internal arrangement of the firm in which you will work.

The basic course, BGS 3002, examines general topics. Other courses examine specific subjects such as regulation, antitrust, environment, and international aspects of business.

3001. MANAGERIAL ECONOMICS. (4 cr, §Econ 3101, §Econ 3105; prereq Econ 1002 or equiv)
Intermediate microeconomics from the perspective of the business enterprise and of the manager. Firm and industry demand, firm revenues and costs, supply, pricing practices, market structures, and other relevant economic concepts are applied to the individual business.

3001H. HONORS COURSE: MANAGERIAL ECONOMICS. (4 cr, §3001, §Econ 3101, 3105; prereq Econ 1002; School of Management honors student or #, and Δ)
See BGS 3001.

3002. BUSINESS AND SOCIETY. (4 cr; prereq jr or sr)
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 to society. Ethical and practical conflicts in the role of the firm and the manager examined in the context of the public policy process. Current social issues and their impacts on business.

3002H. HONORS COURSE: BUSINESS AND SOCIETY. (4 cr, §3002; prereq jr or sr; School of Management honors student or #, and Δ)
See BGS 3002.

3003. BUSINESS AND THE NATURAL ENVIRONMENT. (4 cr; prereq jr or sr)
Business and its relationship to the natural environment. The use by industry of renewable and nonrenewable resources. Environmental deterioration caused by businesses to air, land, and water. Business solutions to environmental problems. May emphasize energy in some quarters.

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, personnel and operations in the host nations. Resource (including energy) questions in their global contexts: quantities, demands, distribution of resources.

3005. GOVERNMENT AND BUSINESS. (4 cr, §Econ 3651; prereq Econ 1001 and 1002 or equiv)
The role of the free enterprise system; structure of American industry; economic and social consequences of big business; public policies toward private enterprise; public regulation, public ownership; antitrust laws and their applications.

3019. TOPICS IN BUSINESS, GOVERNMENT, AND SOCIETY. (4 cr; prereq 3002 or #)
Selected topics and problems of current interest considered in depth. Class discussions and course projects. Topics vary from quarter to quarter depending on the instructor.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8009. BUSINESS AND GOVERNMENT I: GOVERNMENT ECONOMIC REGULATION OF BUSINESS

8010. BUSINESS AND GOVERNMENT II: GOVERNMENT SOCIAL REGULATION OF BUSINESS

8017. ORGANIZATIONAL POLITICS AND MANAGEMENT

8019. TOPICS IN BUSINESS, GOVERNMENT, AND SOCIETY

Business Law (BLaw)

1235 Management and Economics

Courses in business law are designed to 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 a variety of methods: lectures, readings, analysis of judicial decisions, and class discussions.

Business law is not offered as a separate field for specialization in the Carlson School of Management. Rather, the courses in this area provide a sequence of elective offerings for management students. The first course, BLaw 3058, is a prerequisite for the other business law courses.

3058. INTRODUCTION TO LAW, THE LAW OF CONTRACTS AND SALES CONTRACTS. (4 cr, §8158; prereq Econ 1002 or equiv)
The origin of law, its place in and effect upon society; the history and development of law; the system of courts; and legal procedure. The law of contracts as the basic law affecting business transactions. Laws affecting the sales of goods contracts.

Course Descriptions

3078. AGENCY, PARTNERSHIPS, CORPORATIONS, AND COMMERCIAL PAPER. (4 cr, §8278; prereq 3058)

A study of law affecting the relationship between principal and agent, master and servant, and employer and employee. Partnership and corporate forms of business entities, including the 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.

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, 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.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8158. INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND SALES CONTRACTS

Decision Sciences (DSci)

395 Humphrey Center

The decision sciences address a body of technology that supports management and administrative decision making over the entire range of hierarchical and functional areas that exist in an organization. While the principal technologies of the area are statistics and mathematical modeling, both rely heavily on the computer for gaining access to data and for manipulating data.

Decision making is viewed as a process in which problem formulation, the decision-making technologies, and implementation all play integral parts. Accordingly, all of the decision-making technologies—statistics, mathematics, and the computer—are taught to be used within structured approaches to the decision-making process including structured approaches to problem formulation and to the implementation of decision science methods and solutions.

Mathematical modeling techniques are used to deal with such problems as warehouse and plant location, vehicle

scheduling, production scheduling, personnel utilization, design of service facilities, and capital budgeting. Statistical techniques are used to deal with such problems as forecasting consumer demand, controlling product quality, designing production processes, evaluating investment opportunities, and estimating unemployment levels.

Decision scientists are employed in such diverse organizational areas as marketing, operations, finance, and information systems. In addition, there are rapidly increasing opportunities for decision scientists with M.B.A. degrees to serve in staff capacities as either internal or external consultants to business and government.

Carlson School of Management undergraduates are required to take courses in the management science area, MSci 1010, 1020, 3030, which include instruction in decision science and management information systems. If you want more thorough training in decision science methods, you may elect additional courses from the following list. If you are planning extensive study in this area, either at the undergraduate or graduate level, you should confer with a department faculty member as early as possible to ensure completion of necessary mathematical preparation. Coursework in decision sciences focuses on applications and not theoretical developments.

1050. ELEMENTARY MANAGERIAL STATISTICS. (4 cr, §MSci 1010, 1020, §QA 1050; prereq Math 1111 or Math 1131 or equiv)

Introduction to quantitative decision making. Probabilistic and other statistical techniques for decision making and data analysis, e.g., laws of probability, sampling, estimation, hypothesis testing, and regression.

1060. BUSINESS RESEARCH PRACTICE. (4 cr; prereq 1050 or MSci 1010, 1020; 90 cr)

The design and conduct of business research from a management perspective, emphasizing competencies associated with business research practice within functional areas. Research aims and expectations, research strategies, methods, and managerial requirements.

5040. EXPERT SYSTEMS. (4 cr; prereq jr, sr, or grad)

Computer programs capable of solving a class of problems in a narrowly defined domain based on an understanding of how human beings solve these same problems. Draws on concepts from artificial intelligence, cognitive science, and management to develop a framework for understanding what expert systems are and how they can benefit the firm. Methods for developing and evaluating expert systems. Techniques for managing an expert system development project. Strategies for choosing application areas so as to enhance an organization's competitive advantage.

5050. MANAGERIAL STATISTICS. (4 cr; prereq MSci 1020 or DSci 1050 or MBA 8020 or #)

Simple linear and multiple regression analysis; residual analysis, model building, and the use of transformations; time series forecasting, exponential smoothing, and autoregressive models; the use of factorial and response surface designs in product development and testing; decision analysis.

5055. STATISTICAL METHODS FOR QUALITY AND PRODUCTIVITY IMPROVEMENT. (4 cr; prereq MSci 1020 or DSci 1050 or MBA 8020 or equiv or #)

Statistical methods for on-line and off-line quality control. Quality management philosophy, Pareto analysis, control charts, experimental design, and sampling inspection. Applications to administrative, service, and production operations.

5060. DETERMINISTIC MODELING AND OPTIMIZATION. (4 cr, \$DSci 3055; prereq MSci 1020 or DSci 1050 or MBA 8020 or equiv or #)

Survey of deterministic optimization problems, techniques, and applications. Classical optimization, linear programming, transportation and assignment problems, integer programming, networks, PERT/CPM, and dynamic programming. Applications in pricing, vehicle routing, capital budgeting, portfolio selection, production scheduling, and marketing strategy. Computer packages for solution of optimization problems.

5070. STOCHASTIC MODELING AND SIMULATION. (4 cr, \$DSci 8550; prereq MSci 1020 or DSci 1050 or MBA 8020 or equiv or #)

Survey of probabilistic modeling, with emphasis on computer simulation of complex systems. Event-scheduling simulation models, process-interaction simulations using a high-level simulation language, structural and quantitative simulation modeling, overview of simulation methodological issues, animation. Use of computers and various languages to carry out actual simulation studies.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8600. MODELING AND SCIENTIFIC METHODOLOGY**8610. BAYESIAN INFERENCE AND DECISION THEORY****8611. BEHAVIORAL DECISION THEORY****8620. HEURISTIC DECISION MAKING****8630. MANAGERIAL PROBLEM SOLVING****8640. KNOWLEDGE ENGINEERING****8650. REGRESSION ANALYSIS****8651. EXPERIMENTAL DESIGN****8660. LINEAR PROGRAMMING****8661. INTEGER PROGRAMMING****8662. NETWORK FLOW MODELS****8670. STOCHASTIC MODELING, ANALYSIS, AND APPLICATIONS****8671. SIMULATION METHODOLOGY****8799. SEMINAR: DECISION SCIENCES****8850. TOPICS IN DECISION SCIENCES****8990. READINGS IN DECISION SCIENCES****8995. GRADUATE RESEARCH IN DECISION SCIENCES****Finance (BFin)****735 Management and Economics**

The principles of finance are crucial to financial decision making. Should an investment in real capital be made, and if so, how should the purchase be financed? Applying certain principles of finance gives answers to these questions. Even in a risky world, finance offers guidance on how accumulated wealth and savings from the past should be managed. The principles of finance are crucial not only to the financial decision making of business enterprises, but also to government and private nonprofit organizations, and individuals and families.

Since financial decision making is so common, students trained in the application of the principles and techniques of finance to such decision making have career opportunities in many different kinds of companies—manufacturing companies; insurance and trust companies and others which manage accumulated wealth; and banks and other types of financial institutions that borrow from and lend to the public. Since there are many different financial decisions to be made,

Course Descriptions

students trained in finance can participate in various activities such as capital budgeting, security analysis, and commercial lending.

The courses in finance are intended to acquaint students with the principles and techniques which give guidance in financial decision making. In BFin 3000, students are introduced to many of these principles and techniques. In BFin 3100 students increase their understanding of the principles and techniques of BFin 3000 by applying them to actual problems in financial decision making faced by business enterprises. This course makes significant use of cases and of computer-based financial modeling. In BFin 3300, students are acquainted with the particular principles and techniques applicable to portfolio management or, in other words, to the management of accumulated wealth.

If you choose a finance emphasis, the course requirements are: BFin 3100—Financial Management, BFin 3300—Investment Management, Ins 3100—Risk Management and Insurance, Acct 3160—Financial Statement Analysis, and Acct 3255—Managerial Cost Accounting.

If you choose a banking emphasis, the finance course requirements are: BFin 3601—Bank Financial Management, BFin 3602—Regulation of Depository Institutions, BFin 3603—Selected Problems in Banking Management.

3000. FINANCE FUNDAMENTALS. (4 cr, §MBA 8040; prereq Acct 3001 or 1051)

A comprehensive, analytical introduction to the principal concepts in finance. The general business environment, valuation theory, financial management decisions concerning uses and sources of funds (capital budgeting), survey of the nation's financial markets.

3100. FINANCIAL MANAGEMENT. (4 cr; prereq 3000)

A broad, case-oriented course building on concepts introduced in 3000. The viewpoint of a corporation's principal financial officer is generally used. Case discussions, augmented by lectures and readings, prepare students to apply finance principles in actual business situations. Experience in problem definition, specification of alternatives, analysis, and decisions. Effective verbal and written communication stressed.

3300. INVESTMENT MANAGEMENT AND FINANCIAL MARKETS. (4 cr, §8300; prereq 3000)

Introduces decision procedures in a variety of financial markets. The 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.

3500. REAL ESTATE INVESTMENT ANALYSIS. (4 cr; prereq 3000 and Econ 1002 or equiv)

Analysis and economic aspects of investments in real property including cash flows; accounting depreciation vs. market value depreciation or appreciation; financing methods and cost; sources of funds; measures of return on investment.

3601. BANK FINANCIAL MANAGEMENT. (4 cr; prereq 3000 or #)

Comprehensive introduction to the principles of bank financial management. Bank risk analysis, lending, investments, liquidity, asset-liability management. Lecture augmented with case discussions.

3602. REGULATION OF DEPOSITORY INSTITUTIONS. (4 cr; prereq 3601 or #)

Overview of federal regulation of commercial banks and thrift institutions. Rationale for and history of regulation, current regulatory structure and environment, principles guiding future evolution. Heavy emphasis on student involvement through discussions and group presentations.

3603. SELECTED PROBLEMS IN BANKING MANAGEMENT. (4 cr; prereq 3602 or #)

Close-up view of bank management issues through lectures by guest speakers drawn from the banking community. Bank strategic planning, lending issues, innovative financial instruments, bank risk management, new bank powers.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8100. CASES IN FINANCIAL MANAGEMENT

8150. THEORY OF FINANCE

8200. FINANCIAL MARKETS AND INTEREST RATES

8300. INVESTMENTS AND SECURITY ANALYSIS

8400. INTERNATIONAL FINANCIAL MANAGEMENT

8700. SEMINAR: WORKING CAPITAL MANAGEMENT

8701. SEMINAR: CORPORATE INVESTMENT AND FINANCIAL STRATEGY

8702. SEMINAR: FINANCIAL MANAGEMENT OF FINANCIAL INSTITUTIONS

8703. SEMINAR: PORTFOLIO THEORY AND MANAGEMENT

8704. SEMINAR: INTERNATIONAL FINANCIAL MANAGEMENT

8705. SEMINAR: FEDERAL RESERVE SYSTEM, HISTORY AND CONTROVERSIES

8706. SEMINAR: REGULATION OF FINANCIAL INSTITUTIONS AND MARKETS

8800. SEMINAR: SPECIAL TOPICS IN FINANCE

8801. INTRODUCTION TO THE THEORY OF CAPITAL MARKETS

8802. MATHEMATICAL METHODS IN THE THEORY OF CAPITAL MARKETS

8803. ADVANCED THEORY OF CAPITAL MARKETS

8811. THEORY OF FINANCIAL CONTRACTS

8821. CORPORATE FINANCE

8831. ECONOMETRIC METHODS IN FINANCE

8850. INDEPENDENT STUDY IN FINANCE

8900. RESEARCH WORKSHOP

Foreign Studies Management (FSMg)

290 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 Undergraduate Studies Office, 290 Humphrey Center (612/624-3313).

3460. IES BUSINESS PROGRAM IN VIENNA, AUSTRIA. (Cr ar)
Semester or year study in English at Vienna Center of Institute of European Studies. Courses on business (FSMg), economics, East-West studies, humanities, and required intensive German language instruction. Advanced students of German may take University of Vienna courses. Internships available.

3490. IES BUSINESS PROGRAM AT THE UNIVERSITY OF SINGAPORE. (Cr ar)
Academic year or fall semester study in regular courses at the National University of Singapore under auspices of Institute of European Studies. Instruction in English. Courses on business (FSMg), economics, Asian studies, and Chinese, Japanese, and/or Malay language.

3820. DENMARK'S INTERNATIONAL STUDY PROGRAM IN COPENHAGEN. (Cr ar)

Semester or year study in Copenhagen. Courses on international business (FSMg), economics, liberal arts, and language. Courses taught in English by Danish faculty, mostly from the University of Copenhagen. Students encouraged to study Danish language and live with Danish families.

3910. CIEE JAPANESE BUSINESS AND SOCIETY PROGRAM. (Cr ar)

Summer or semester of study near Tokyo under supervision of an on-site CIEE director, with instruction in English by Japanese faculty. Courses on Japanese business (FSMg), society, economy, politics, language, and extensive field study. Students may live with Japanese families.

3920. CIEE BUSINESS/SOCIETY PROGRAM, SEVILLE, SPAIN. (Cr ar)

Semester study in off-campus facilities of University of Seville's business college. Courses taught in Spanish by Seville faculty. Courses on Spanish business (FSMg), economy, society, language, plus field visits. Prerequisites include 2½ years of Spanish and some business/economics. Internships available on a competitive basis.

Industrial Relations (IR)

537 Management and Economics

Industrial relations is an interdisciplinary field of study that utilizes 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 the following degrees: M.A. in industrial relations, Ph.D. in industrial relations.

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

Course Descriptions

3000. TOPICS IN INDUSTRIAL RELATIONS.

(Cr ar [may be repeated for cr])

Selected topics and issues of current interest. Topics vary from quarter to quarter, depending on instructor.

3002. PERSONNEL AND INDUSTRIAL RELATIONS. (4 cr, \$8002; prereq Econ 1001, 1002, Psy 1001)

An introduction to the human resource management function in organizations. The labor market, recruitment, selection, training, compensation, and labor relations. Topics include the changing nature of the world of work, emerging legal issues, discrimination in pay and employment, work performance and its assessment, and the effects of technological change on jobs and employment. Lecture presentations, discussion, case studies, and simulation exercises.

3007. COLLECTIVE BARGAINING AND LABOR RELATIONS. (4 cr)

Analysis of the 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, and bargaining simulations.

3010. THE INDIVIDUAL AND THE ORGANIZATION. (4 cr)

An introduction to 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; and planning for change. Lecture presentations, discussion, case studies, and simulation exercises.

5000. TOPICS IN PERSONNEL AND INDUSTRIAL RELATIONS. (Cr ar [may be repeated for credit])

Selected topics of current relevance to human resource management.

5002. SYSTEMS OF CONFLICT AND DISPUTE RESOLUTION. (4 cr)

Theoretical and practical treatment of the settlement of conflict in interpersonal, work-related, community, business, and international settings. Includes lecture presentations, discussion, observation of actual dispute resolution sessions, and laboratory exercises, with participation in various dispute resolution simulations applied to real world conflicts.

5990. INDEPENDENT STUDY IN PERSONNEL AND INDUSTRIAL RELATIONS. (Cr ar [may be repeated for credit])

Individual readings or research topics in human resource management.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8000. GRADUATE TOPICS IN INDUSTRIAL RELATIONS

8001. QUANTITATIVE METHODS IN INDUSTRIAL RELATIONS

8002. AN INTRODUCTION TO INDUSTRIAL RELATIONS

8003. STAFFING, TRAINING AND DEVELOPMENT

8004. ORGANIZATIONAL THEORY AND ANALYSIS

8005. EMPLOYEE COMPENSATION AND REWARD

8006. LABOR MARKET ANALYSIS

8007. COLLECTIVE BARGAINING IN THE PUBLIC AND PRIVATE SECTORS

8012. INDUSTRIAL RELATIONS SYSTEMS

8013. ORGANIZATION AND STAFFING

8014. ORGANIZATION DESIGN AND ADMINISTRATION

8015. COMPENSATION, REWARD, MOTIVATION, AND PERFORMANCE

8016. MICRO LABOR MARKET ANALYSIS

8017. THEORIES OF LABOR-MANAGEMENT RELATIONSHIPS AND NEGOTIATIONS

8022. INTERNATIONAL HUMAN RESOURCE MANAGEMENT

8023. TRAINING AND DEVELOPMENT

8024. ORGANIZATION ANALYSIS AND ENVIRONMENTAL SYSTEMS

8025. EMPLOYEE BENEFITS AND ADMINISTRATION

8026. MACRO LABOR MARKET ANALYSIS

8027. METHODS FOR DISPUTE RESOLUTION

8032. COMPARATIVE AND INTERNATIONAL LABOR MOVEMENTS

8033. MANAGEMENT DEVELOPMENT

8035. MOTIVATION AND WORK BEHAVIOR

8036. HUMAN RESOURCE PLANNING

8037. THE LABOR MOVEMENT IN THE UNITED STATES

8801. SEMINAR: INDUSTRIAL RELATIONS RESEARCH METHODOLOGY

8802. SEMINAR: INDUSTRIAL RELATIONS SYSTEMS

8803. SEMINAR: STAFFING, TRAINING AND DEVELOPMENT

8804. SEMINAR: ORGANIZATION THEORY

8805. SEMINAR: COMPENSATION AND REWARD

8806. SEMINAR: LABOR MARKET THEORY AND RESEARCH

8807. SEMINAR: COLLECTIVE BARGAINING AND LABOR RELATIONS

8990. INDEPENDENT STUDY IN INDUSTRIAL RELATIONS

Logistics Management (LM)

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Logistics management deals with managing the flow of physical goods in a business firm or other organization. Logistics activities are of vital importance in controlling costs and in providing appropriate service to customers. Logistics activities include transportation, warehouse operation, inventory management, production scheduling, materials handling, packaging, order processing, plant and warehouse location, and customer service. Together, the cost of these activities represent 20 to 25% of the cost of doing business for many firms in the United States. The cost of freight transportation alone is about 8% of the nation's annual gross national product.

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.

The increase in 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 the logistics management field provide a useful background and preparation for a wide 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 the logistics management field are available.

The requirements for an undergraduate emphasis in logistics management consist of four courses in logistics management plus a total of two advanced courses selected from finance, management information systems, marketing, or operations management. The requirements are intended to provide you with a basic knowledge of and skills in logistics management, and an awareness of its interrelatedness with other areas of an organization.

3000. INTRODUCTION TO LOGISTICS MANAGEMENT. (4 cr, [replaces Tran 3054] §Tran 3064, §Tran 8264; prereq Econ 1002 or equiv)

Management of the flow of physical products (physical supply and physical distribution) of an organization and the linkages between the process of controlling the physical flow of products and the major functions of the organization, i.e., finance, marketing, and operations management. Logistics topics and analysis of the impact of logistics topics on other functional areas.

3010. PRINCIPLES OF TRANSPORTATION. (4 cr, §8010, §Tran 3054, §Tran 8154; prereq Econ 1002 or equiv)

Organizational, economic, and service aspects of the transportation system of the United States including rail, highway, water, pipeline, and air transportation. Decision making in transportation companies. Government promotional and regulatory policy regarding transportation.

3020. ADVANCED LOGISTICS MANAGEMENT. (4 cr, §8020, §Tran 3064, §Tran 8264; prereq 3000 or 3010 or equiv)

Management of the flow of physical products (physical supply and physical distribution) of an organization. Transportation alternatives, customer service, inventory management, location decisions, warehousing, logistics information systems, international logistics, and logistics system design. Case problems. Usually includes logistics simulation exercise.

5010. TOPICS IN LOGISTICS MANAGEMENT. (4 cr [may be repeated for credit]; prereq 3000 or 3010 or 8010 or 8020 and #)

Specialized topics in the field of logistics management; topics change from quarter to quarter.

Course Descriptions

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8010. PRINCIPLES OF TRANSPORTATION

8020. ADVANCED LOGISTICS MANAGEMENT

8030. SEMINAR IN LOGISTICS MANAGEMENT

8990. READINGS IN LOGISTICS MANAGEMENT

8995. GRADUATE RESEARCH IN LOGISTICS MANAGEMENT

Management (Mgmt)

835 Management and Economics

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

Courses such as Mgmt 3001, Mgmt 8001, and MBA 8010 are introductory; they may be followed by more specialized and advanced courses. Mgmt 3004 and MBA 8060 are general policy courses designed to help students develop skills in problem identification, analysis, and solution at the general policy level, and skills in strategic planning and direction setting. These skills require students to apply knowledge of frameworks developed in the Mgmt 3004 course as well as skills that require students to draw on knowledge acquired in other subject areas such as accounting, economics, finance, and marketing. These integrating courses are recommended only for students who are about to graduate and who are already acquainted with the various business areas.

The undergraduate emphasis in small business management and entrepreneurship includes the following requirements: Mgmt 3002, Mgmt 3008 and Mgmt 5101; and two of the following: Acct 3160, BFin 3100, Mktg 3010, OM 3041.

3001. FUNDAMENTALS OF MANAGEMENT. (4 cr, \$8001)

Leadership and management functions such as those required to establish goals, policies, procedures, and plans. Motivation, planning and control systems, and concepts of organizational structure and behavior.

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 aid in effective utilization of human resources. Various laboratory procedures are used to study these concepts, methods, and skills and furnish practice in applying them to management problems.

3003. CONFERENCE AND DISCUSSION METHODS IN MANAGEMENT. (4 cr, \$8007; pre-req 3002)

Theory and research relating to the use of conference and discussion methods for line managers in organizations. Stresses theory, methods, and skill building in organizing and conducting problem solving discussions and conferences.

3004. BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION. (5 cr; prereq sr and completion of business core courses or † final core course)

Undergraduate-level capstone course designed to develop skill in the management functions of identifying and analyzing strategic issues and problems, establishing corporate or divisional goals, and designing realistic programs of action. Case analysis and discussion in class. Students also meet in small groups to prepare cases and, occasionally, presentations to be made to the entire class. These concepts as well as concepts, tools, and theories previously presented in other courses are applied to solve goal selection and strategy implementation problems. Usually the viewpoint of the general line manager (department, division, or executive level) is taken.

3008. ENTREPRENEURSHIP AND THE SMALLER ENTERPRISE. (4 cr; prereq completion of business core courses or #)

Assessment of opportunities and constraints in establishing and managing one's own firm; topics include structuring a new venture, buying into an existing enterprise, owning an enterprise versus becoming a principal employee in a new venture. Case method.

5101. ADVANCED TOPICS IN MANAGEMENT. (Cr or † may be repeated for cr); prereq sr or grad student and #)

Specialized topics in the field of management; topics vary from quarter to quarter.

5175. BUSINESS FORECASTING. (4 cr; prereq 3001 or 8001 or MBA 8010 and QA 3055 or #)

Methods of economic, social, and technological forecasting and applications to problems of managerial decision making and planning.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8001. FUNDAMENTALS OF MANAGEMENT

8004. ADVANCED TOPICS IN MANAGEMENT

8006. PSYCHOLOGY IN MANAGEMENT
8008. ENTREPRENEURSHIP AND THE SMALLER ENTERPRISE
8009. PLANNING AND CONTROL FOR LINE MANAGEMENT
8012. ORGANIZATIONAL BEHAVIOR AND MANAGEMENT ANALYSIS
8021. ORGANIZATIONAL DESIGN AND DEVELOPMENT
8022. CAREER MANAGEMENT
8040. INTERNATIONAL BUSINESS
8101. SEMINAR IN STRATEGIC MANAGEMENT
8102. HISTORY OF MANAGEMENT THOUGHT
8201. FOUNDATIONS OF BUSINESS-GOVERNMENT-SOCIETY
8202. EXTERNAL AFFAIRS MANAGEMENT
8203. RESEARCH TOPICS AND METHODS IN BUSINESS-GOVERNMENT-SOCIETY
8251. BUSINESS RESEARCH METHODS AND TECHNIQUES
8301. SEMINAR IN ORGANIZATIONAL BEHAVIOR
8302. SEMINAR IN ORGANIZATION THEORY
8303. ORGANIZATIONAL RESEARCH SEMINAR
8401. SEMINAR IN STRATEGY FORMULATION
8402. SEMINAR IN STRATEGY IMPLEMENTATION
8403. STRATEGIC MANAGEMENT RESEARCH SEMINAR
8801. SEMINAR: INTERPERSONAL RELATIONS
8802. SEMINAR: MANAGEMENT
8990. READINGS IN MANAGEMENT THEORY AND ADMINISTRATION
8995. GRADUATE RESEARCH IN MANAGEMENT THEORY AND ADMINISTRATION

Management Information Systems (MIS)

395 Humphrey Center

Management information systems is a field that recognizes information as a resource comparable to capital, labor, land, or other valuable commodities that should be subject to managerial planning and control. Study in this field centers on con-

cepts and methods necessary to analyze, design, and manage complex information-decision systems. As preparation for these tasks, MIS courses integrate elements of computer processing technology, systems analysis, statistics, management, operations research, and accounting.

Although a major or specialization in management information systems is not offered at the undergraduate level, students receive instruction in the MIS area in the required courses MSci 1010, 1020, and 3030. No more than three credits of MIS 1070-1074 can be used for a Carlson School of Management degree. No credit will be granted if MIS 1070 is taken after MSci 1010.

1070. ORIENTATION TO COMPUTER SOFTWARE AND PROGRAMMING. (1 cr, \$MIS 3300 or MSci 1010)

Intended for Carlson School students and persons seeking to learn to use computer applications for business. Software alternatives and how to use software effectively. Survey of software packages and computer languages as a gateway to the MIS 1071-1077 series. Students who can demonstrate mastery of software and programming may waive this course and proceed into the MIS 1071-1077 series.

1071. ELECTRONIC SPREADSHEETS. (1 cr; prereq 1070 or proficiency exam based on equiv experience)

Concepts and uses of electronic spreadsheets, benefits and limitations using examples applicable to accounting, finance, management, and marketing. Lotus 123 used to illustrate spreadsheet practice.

1072. DATA BASE MANAGEMENT SOFTWARE. (1 cr; prereq 1070 or proficiency exam based on equiv experience)

A data base software package used to illustrate concepts and practice involved in the management of data on computer systems, especially microcomputers.

1073. BUSINESS GRAPHICS SOFTWARE. (1 cr; prereq 1070 or proficiency exam based on equiv experience)

Technical skills and design considerations related to use of business and presentation graphics. Selected graphics software packages used to illustrate applications and visual benefits of computer-generated formats.

1074. FINANCIAL MODELS SOFTWARE PACKAGE. (1 cr; prereq 1070 or proficiency exam based on equiv experience)

Introduction to concepts of higher-level modeling languages. IFPS used to illustrate financial modeling and linkages to data bases.

Course Descriptions

1075. ELEMENTARY COBOL. (2 cr, \$3098; prereq 1070 or proficiency exam based on equiv experience) Introduction to programming in COBOL, a widely used business data processing language. Completion of a structured set of COBOL programs and tests in self-paced units. No regular lectures. Mandatory attendance for first class meeting.

1076. INTERMEDIATE COBOL. (2 cr, \$5098; prereq 1075 or proficiency exam based on equiv experience)

Advanced features of COBOL. Completion of a structured set of COBOL programs and tests on or before a scheduled date on a self-paced basis. No regular lectures. Mandatory attendance for first class meeting.

1077. ELEMENTARY FORTRAN. (2 cr, \$3099; prereq 1070 or proficiency exam based on equiv experience)

Introduction to programming in FORTRAN, a language used in programming analytic problems in business contexts for computation, e.g., forecasting, optimization, and statistical analysis. Self-paced units used to complete a structured set of FORTRAN programs. No regular lectures. Mandatory attendance for first class meeting.

3040. ORGANIZATIONAL USE OF COMPUTERS. (4 cr; intended for non-MIS majors)

A nontechnical description of computers and computer systems used in government and business. The kinds of people who work with computers and their activities. Current issues such as privacy, data banks, and point-of-sale systems, and likely future issues such as communications networks, mini and micro computer applications, electronic funds transfer. The history, status, and future of the computer industry.

3100. INTRODUCTION TO COMPUTERS AND COMPUTER DATA PROCESSING. (4 cr, \$5100, \$5300, \$8300)

Elements of computer hardware and their functions. Computer software. Tools and methods for development of computer applications. Preparing computer programs. Acquisition, organization, and management of computer resources. The computer industry. Future developments.

3101. INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS. (4 cr, \$5101)

An overview of MIS. Conceptual foundation of MIS including: concepts of information, humans as information processors, systems concepts and information systems, concepts of management and organizational concepts relevant to MIS, decision-making concepts and the value of information for decision making. The structure of an MIS and its development, organization, management, and evaluation. Emphasis on the user/system interface.

3131. DATA BASE MANAGEMENT SYSTEMS. (4 cr; prereq 5103)

Concepts and methods in the definition, creation, and management of data bases for management information systems. Topics include objectives of data base management, design and evaluation of data base management systems, theory of files, data structures, storage structures, interrogation, responsibilities of the data base administrator, data base integrity, security, and privacy.

3132. DATA COMMUNICATIONS SYSTEMS. (4 cr; prereq 5102)

Characteristics of transmission facilities and networks, concentrators and multiplexors, terminals, modems and front end processors. Control hardware and software systems. The role of data communications in management information systems.

3151. ADMINISTRATION AND CONTROL OF MANAGEMENT INFORMATION SYSTEMS. (4 cr; prereq 5102 and Mgmt 3001)

Technical tools and management concepts required in the administration of the information systems function. Topics include the structure and management of computer operations, measurement of operating performance, budgeting and planning, project management techniques for systems and programming, the role of the information processing manager, and personnel selection, training, and compensation.

5102. INTRODUCTION TO INFORMATION SYSTEMS ANALYSIS. (4 cr [cr cannot be applied to MBA programs begun after December 15, 1979]; prereq 1075, MSci 3030 or equiv)

The phases within the life cycle for development of an information system application. Emphasis on the standards, tools, and techniques required for analysis of information requirements and in logical design. Processing alternatives and alternative approaches to systems design.

5103. DATA STRUCTURES AND FILE PROCESSING. (4 cr [cr cannot be applied to MBA programs begun after December 15, 1979]; prereq 1076, MSci 3030 or equiv)

Principles and techniques of data organization, physical representation of data in a computer system, and file processing strategy to meet user information requirements and system performance objectives. Topics include theory of files, data storage devices, record design, sequential and random processing, linked structures, indexing, hashing, balanced search trees, multiattribute search, inverted and multilist file organizations, hierarchic, network, and relational structures, sorting, data compression, and data integrity. Students establish and manipulate data structures at the University computer facility.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8279. LEGAL ASPECTS OF COMPUTING

8300. COMPUTERS AND MANAGEMENT INFORMATION SYSTEMS

8301. PROGRAM DESIGN AND PROGRAMMING

8302. SYSTEMS ANALYSIS AND DESIGN

8303. DATA STRUCTURES, FILE PROCESSING, AND RETRIEVAL LANGUAGES

8304. MIS ADMINISTRATION

8312. ADVANCED SYSTEMS DEVELOPMENT AND ADMINISTRATION

8313. ADVANCED DATA BASE DESIGN, MANAGEMENT SYSTEMS, AND ADMINISTRATION

8315. TELECOMMUNICATIONS**8850. TOPICS IN MANAGEMENT INFORMATION SYSTEMS****8985. MIS RESEARCH SEMINAR****8990. READINGS IN MANAGEMENT INFORMATION SYSTEMS****8995. GRADUATE RESEARCH IN MANAGEMENT INFORMATION SYSTEMS****Management Science (MSci)**

395 Humphrey Center

These management science courses make up the Carlson School of Management undergraduate core courses and include integrative material in the areas of management information systems and decision sciences.

1010. FUNDAMENTALS OF COMPUTERS AND INFORMATION TECHNOLOGY IN ORGANIZATIONS. (4 cr, \$DSci 1050; prereq, 45 cr, Math 1111 or \$Math 1111)

Computer hardware, software, and data communications. Future technology. Introduction to computer data processing. Elementary data analysis. Skill development in computer access and data analysis software.

1020. DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS. (4 cr, \$DSci 1050; prereq 1010, Math 1111, (Math 1131 recommended)) Introduction to probabilistic and statistical techniques for decision making, e.g., data analysis, sampling, estimation, and hypothesis testing. Using computer software and computer-stored data in statistical analysis. Introduction to modeling using modeling software.**3030. INFORMATION SYSTEMS AND INFORMATION MANAGEMENT.** (4 cr, \$MIS 3300; prereq 1020)

Defining information requirements. Developing information systems applications. Using information systems. Defining data structures and building and using databases. Formulating database retrievals. Building and using models and expert systems to support decision making. Obtaining external data to support model building and decision making. Evaluating information. Skill development in database software.

Marketing (Mktg)

1235 Management and Economics

The field of marketing is concerned with the flow of goods and services through the economy and the distribution of both industrial and consumer goods. Since more than half of 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 marketing policies and to implement them through the development of marketing strategies and programs. Among the major marketing decision areas are development of the product and expansion of the product line, 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, merchandising, sales promotion, brand management, international marketing, and marketing research. If you are interested in a career in marketing research, marketing management, or product management, you should consider completing an M.B.A. degree.

The undergraduate emphasis in marketing includes the following requirements: Mktg 3010, Mktg 3020; one of the following courses—Mktg 3030, Mktg 3050, Mktg 3065, Mktg 3090; and two advanced courses from any Carlson School of Management department.

You may also complete electives in fields outside of the Carlson School in order to form a program that best meets your needs. Such areas as agricultural economics, economics, geography, home economics, journalism, psychology, sociology, and speech-communication may be of interest.

3000. PRINCIPLES OF MARKETING. (4 cr, \$8000; prereq Econ 1002 or equiv)

Basic policy and strategy issues in marketing and the environmental factors that affect these issues. Legal, behavioral, ethical, competitive, economic, and technological factors that affect product, pricing, promotion, and marketing-channel decisions.

3000H. HONORS COURSE: PRINCIPLES OF MARKETING. (4 cr, \$3000, \$8000; prereq Econ 1002 or equiv, Carlson School honors student or #, and Δ) See Marketing 3000.

Course Descriptions

3010. BUYER BEHAVIOR AND MARKETING ANALYSIS. (4 cr; prereq 3000 and MSci 1020 or equiv)

Identifying and applying secondary and primary data to solve marketing problems. Consideration of consumer and organizational buyer behavior. Topics include survey and experimental research techniques, market segmentation, data analysis, behavior concepts and processes, consumer and organizational decision-making models, and managerial applications of these models.

3020. MARKETING OPERATIONS MANAGEMENT. (4 cr; prereq 3010)

Development of marketing plans, primarily for manufacturing organizations. Analytical methods for developing and appraising marketing programs, factors important in shaping marketing plans. Planning for selling, communication, distribution, pricing, product development, and marketing research activities.

3030. SALES AND DISTRIBUTION MANAGEMENT. (4 cr; prereq 3020)

Design and management of marketing systems for distributing goods and services to industrial users and ultimate consumers. Institutional, functional, and social aspects of distribution channels, with emphasis on the managerial problems of channel design, integration, and control. Managing the personal selling function as an integral part of the overall distribution system, with emphasis on sales force organization, selection, training, motivation, compensation, forecasting, budgeting, and control.

3050. MARKETING COMMUNICATIONS. (4 cr; prereq 3020)

The communications aspect of the marketing mix and the communications process. Emphasis on advertising, media alternatives, and research. Integration of the sales force in communications strategy.

3065. RETAIL MANAGEMENT. (4 cr, §8065; prereq 3010)

Retailing principles, problems, and trends as they relate to various types of retailing institutions. Assignment of trade journal and supplementary readings for in-store study (buying and pricing) with a local retailer.

3090. MARKETING TOPICS. (4 cr [may be repeated for cr]; prereq 3010 and #)

Selected topics and problems of current interest considered in depth. Class discussion and course projects. Topics vary from quarter to quarter, depending on the instructor.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8051. MARKETING RESEARCH

8053. MARKETING RESEARCH: ADVANCED ANALYSIS AND FIELDWORK

8055. INTRODUCTION TO CONSUMER BEHAVIOR

8060. MARKETING SYSTEMS

8072. INTERNATIONAL MARKETING

8074. PRODUCT AND PRICE POLICY

8076. SALES MANAGEMENT

8078. MARKETING COMMUNICATIONS

8080. INDUSTRIAL MARKETING

8088. STRATEGIC MARKETING

8090. MARKETING TOPICS

8800. SEMINAR: MARKETING THEORY

8810. SEMINAR: CONSUMER BEHAVIOR

8990. READINGS IN MARKETING

8995. GRADUATE RESEARCH IN MARKETING

Operations Management (OM)

395 Humphrey Center

Most organizations have operating units that are responsible for providing the goods or services needed to carry out their functions. Managers of these operating units must analyze and improve their unit's performance. Courses in operations management deal with the methods, techniques, and general principles that contribute to the efficient running of such departments. Coursework emphasizes two themes: 1) a management perspective, examining the various operating functions and related decisions, and 2) the application of scientific/analytic approaches to operations management.

While traditionally this area has emphasized manufacturing, OM also encompasses service industries or components of business that require planning and control of operating processes.

Since OM functions are basic to all enterprises and interface with all other business functions, students expecting to pursue any type of business career will benefit by taking these courses. Graduate students majoring in OM will find opportunities in both line and staff positions in business and industry.

3000. INTRODUCTION TO OPERATIONS MANAGEMENT. (4 cr)

Concepts and principles related to the management of operations functions, taught from a managerial perspective. Examples from service industries, nonprofit organizations, and manufacturing. Relationships to the environment and other functional areas, such as marketing and finance. Topics include operations strategy, forecasting, process selection, capacity management, scheduling, quality planning and control, inventory management, productivity and work standards.

3041. PROJECT MANAGEMENT (4 cr; prereq 3000 or #)

Principles and methods useful for planning and controlling a project. Topics include developing a project plan, resource planning and scheduling, and project monitoring and evaluation. Various computerized packages, including PERT and CPM. Examples of different types of projects from manufacturing and service industries.

3056. PRODUCTION AND INVENTORY MANAGEMENT. (4 cr; prereq 3000 or #)

The functions of forecasting, inventory control, materials requirements planning, capacity planning, and scheduling. Taught from a planning and control point of view with applications in manufacturing and service industries. Computer packages used and evaluated.

3059. QUALITY MANAGEMENT. (4 cr; prereq 3000 or 90 cr)

The quality function within manufacturing and service organizations. Topics include quality planning, vendor relations, process control, acceptance sampling and quality improvement. Taught from a managerial point of view.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8041. PROJECT MANAGEMENT

8056. PRODUCTION AND INVENTORY MANAGEMENT

8057. PROCESSES, TECHNOLOGY, AND INNOVATION IN THE OPERATIONS FUNCTION

8058. OPERATIONS STRATEGY

8059. QUALITY MANAGEMENT

8215. OPERATIONS FORECASTING

8220. INVENTORY MANAGEMENT

8221. RESOURCE PLANNING AND SCHEDULING

8850. TOPICS IN OPERATIONS MANAGEMENT

8900. FOUNDATIONS FOR RESEARCH IN OPERATIONS MANAGEMENT I

8901. FOUNDATIONS FOR RESEARCH IN OPERATIONS MANAGEMENT II

8990. READINGS IN OPERATIONS MANAGEMENT

8995. GRADUATE RESEARCH IN OPERATIONS MANAGEMENT

Risk Management and Insurance (Ins)

735 Management and Economics

Risk management deals with the identification, measurement, and treatment of the property, liability, and personnel risks facing businesses, nonprofit organizations, federal, state, and local governments, and individuals or families.

Insurance is the most important and most complex tool used to handle this class of risks.

Career opportunities in risk management and insurance include the following occupations: (1) underwriters, claims adjusters, actuaries, investment analysts, accountants, office managers, pension consultants, agents, brokers, and other positions in the private insurance industry; (2) risk managers for large firms, nonprofit organizations, and government units that are becoming more aware of the need for a rational risk management program; (3) consultants, including consulting actuaries, employee benefits specialists, and risk management consultants; (4) employees of government organizations that regulate the private insurance industry or administer social insurance programs; and (5) educators and research personnel.

Many professionals in areas other than risk management and insurance may find that handling insurance matters for their firm will become a part of their responsibility or that their activities affect the operations of the risk manager and vice versa. In their personal lives all individuals will be risk managers. Finally, as evidenced by the extent of government regulation and social insurance programs, all citizens have reason to be interested in the public policy aspects of risk management and insurance. For these reasons, risk management and insurance courses can also be useful to students who do not intend to specialize in this area.

The introductory risk management and insurance course is consumer oriented. The actuarial science courses are designed for students interested in that

Course Descriptions

field. The other courses should interest both consumers and those students intending to enter the insurance business.

If you choose a risk management and insurance emphasis, the course requirements are: Ins 3100—Risk Management and Insurance, BFin 3100—Financial Management, BLaw 3058—Introduction to Law, the Law of Contracts, and Sales Contracts; and two of the following: Ins 3200—Life and Health Insurance, Ins 3210—Economic and Social Security, Ins 3220—Property and Liability Insurance.

If you choose an actuarial science emphasis, you must take the following courses: Ins 3100—Risk Management and Insurance, Ins 5230/Math 5051—Life Contingencies I, Ins 5231/Math 5058—Life Contingencies II, Math 5473—Analysis of Numerical Methods and Math 5056—Theory of Interest.

3100. RISK MANAGEMENT AND INSURANCE. (4 cr, \$8100)

How to recognize and evaluate the property, liability, and personnel risks facing a business, a nonprofit organization, a government unit, or an individual or family. The tools of risk management—mainly retention, loss control, and insurance—and the 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.

3200. PERSONAL FINANCIAL MANAGEMENT. (4 cr, \$8200; prereq 3100; may not be repeated for credit)

Personal financial planning process, financial statements and cash flow analysis, time value of money and financial functions. Insurance and risk management of liability, disability, life, medical, and property exposures. Investment principles and vehicles, investment companies, portfolio construction and management. Taxes and tax management. Retirement planning, employee benefits, and funding vehicles, and estate planning principles and instruments. Professional ethics and government regulation of financial planners.

3210. 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 and public programs, with emphasis on public programs such as Old Age, Survivors, Disability and Health Insurance (Social Security), workers' compensation insurance, unemployment insurance, and public assistance programs.

3220. PROPERTY AND LIABILITY INSURANCE. (4 cr, \$8220; prereq 3100 or equiv)

Types of property and liability losses and their measurement. Legal doctrines and statutes creating liability risks for business firms, families, and other units. Analysis of major property and liability insurance contracts and self-insurance alternatives. How property and liability insurance is priced and marketed. Selection of insurers and service organizations. Public policy issues such as availability of insurance, insurance pricing, automobile compensation, and workers' compensation systems.

3230. EMPLOYEE BENEFITS. (4 cr; prereq 3100 or equiv)

Employee benefit plan objectives, development, and growth. Design issues. Basic features of plans providing death benefits, disability benefits, medical expense benefits, pension, and other benefits. Recent developments and trends.

5230. LIFE CONTINGENCIES I. (4 cr, \$Math 5057; prereq Math 1211, 1221, plus Math 1231 or 1131 or #, plus one course in probability or statistics)

How to calculate net premiums, gross premiums, reserves, and nonforfeiture values for major life insurance contracts. The impact of assumed mortality, interest, and expense assumptions on these items.

5231. LIFE CONTINGENCIES II. (4 cr, \$Math 5058; prereq 5230 or #)

Advanced topics such as compound interest and annuities certain, the measurement of mortality, life insurance and annuity premiums and reserves. Multilife functions. Population problems and multiple-decrement theory.

For Graduate Students Only

(For descriptions, see the *Graduate School Bulletin*)

8100. RISK MANAGEMENT AND INSURANCE I

8101. RISK MANAGEMENT AND INSURANCE II

8200. PERSONAL FINANCIAL MANAGEMENT

8210. ECONOMIC AND SOCIAL SECURITY

8220. PROPERTY AND LIABILITY INSURANCE

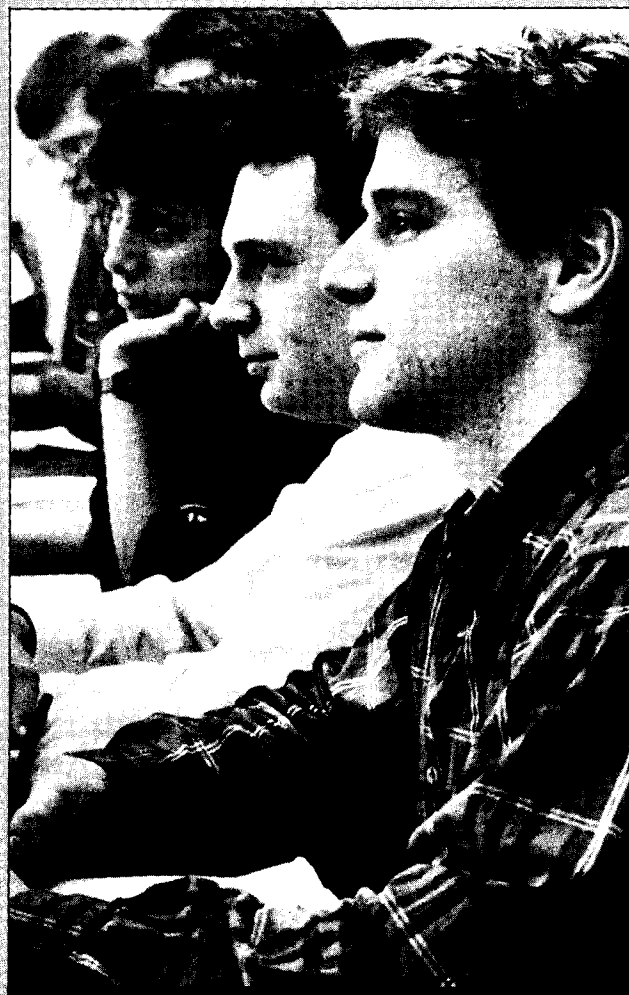
8800. SEMINAR: RISK MANAGEMENT AND INSURANCE

8990. READINGS IN RISK MANAGEMENT AND INSURANCE

8995. GRADUATE RESEARCH IN RISK MANAGEMENT AND INSURANCE

See also **IR 8025. EMPLOYEE BENEFITS AND ADMINISTRATION**

Administration and Faculty



Administration and Faculty

University Regents

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Carlson School of Management Administrators

Preston Townley, Dean
Timothy J. Nantell, Associate Dean
Anne M. Benedict, Associate Dean for
External Affairs
Norman L. Chervany, Director, Profes-
sional Management Programs (M.B.A.
Program and Executive Development
Center)
Dennis A. Ahlburg, Director of Graduate
Study, M.A. and Ph.D. Programs in
Industrial Relations
Frederick R. Jacobs, Director of Graduate
Study, M.B.T. Program
Paul E. Johnson, Director of Graduate
Study, Ph.D. Program in Business Ad-
ministration

Gerald Rinehart, Director of Undergradu-
ate Studies

Carlson School Faculty

**Recipient of the Horace T. Morse-Minnesota Alumni
Association Award (Formerly Morse-Amoco) for out-
standing contributions to undergraduate education.*

Department of Accounting

David A. Dittman, Chair, Department of
Accounting; Director, Accounting Re-
search Center

Professor

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University of Illinois; C.P.A., C.I.A.
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Stanford University; C.P.A.
John W. Dickhaut, Ph.D.,
Ohio State University
David A. Dittman, Ph.D.,
Ohio State University
Jack Gray, Ph.D.,
Ohio State University; C.P.A.
Shyam Sunder, Ph.D.,
Carnegie-Mellon University

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Washington State University; C.P.A.
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Assistant Professor

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Doris L. Holt, Ph.D.,
University of Michigan; C.P.A.
Gordon S. Potter, Ph.D.,
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Judy D. Rayburn, Ph.D.,
University of Iowa; C.P.A.

Coordinator of Undergraduate Studies in Accounting

Dennis Daly, M.B.A.,
University of Detroit; C.M.A.

Director of Masters in Business Taxation

Fred Jacobs, Ph.D.,
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Department Director

Terry Tranter, Ph.D.,
University of Washington; C.P.A.

Department of Finance and Insurance

Michael U. Dothan, Chair

Professor

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Michael U. Dothan, Ph.D.,
Harvard University; Finance
John H. Kareken, Ph.D.,
Massachusetts Institute of Technology; Finance
Timothy J. Nantell, Ph.D.,
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Andrew F. Whitman, Ph.D.,
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C. Arthur Williams, Jr., Ph.D.,
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Associate Professor

- James M. Gahlon, Ph.D.,
University of Illinois; Finance
Patrick J. Hess, Ph.D.,
University of Chicago; Finance
*Peter Rosko, Ph.D.,
University of Michigan; Finance

Assistant Professor

- Chun Chang, Ph.D.,
Northwestern University; Finance
Dongsae Cho, Ph.D.,
University of Illinois; Insurance
Paul A. Richardson, Ph.D.,
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Adjunct Assistant Professor

- Evelyn F. Carroll, Ph.D.,
Michigan State University; Finance

Visiting Associate Professor

- Michael J. Stutzer, Ph.D.,
University of Minnesota; Economics

Visiting Assistant Professor

- Ellie Glennon Harris, Ph.D.,
Northwestern University; Finance

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John A. Fossum, Chair, Department of Industrial Relations;
Director, Industrial Relations Center

Professor

- Richard D. Arvey, Ph.D.,
University of Minnesota; Industrial/Organizational Psychology and Industrial Relations
Mario F. Bognanno, Ph.D.,
University of Iowa; Labor Economics and Industrial Relations

- John J. Flagler, M.S.,
Cornell University; Industrial Relations and Labor Education
John A. Fossum, Ph.D.,
Michigan State University; Labor and Industrial Relations
James G. Scoville, Ph.D.,
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C. Arthur Williams, Jr., Ph.D.,
Columbia University; Insurance and Compensation and Benefits
Mahmood A. Zaidi, Ph.D.,
University of California, Berkeley; Manpower Economics and Industrial Relations

Associate Professor

- Dennis A. Ahlburg, Ph.D.,
University of Pennsylvania; Labor Economics and Industrial Organizations
Ross E. Azevedo, Ph.D.,
Cornell University; Industrial Relations
Avner Ben-Ner, Ph.D.,
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Martin W. Duffy, B.S.,
Northern Michigan University; Labor Education
Paul R. Sackett, Ph.D.,
Ohio State University; Industrial/Organizational Psychology

Assistant Professor

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Brown University; Economics
Rebecca A. Luzadis, Ph.D.,
Cornell University; Labor Economics
Brian P. McCall, Ph.D.,
Princeton University; Economics
Raymond A. Noe, Ph.D.,
Michigan State University; Industrial/Organizational Psychology
Cheri Ostroff, Ph.D.,
Michigan State University; Psychology
Joshua L. Schwarz, Ph.D.,
Cornell University; Industrial Relations

Graduate Faculty From Outside the College

Professor

- Hyman Berman, Ph.D.,
Columbia University; Labor History
John P. Campbell, Ph.D.,
University of Minnesota; Psychology
René V. Dawis, Ph.D.,
University of Minnesota; Psychology
Marvin D. Dunnette, Ph.D.,
University of Minnesota; Psychology
Morris M. Kleiner, Ph.D.,
University of Illinois; Economics
Jeylan T. Mortimer, Ph.D.,
University of Michigan; Sociology
Norman J. Simler, Ph.D.,
University of Minnesota; Economics

Administration and Faculty

Department of Management Sciences

Carl R. Adams, Chair

Professor

- Carl R. Adams, Ph.D.,
Purdue University; Decision Sciences
- Frederick J. Beier, Ph.D.,
Ohio State University; Logistics Management
- Norman L. Chervany, Ph.D.,
Indiana University; Decision Sciences
- Gordon B. Davis, Ph.D.,
Stanford University; Management Information Systems
- Gary W. Dickson, D.B.A.,
University of Washington; Management Information Systems
- Donald V. Harper, Ph.D.,
University of Illinois; Logistics Management
- Thomas R. Hoffmann, Ph.D.,
University of Wisconsin; Management Sciences
- Paul E. Johnson, Ph.D.,
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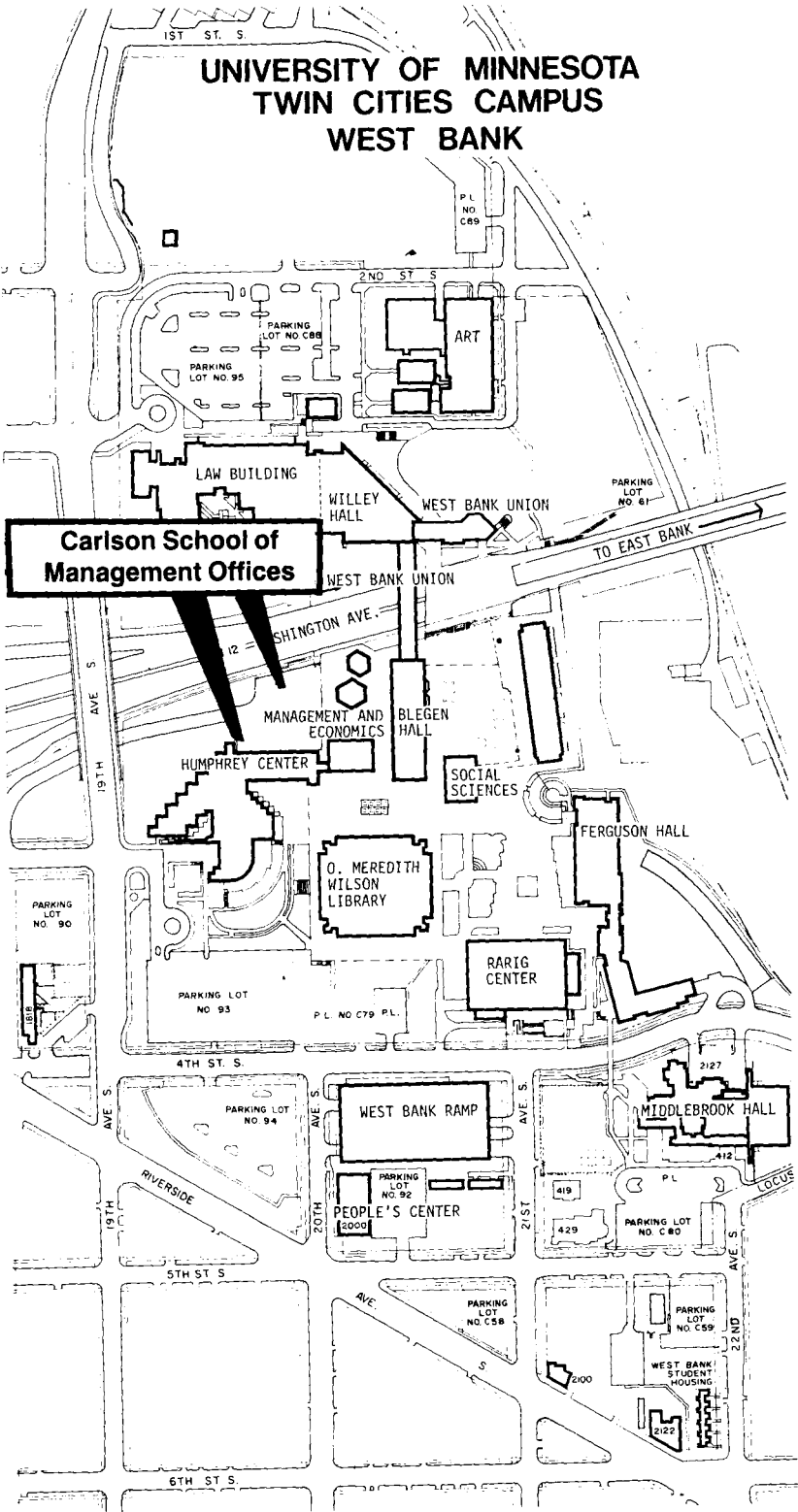
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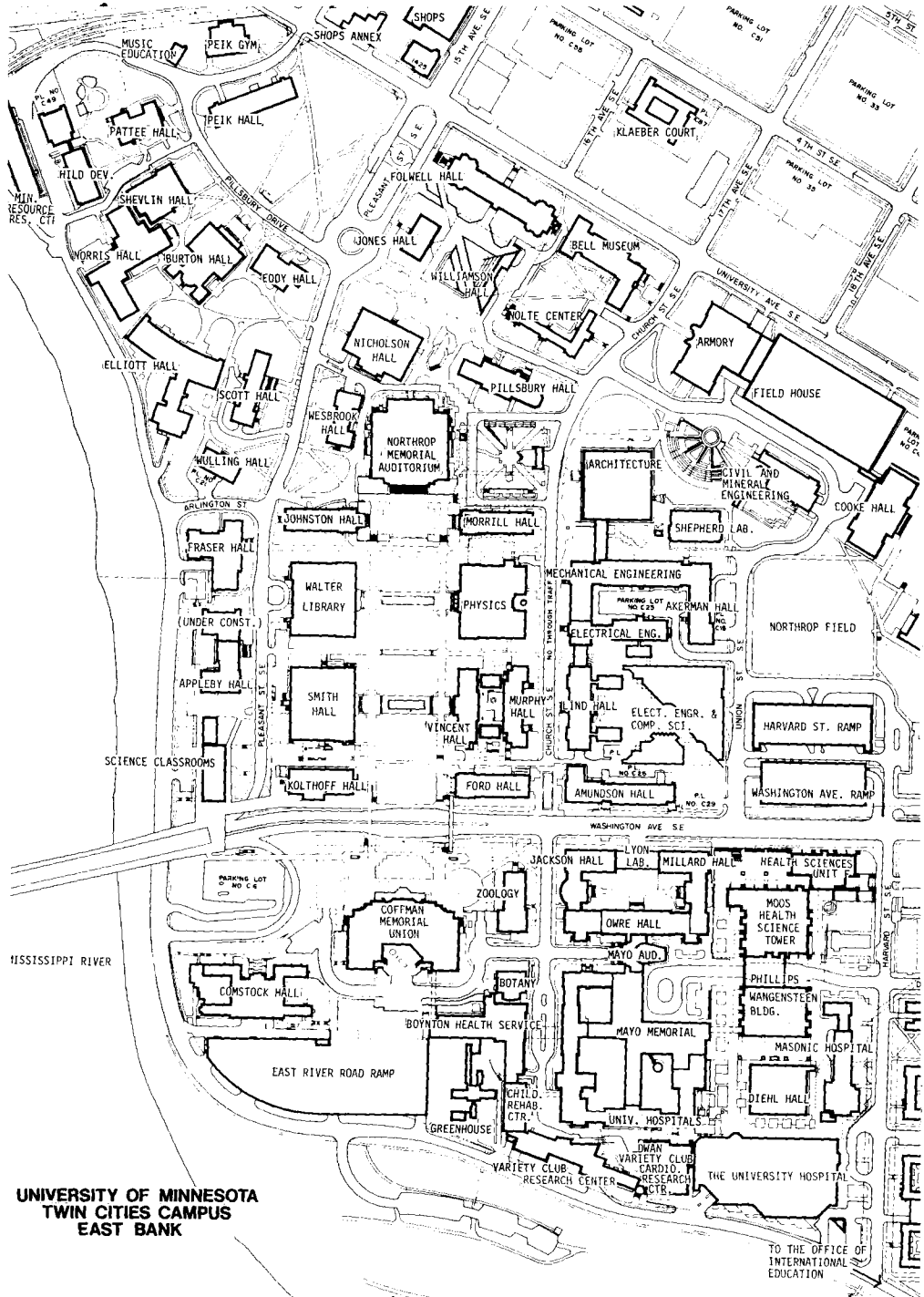
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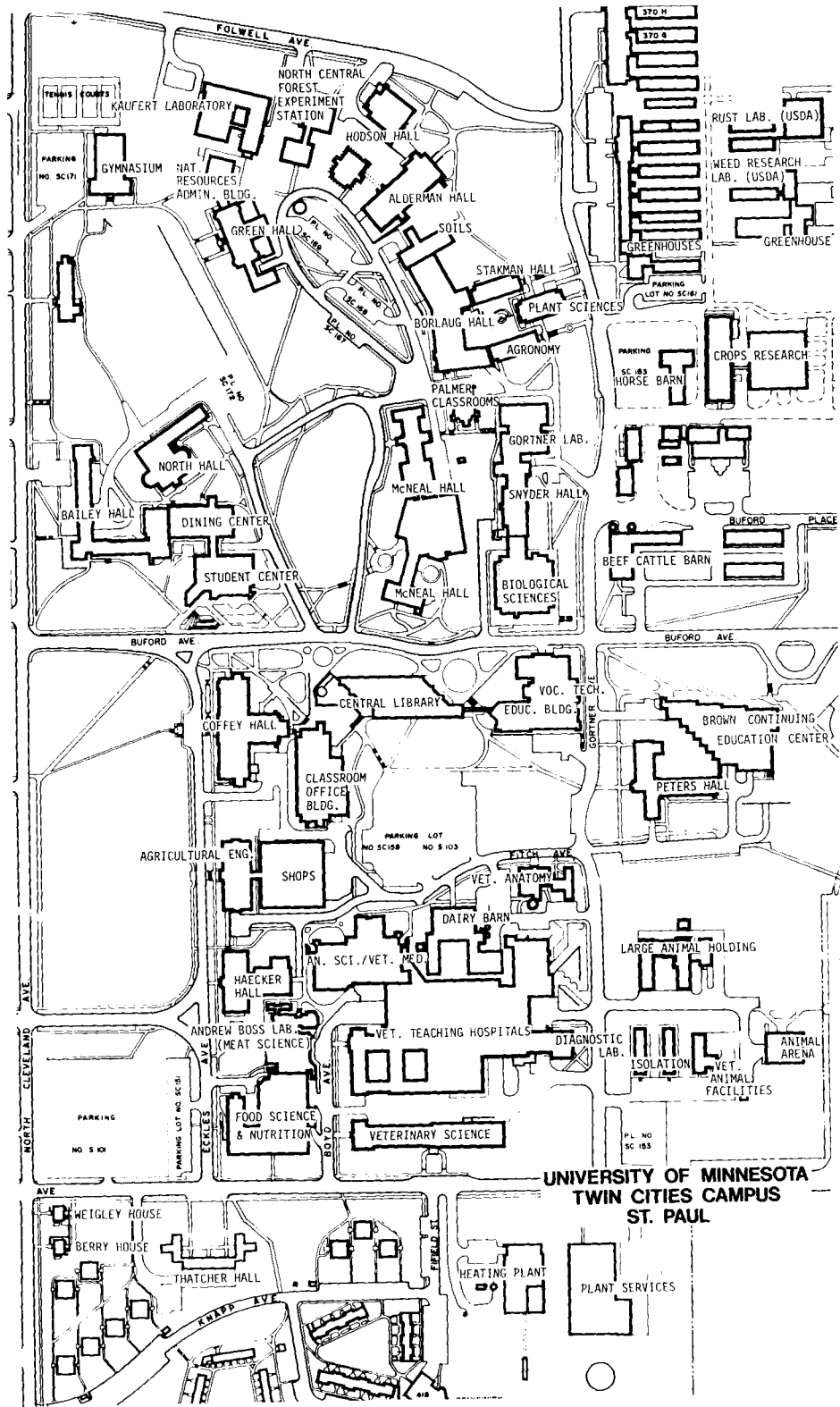
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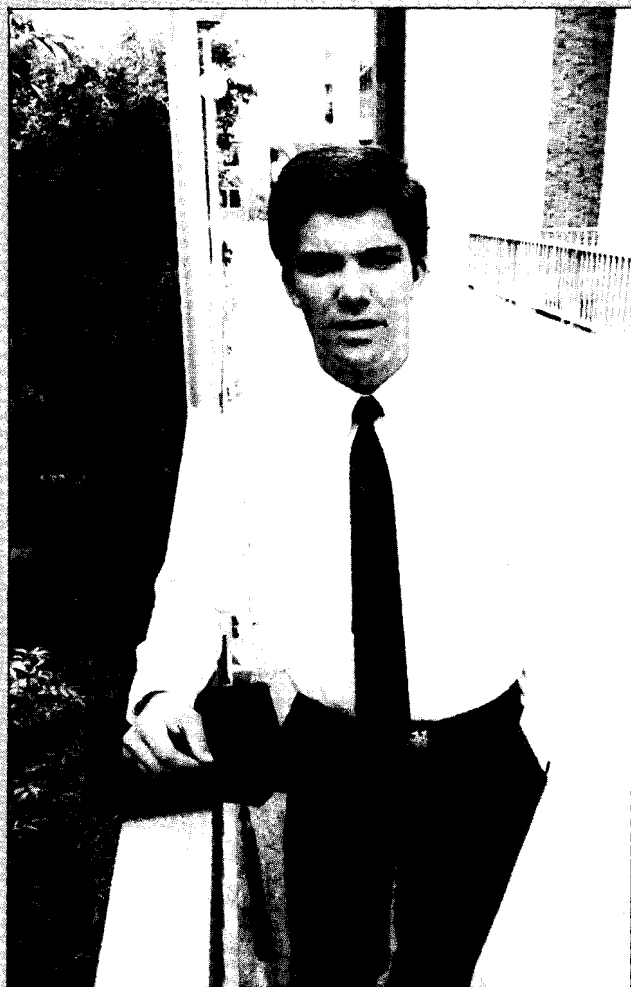
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