



This is the Professional Schools section of the 2005-2007 Duluth Catalog for the University of Minnesota

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## College of Pharmacy

*Senior Associate Dean:* Stephen Hoag, 386 Kirby Plaza, 1208 Kirby Drive, Duluth, MN 55812, 218-726-6000

### College of Pharmacy Mission

The College of Pharmacy educates pharmacy practitioners to meet the pharmaceutical care needs of the people of Minnesota and the rest of society. The college is committed to improving human health through the development of new drugs and drug delivery systems, optimization of drug use, and improvement of pharmaceutical services. It is committed to advancing pharmaceutical technology to strengthen Minnesota's economy.

### Overview

The University's College of Pharmacy is recognized as one of the outstanding pharmacy education and research institutions in the world. It is highly ranked among the colleges of pharmacy in the United States by the *Gourman Report* and *U.S. News and World Report*. Graduates of the program enter the profession as well qualified, highly sought-after pharmacists. The college is fully accredited by the Accreditation Council for Pharmacy Education, 20 N. Clark Street, Suite 2500, Chicago, IL 60602 (312-664-3575).

### Duluth Program

The College of Pharmacy offers the Pharm.D. curriculum on two campuses, Duluth and Twin Cities. The shortage of pharmacy practitioners in Minnesota—especially in greater Minnesota—was a driving force to extend the program to the Duluth campus in 2003. The college's goal is that more graduates from both campuses will decide to practice in greater Minnesota.

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 (Pharm.D.) Program

The Pharm.D. 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](http://www.pharmcas.org). A supplementary application is also required and is available on the College of Pharmacy Web site at [www.pharmacy.umn.edu/pharmd/admissions](http://www.pharmacy.umn.edu/pharmd/admissions). February 1 is the deadline for filing all required application documents to be considered for admission. Applicants are notified of admission decisions in April. Students are admitted to the college fall semester only.

### Admission Requirements

The required overall GPA for admission is 3.00, and 3.60 for the early decision program. Applicants are required to submit scores from the Pharmacy College Admission Test (PCAT). PCAT registration and test dates are available at [www.pcatweb.info](http://www.pcatweb.info).

**Prepharmacy Courses**—Students must have select coursework completed before entering the Pharm.D. program. These required 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 Pharm.D. 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 pharmacy Web site at [www.pharmacy.umn.edu/pharmd](http://www.pharmacy.umn.edu/pharmd).

**English Language Requirements**—Students whose first (primary) language is not English must submit a Test of English as a Foreign Language (TOEFL), with a paper-based minimum score of 580 or computer-based minimum score of 237. See the *College of Pharmacy Catalog* or the pharmacy Web site at [www.pharmacy.umn.edu/pharmd/admissions](http://www.pharmacy.umn.edu/pharmd/admissions) for details.

### 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](mailto:copd@d.umn.edu) or [phaross@umn.edu](mailto:phaross@umn.edu) or visit the pharmacy Web site at [www.pharmacy.umn.edu/pharmd](http://www.pharmacy.umn.edu/pharmd).

### Pharm.D. 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.html](http://www.catalogs.umn.edu/phar/index.html) for more information on the Pharm.D. curriculum.

## University of Minnesota Medical School Duluth

**Medical School Dean's Office**, 218-726-7572

*Dean:* Richard J. Ziegler, 117 Medical School

**Admissions and Student Affairs**, 218-726-8872

*Associate Dean:* Lillian A. Repesh, 173 Medical School

**Education and Curriculum**, 218-726-7581

*Associate Dean:* Richard Hoffman, 111 Medical School

**Faculty Affairs**, 218-726-8512

*Associate Dean:* Jean Regal, 313 Medical School

**Research**, 218-726-8975

*Associate Dean:* George J. Trachte, 319 Medical School

**Rural Health**, 218-726-7572

*Assistant Dean:* Raymond G. Christensen, 131 Medical School

**Alumni Relations and Preceptorship Program**,  
218-726-8892

*Director:* James G. Boulger, 234 Medical School

**Animal Services**, 218-726-7931

*Director:* M. Kent Froberg, 35 Medical School

**Center of American Indian and Minority Health**,  
218-726-7235

*Director:* Joycelyn Dorscher, 185 Medical School

**Toxicology Graduate Program**, 218-726-8892

*Director:* Ken Wallace, 236 Medical School

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 M.D. 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 examples, 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 regions of Minnesota.

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

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

### Department of Anatomy, Microbiology, and Pathology

#### *Division of Anatomy and Cell Biology*

*Professor:* Arlen R. Severson (*division head*); *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*

*Professor:* Arthur G. Johnson, Richard J. Ziegler; *Associate Professors:* Benjamin L. Clarke, Omelan A. Lukasewycz (*division head*); *Assistant Professor:* Lucia P. Barker

**Division of Pathology and Laboratory Medicine**

*Professors:* Arthur C. Aufderheide, Patrick C. J. Ward (*division head*); *Associate Professor:* M. Kent Froberg; *Teaching Assistant Professor:* Kristine Krafts; *Clinical Associate Professor:* Geoffrey A. Witrak; *Clinical Assistant Professors:* Thomas C. Nelson, Sarah T. B. Seidelmann, Patrick A. Twomey, Daniel P. Vandersteen

**Department of Biochemistry and Molecular Biology**

*Professors:* Paul Anderson; Matthew T. Andrews, Lester R. Drewes (*department head*), Joseph R. Prohaska, Jean F. Regal, Kendall B. Wallace; *Associate Professors:* Subhash C. Bask, Thomas E. Huntley; *Assistant Professors:* Robert T. Cormier, Edward L. Perkins; *Research Assistant Professor:* Patricia Scott

**Department of Behavioral Sciences**

*Professors:* Barbara A. Elliott, Frederic W. Hafferty; *Associate Professors:* Mustafa N. al'Absi, 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, Robert S. Nesheim, Steven J. Sutherland, Tracy A. Tomac; *Clinical Instructor:* Benjamin Wolfe

**Department of Family Medicine**

*Professor:* Barbara A. Elliott; *Associate Professors:* Mustafa al'Absi, James G. Boulger, Raymond G. Christensen, Alan Johns; *Assistant Professors:* Jeff Adams, Joycelyn Dorscher, Dan Mareck, Glenn H. Nordehn, Ruth Westra (*acting department head*); *Instructor:* Jennifer Pearson; *Duluth Family Practice Center Faculty:* Thomas Day (*director*), Ann Doberstein, David Hutchinson, Roger Waage

**Department of Physiology and Pharmacology****Division of Pharmacology**

*Professors:* Richard M. Eisenberg (*department head*), 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:* Edwin W. Haller, John Keener, David E. Mohrman, Edward K. Stauffer, Lorentz E. Wittmers, (*division head*); *Assistant Professors:* Irina Haller, Teresa Rose-Hellekant