The College of Pharmacy, Duluth and Twin Cities. The Department of Pharmacy Practice and Pharmaceutical Sciences in Duluth emphasizes rural health care issues and provision of pharmaceutical care in rural areas, and is committed to delivering outstanding education, excellence in research, and service to the public and other health professions. Faculty and students are involved in collaborative efforts with colleagues in the medical school and nursing school.

Doctor of Pharmacy Program
The doctor of pharmacy program prepares students to identify, resolve, and prevent drug-related problems. Students learn to provide patient care to achieve positive drug therapy outcomes that improve the quality of a patient’s life. Before enrolling in the college, students complete prepharmacy coursework at an accredited college.

Admissions
Application materials are available from PharmCAS, a national pharmacy application service, at www.pharmcas.org. A supplementary application is also required and is available on the College of Pharmacy Web site, www.pharmacy.umn.edu/pharmd/admissions. The college has initiated a rolling admissions process for admission. Under rolling admissions, applicants are reviewed in the order received, hence scholarships, as well as positions in the college, can become limited closer to the February 1 deadline.

Admission Requirements
The minimum overall GPA to qualify for admission is 3.00, or 3.20 over the most recent 60 semester credits. Applicants are required to submit scores from the Pharmacy College Admission Test (PCAT). PCAT registration and test dates are available at www.pcatweb.info.

Prepharmacy Courses—Students must have select coursework completed before entering the doctor of pharmacy program. These prepharmacy courses may be taken at any accredited college and must be taken A-F and completed with a grade of C or better before enrollment. In addition to the prepharmacy course requirements, students must complete at least 30 semester credits of general education courses to graduate from the program. Prepharmacy credits earned in behavioral sciences, English composition, economics, and public speaking apply toward the general education requirement. For detailed information, see the College of Pharmacy Catalog or the College of Pharmacy Web site at www.pharmacy.umn.edu/pharmd.

English Language Requirements—The TOEFL is required of all international applicants whose native language is not English, except those who will have completed 16 semester credits (within the past 24 months) in residence as a full-time student at a recognized institution of higher learning in the U.S. before entering the College of Pharmacy. For information about the TOEFL, visit www.ets.org/toefl.

Prepharmacy Advising
The Office of Student Services, with staff in both the Twin Cities and Duluth, can refer students to prepharmacy advisers throughout Minnesota and at nearby Wisconsin colleges. Prospective students may also e-mail copd@d.umn.edu or pharmacy@umn.edu, or visit the College of Pharmacy Web site, www.pharmacy.umn.edu/pharmd.
Curriculum

The professional program’s graduates are prepared to enter pharmacy practice, advanced professional training programs, graduate education, and research. The program covers the chemical, biological, physical, social, and clinical sciences that underlie pharmacy. A common patient care process is used to teach students how to meet drug-related needs at a patient-specific level. Students develop skills in problem solving, communication, and analytical thinking. The program emphasizes professional ethics, social responsibility, professional citizenship, and commitment to lifelong learning.

The first three years of the curriculum provide the fundamental components of pharmacy education needed to practice in a variety of settings. Beginning in the second year, students take elective courses. In their fourth year, students participate in advanced pharmacy practice experiences. Please consult the College of Pharmacy Catalog at www.catalogs.umn.edu/phar/index.htm for more information on the doctor of pharmacy curriculum.

University of Minnesota
Medical School Duluth

Interim Senior Associate Dean: Gary Davis
117 Medical School, 218-726-7572
Admissions and Student Affairs
137 Medical School, 218-726-8965
Associate Dean: Lillian A. Repesh
131 Medical School, 218-726-7581
Faculty Affairs
131 Medical School, 218-726-8975

Rural Health
Assistant Dean: Raymond G. Christensen
311 Medical School, 218-726-7572
Alumni Relations and Preceptorship Program
Director: James G. Boulger
234 Medical School, 218-726-8892

Animal Services
Director: M. Kent Froberg
35 Medical School, 218-726-7931

Center of American Indian and Minority Health
Director: Jocelyn Dorscher
185 Medical School, 218-726-7235

Toxicology Graduate Program
Director: Ken Wallace
236 Medical School, 218-726-8892

The Medical School Duluth offers the first two years of the four-year medical school curriculum. It covers basic medical and clinical science studies with principal emphasis on the training of family physicians. Students who successfully complete the program in Duluth will automatically transfer on a noncompetitive basis to complete the last two years of their doctor of medicine requirements at the University of Minnesota Medical School in Minneapolis.

The specific goals of the Medical School Duluth are to:

- increase the proportion of well-trained physicians who will enter family practice primary care;
- increase the number of physicians who will most likely enter practice in rural and non-urban areas of the state;
- provide excellent academic training for medical, graduate, and undergraduate students in the basic and clinical sciences;
- conduct and promote research programs for the advancement of knowledge in the health sciences and for service to the state.

To achieve these goals, many family practitioners, as well as other primary care physicians, are used as instructors and preceptors throughout the two years of study. These role models illustrate, both through their instruction and example, the delivery of general and family medical care in urban, small community, and rural settings. The preceptorship program in family medicine is specifically designed to meet these goals and to augment the supply of family physicians in the northern region of Minnesota.

Coursework taught by the Medical School Duluth faculty at the undergraduate and graduate levels is listed by department in the Course Descriptions section of this catalog.

For information on the school’s policies, admission procedures, and course offerings for medical students, consult the Medical School Duluth Catalog.

Departments

Anatomy, Microbiology, and Pathology

Division of Anatomy and Cell Biology
Professors: Kent Froberg, Arlen R. Severson; Associate Professors: Stephen W. Downing, Donna J. Forbes, Jon M. Holy, Lillian A. Repesh; Senior Research Associate: Richard L. Leino

Division of Medical Microbiology and Immunology
Professors: Arthur G. Johnson, Richard J. Ziegler (division head); Associate Professors: Benjamin L. Clarke Assistant Professor: Lucia P. Parker

Division of Pathology and Laboratory Medicine
Professors: Arthur C. Aufderheide, M. Kent Froberg, Patrick C. J. Ward (division head); Teaching Assistant Professor: Kristine Krafts; Clinical Associate Professor: Geoffrey A. Witrik; Clinical Assistant Professors: Sara Lundeen, Thomas C. Nelson Patrick A. Twomey, Daniel P. Vandersteen, Krista Warren, Geoffrey Witrik

Biochemistry and Molecular Biology

Professors: Lester R. Drewes (department head), Joseph R. Prohaska, Jean F. Regal, Kendall B. Wallace; Associate Professors: Subhash C. Baske, John Holy (joint with Anatomy and Cell Biology), Thomas E. Huntley; Assistant Professors: Robert T. Corrigan, Edward L. Perkins; Research Assistant Professor: Patricia Scott

Behavioral Sciences

Professors: Mustafa N. alAbi, Richard M. Eisenberg, Barbara A. Elliott, Freders; W. Hafferty; Associate Professors: James G. Boulger, Gary L. Davis (department head), Robert Gibson, Richard G. Hoffman, Jane Hovland; Clinical Associate Professor: David X. Swenson; Clinical Assistant Professors: Steven J. Bauer, Fred T. Friedman, Peter Miller, Steven J. Sutherland, Tracy A. Tomac; Clinical Instructor: Benjamin Wolfe

Family Medicine

Professor: Barbara A. Elliott, Mustafa al’Abi, James Boulger (joint with Behavioral Sciences); Associate Professors: Raymond G. Christensen, Alan Johns; Assistant Professors: Jeff Adams, Jocelyn Dorscher, Dan Mareck, Glen H. Nordeen, Ruth Westra (department head); Instructor: Jennifer Pearson, Duluth Family Practice Center Faculty: Thomas Day (director), Ann Doberstein, David Hutchinson, Roger Waage

Physiology and Pharmacology

Division of Pharmacology
Professor: George J. Trachte; Associate Professors: Janet L. Fitzakerley, Edward T. Knych, Jr.

Division of Medical and Molecular Physiology
Professors: Lloyd Beck, B. Goran Hellekant, Lois J. Heller; Associate Professors: John Keener, David E. Mohrman, Edward K. Stauffer, Lorentz E. Wittmers (interim department head); Assistant Professors: Teresa Rose-Hellekant