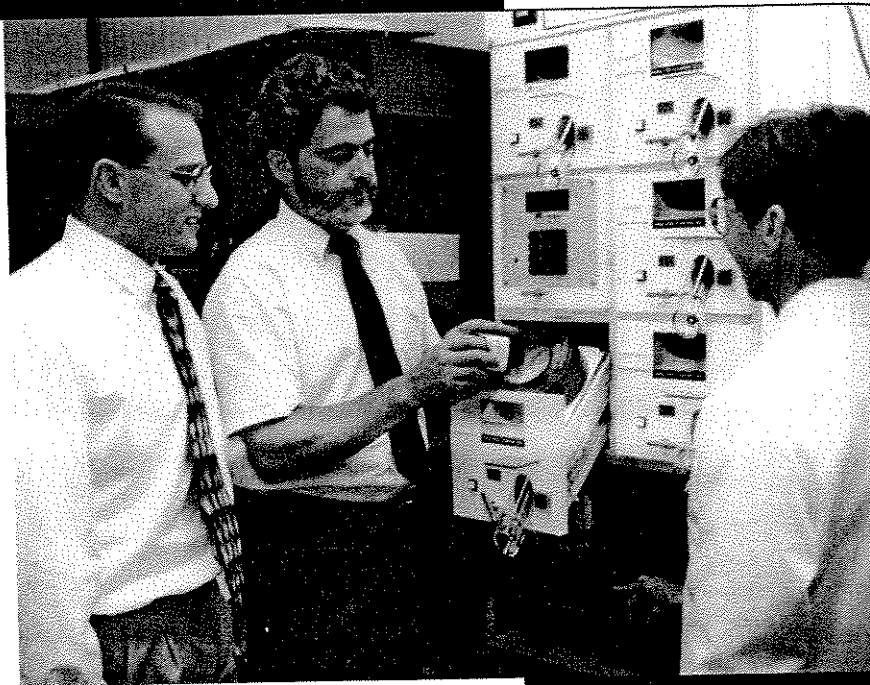


College of Pharmacy

"Research [is] the mainspring
of progress."

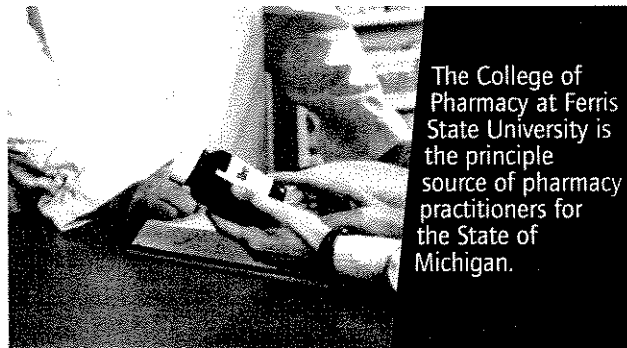
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College of Pharmacy

Statement of Mission

The College of Pharmacy at Ferris State University is the principle source of pharmacy practitioners for the State of Michigan. Its primary mission is the selection and education of qualified students to become employable, competent practitioners of pharmaceutical care. The College of Pharmacy prepares its students to be capable of professional growth with the ability to contribute to the profession and to a constantly changing global society. The College is committed to maintaining an optimal academic environment through faculty development, an active service component, encouraging scholarly activity, and resource development.



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Pharmaceutical care has been defined as "the direct responsible provision of medication-related care for the purpose of achieving definite outcomes that improve a patient's quality of life." Definite outcomes include: cure of a disease; elimination or reduction of a patient's symptomatology; arresting or slowing of a disease process; or preventing a disease or symptomatology. Graduates of the doctor of pharmacy program of the College of Pharmacy will be prepared to deliver pharmaceutical care to patients in a wide range of contemporary practice settings.

The mission of the College of Pharmacy aligns well with that of the University which states "Ferris State University will be a national leader in providing opportunities for innovative teaching and learning in career-oriented, technical and professional education."

Program

The College of Pharmacy offers the doctor of pharmacy (Pharm.D.) program that was established in 1990 to provide advanced clinical training and skills to individuals interested in the practice of clinical pharmacy. The curriculum has recently been revised, for implementation in the year 2000, in order to address recent changes in the accreditation standards. Students completing the

program will be well prepared for the challenges of contemporary clinical practice or for the rigors of post-doctoral residencies or fellowships.

The program requires a minimum of two years of pre-professional preparation followed by four years of study in the pharmacy curriculum. There is an option to accelerate that includes a summer semester, but provides for graduation up to nine months earlier than the traditional path. Regardless of the option, the third year of the curriculum will be presented at an off-campus location in a major metropolitan center. The last two semesters of the pharmacy curriculum consists of experiential training that will be presented through one of four regional centers established in Grand Rapids, Kalamazoo, Lansing, and the tri-cities of Midland, Bay City, and Saginaw.

Standards

The doctor of pharmacy program provided by the College of Pharmacy is fully accredited by the American Council on Pharmaceutical Education (ACPE), 311 West Superior Street, Chicago, IL 60610; phone 312-664-3575. ACPE is the national accrediting agency for schools and colleges of pharmacy. The College is a member of the American Association of Colleges of Pharmacy (AACP) and has been recognized as an accredited institution by the Michigan Board of Pharmacy since 1893. Graduation with the doctor of pharmacy degree satisfies the education requirements for licensure as a pharmacist in Michigan and all other states.

Registration as a Pharmacist

State and Federal laws regulate the practice of pharmacy as a profession. Michigan laws are administered by the Michigan Board of Pharmacy. Requirements for registration as a pharmacist include:

1. Graduation from an ACPE accredited college of pharmacy.
2. Age of 21.
3. Good moral character.
4. Completion of a Board approved pharmacy internship.
5. Passage of the North American Pharmacist Licensure Examination (NAPLEX) and the Michigan jurisprudence examination.

Licensure and internship information can be obtained by writing: Michigan Board of Pharmacy, Department of Licensing and Regulation, P.O. Box 30018, Lansing, MI 48909; phone 517-335-0918.

Admission to the College of Pharmacy

Students who desire to study pharmacy must be orderly persons who are academically sound and are capable of assuming professional and ethical responsibilities. Ability to communicate is extremely important due to the increasing emphasis being placed on practitioner:patient interactions. Prospective applicants are encouraged to investigate the profession and its attributes to determine their level of interest and their desire to commit to a very rigorous academic program.

Doctor of Pharmacy Program (Pharm.D.)

Admission to the program is very competitive and is granted to the best qualified applicants on a space available basis. The evaluation of candidates takes into consideration (1) the completion of the required pre-pharmacy courses, (2) academic performance, specifically, as measured by the grades obtained in chemistry, biology, mathematics, and, generally, by the grades achieved in all pre-pharmacy courses, and (3) performance on the PCAT. Other factors that may be considered include motivation for the study and practice of pharmacy and demonstration of communication skills that could include documentation of pharmacy practice experience, preparation of a writing sample, and participation in an interview.

Minimum entrance requirements include a cumulative GPA equal to or greater than 2.5 with no "D" grades in the required courses in biology, chemistry and mathematics, and submission of an official PCAT transcript by the Psychological Corporation. Students repeating courses for better grades generally are not successful in gaining admission.

For the student making normal progress (second semester, sophomore year), it is recommended that the PCAT be taken during January of the year of application. Alternative PCAT test dates occur in October and April. The October date is early but provides a score report before the following January 31 application deadline date, whereas the April date occurs too late in the admissions cycle to be used in the determination of that fall's entering class.

Application to take the PCAT must be made approximately one month in advance. General information and information concerning the dates, times and locations of the test can be obtained from the College of Pharmacy or by writing: Pharmacy College Admission Test, The Psychological Corporation, 555 Academic Court, San Antonio, TX 78204-2498; phone 800-622-3231; fax 210-921-8861.

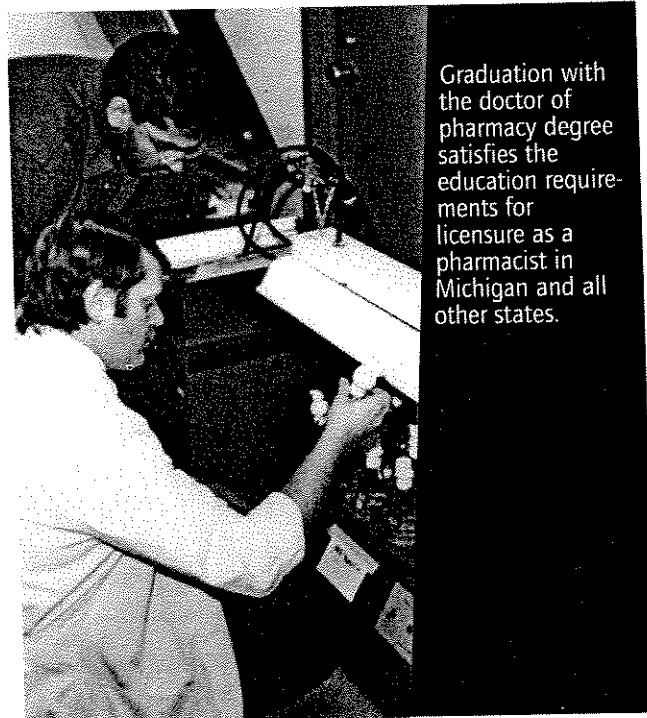
University and College applications for admission can be obtained from: Office of Admissions, Ferris State University, 420 Oak Street, Big Rapids, MI 49307-2020; phone: 231-591-3932 or 800-4-FERRIS.

Applications, along with transcripts, are to be submitted to the above address after the completion of at least three semesters or four quarters of college work. It is expected that candidates will have completed all first-year courses and at least the first semester of courses normally taken the second year, primarily organic chemistry and microbiology. All submissions should be received prior to January 31 of the year the student wishes to enter the College to ensure consideration.

Successful applicants are notified of their conditional acceptance by the College early in April. Confirmation of conditional acceptance requires a \$150 admissions fee that will be applied toward tuition. The admissions fee becomes non-refundable after July 15 barring extenuating circumstances. Final acceptance is contingent upon receipt of transcripts verifying successful completion of all pre-pharmacy requirements.

Applicants who have attended, or are currently attending, another college of pharmacy and who wish to pursue pharmacy education at Ferris must:

1. Be in good academic standing at the college of origin and be able to return;
2. Ascertain that there is space available in the appropriate class at Ferris;
3. Submit transcripts of all previous college courses taken; and
4. Provide a letter of recommendation from the dean of the previous, or current, college of pharmacy directly to the Dean of the FSU College of Pharmacy, 220 Ferris Drive, Big Rapids, MI 49307-2740.



Graduation with the doctor of pharmacy degree satisfies the education requirements for licensure as a pharmacist in Michigan and all other states.

Pre-Pharmacy Requirements

The pre-pharmacy curriculum may be completed at Ferris State University or at another accredited college or university. Successful completion of the pre-pharmacy curriculum at Ferris or any other college or university does not guarantee admission to the College of Pharmacy.

It is the student's responsibility to ensure that courses taken at another university are equivalent to those taken at Ferris. Transfer guides are available for most Michigan colleges and universities. The specific minimum requirements for admission to the College of Pharmacy are as follows:

Requirements	Credit hours
General Chemistry	8-10 ^a
Organic Chemistry	8-10 ^a
General Biology (not to include microbiology)	8 ^a
Microbiology	3-4 ^a
Calculus for the Life Sciences or Calculus	3-4 ^b
Biostatistics	3
English (not to include English as a second language)	6
Interpersonal Communication or Principles of Public Speaking	3
Introduction to Psychology or Introductory Sociology	3
Principles of Economics (macroeconomics preferred)	3
Cultural Enrichment	9 ^c

Knowledge of computers and their applications is expected.

- General chemistry, organic chemistry, general biology, and microbiology courses are to include laboratories.
- If you plan to pursue an M.S. or Ph.D. graduate degree, you should take Calculus 1 and 2. Physics 1 and 2 should also be considered.
- Beginning with the entering class of 2000, admission to the College of Pharmacy will require completion of nine semester credits of cultural enrichment (humanities) courses. These nine credits will fulfill the University's nine semester credit Cultural Enrichment graduation requirement. Acceptable courses are to include at least one at the 200 level.

Students entering the College of Pharmacy with advanced standing from non-pharmacy colleges are required to complete not less than eight semesters (four years) of full-time resident study before they are recommended for the degree of Doctor of Pharmacy. Those who transfer from other colleges of pharmacy may be given credit for up to two years of work provided the courses and credit are applicable to the work outlined in the curriculum at Ferris State University.

Doctor of Pharmacy (Pharm.D.) Degree

Degree and Health Requirements

Upon completion of all specified requirements, the degree of Doctor of Pharmacy is granted.

Candidates for the degree must:

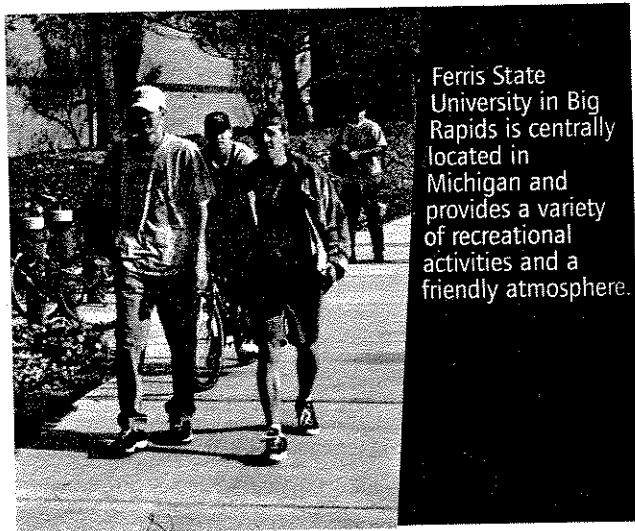
- Successfully complete all work outlined in the pharmacy curriculum;
- Achieve university cumulative grade point average (GPA) and all pharmacy GPA of not less than 2.0;
- Satisfy a minimum residency requirement of four academic years in the College of Pharmacy. Students transferring from another accredited pharmacy school must satisfy a residency requirement of not less than four semesters (third and fourth professional years) of full-time residency within the College of Pharmacy.

Ferris State University maintains a legal agreement with each of the pharmacy practice sites. In accordance with the agreement, students must show proof of health insurance coverage, up-to-date immunizations and a negative tuberculosis test (or negative chest x-ray if the PPD is positive) within 12 months of the beginning of experiential training. Students are also required to attend an educational meeting on blood borne pathogens. In addition, it is strongly recommended that students receive a hepatitis-B vaccination series because of the high degree of patient contact. Students choosing not to receive the vaccination series will be required to sign a waiver releasing the University from responsibility in the event of exposure to the pathogen. Information regarding immunization can be obtained through the College of Pharmacy.

Students are advised that upon admission to the College of Pharmacy they are eligible to apply for a Pharmacists Educational Limited License. This license is required to participate in the College's experiential courses and to accumulate any Board of Pharmacy recognized internship time that may be necessary for registration as a pharmacist.

Academic Standing and Advancement

The academic standing of students in the College of Pharmacy and their advancement in the professional program are based on achieving and maintaining satisfactory academic performance and the successful completion of the appropriate prerequisite coursework. After admission to the College, the grade point averages of all students are excluded from consideration and are reestablished by taking the courses in the professional curriculum. To be in good academic standing and to advance to the second professional year, entering students must achieve a cumulative professional GPA of at least a 2.0 with no F grades in any of the first year courses. F grades and/or failure to attain a 2.0 cumulative GPA in any semester will be handled according to the University's Academic Probation and Dismissal Policy. To be eligible to participate in Clinical Clerkships, students must have successfully completed all didactic coursework (including the University General Education Requirements, and achieved University cumulative GPAs and all pharmacy GPAs of at least 2.0.



Ferris State University in Big Rapids is centrally located in Michigan and provides a variety of recreational activities and a friendly atmosphere.

Professional Program Curricular Requirements

General education		Credit hours
BIOL 331	Clinical Anatomy and Physiology 1	4
BIOL 332	Clinical Anatomy and Physiology 2	3
BIOL 387	Clinical Microbiology and Immunology	4
ENGL 321	Advanced Composition	3
	"300 - 400" Level Social Awareness Course	3
Professional		
PHAD 310	Profession of Pharmacy	3
PHAD 424	Pharmacy Law and Ethics	3

PHAD 436	Pharmacy Practice Management	3
PHAD 502	Sociopharmacy	3
PHAD 540	Pharmacoeconomics	2
PHAR 325	Pharmaceutics 1	3
PHAR 326	Pharmaceutics 2	4
PHAR 440	Pharmacokinetics	3
PHCH 320	Medical Biochemistry	5
PHCH 330	Introduction to Drug Action/Diagnostics	4
PHCH 427	Medicinal Chemistry 1	3
PHCH 428	Medicinal Chemistry 2	3
PHCH 430	Chemotherapeutic Agents	4
PHCL 423	Pharmacology 1	4
PHCL 424	Pharmacology 2	3
PHPR 303	Integrated Lab 1	2
PHPR 304	Integrated Lab 2	2
PHPR 411	Integrated Lab 3	1
PHPR 412	Integrated Lab 4	1
PHPR 501	Integrated Lab 5	1
PHPR 502	Integrated Lab 6	1
PHPR 514	Clinical Communication	2
PHPR 521	Pharmacotherapeutics-Toxicology/Nutrition/ Psychiatry/Neurology	4
PHPR 522	Pharmacotherapeutics-Cardiovascular/Renal	3
PHPR 523	Pharmacotherapeutics-Infectious Diseases/ Immunology/Oncology	4
PHPR 524	Pharmacotherapeutics-Respiratory/Endocrine/ Gastrointestinal	4
PHPR 550	Drug Literature Evaluation/Study Design	3
PHPR 591	Community Externship	2
PHPR 592	Institutional Externship	2
PHPR 680	Clinical Seminar	1
	Clinical Clerkship - Four Required (each 4 credit hours)	16
PHPR 600	Internal Medicine 1	
PHPR 601	Internal Medicine 2	
PHPR 602	Ambulatory Care 1	
PHPR 603	Ambulatory Care 2	
	Clinical Clerkship - Electives (4 required, each 4 credit hours)	16
PHPR 604	Clinical Pharmacokinetic	
PHPR 606	Drug Information	
PHPR 607	Drug Use Policy	
PHPR 608	Pediatric Medicine	
PHPR 610	Institutional Practice	
PHPR 614	Consult/Long-Term Care Clerkship	
PHPR 616	Homecare	
PHPR 618	Managed Care	
PHPR 620	Cardiology	
PHPR 622	Pulmonary Medicine	
PHPR 624	Critical Care	
PHPR 630	Emergency Medicine	
PHPR 636	Nutrition	
PHPR 640	Psychiatry	
PHPR 642	Addiction Medicine	
PHPR 648	Infectious Disease	
PHPR 652	Oncologic Disease	
PHPR 660	Neonatology	
PHPR 664	Geriatrics Medicine	
PHPR 670	Clinical Research	

Professional Electives

(Choose 3, 2 credits each)

PHAD 350	Community Pharmacy Management
PHAD 360	Institutional Pharmacy
PHAD 450	Advanced Community Pharmacy Management
PHAD 460	Advanced Institutional Pharmacy
PHAD 470	Pharmaceutical Marketing
PHAD 480	Health Care Systems
PHAD 482	Pharm Care/Public Health
PHAR 444	Non-Prescription Drugs and DME

PHAR 446	Novel Drug Delivery
PHAR 452	Manufacturing Pharmacy
PHAR 456	Product Development
PHAR 458	Chem. Kinetics/Product Stability
PHAR 460	Advanced Pharmacokinetics
PHAR 462	Pharmaceutics Seminar
PHAR 472	Computer Applications in Pharmacy
PHCG 352	Introduction to Plant Cell Culture
PHCG 432	Herbal Remedies and Alternative Therapies
PHCG 452	Natural Product Toxins
PHCG 462	Advances in Natural Product Research
PHCG 490	Special Topics in PHCG
PHCH 352	Instrumental Analysis
PHCH 362	Selected Topics in Biochemistry
PHCH 452	Special Topics in Medicinal Chemistry
PHCH 462	Chemical Carcinogenesis
PHCH 472	Pharmacy and Geriatric Health
PHCL 352	Selected Topics in Pathophysiology
PHCL 452	Toxicology
PHCL 462	Selected Topics in Pharmacology
PHPR 552	Introduction to Pharmacotherapy Clinics
PHPR 554	Managed Care Pharmacy Practice
PHPR 556	Advanced Topics in Infectious Diseases
PHPR 564	Evaluating Internet Drug Information Resources
PHPR 568	Advanced Presentations and Teaching Skills
PHPR 576	Advance Cardiac Life Support

Total hours for degree: 199 credits

The information that is provided in this publication is not to be construed either as a contract or as an offer to contract. The College of Pharmacy reserves the right to change at any time and without prior notice any provision or requirement including curriculum.