The Profession of Pharmacy

Expanded opportunities for pharmacists in patient care roles and therapeutic decision-making have evolved during the past three decades. The traditional role in drug distribution has increasingly expanded to incorporate the concept of comprehensive medication management, a philosophy which gives pharmacists the responsibility for assuring drug therapy that achieves defined outcomes and improves a patient's quality of life. Pharmacists in contemporary practice are trained and expected to work collaboratively with the patient and the patient's other health care providers to assure that drug therapy is safe and effective.

The ability of the pharmacist to play an active role in drug therapy is recognized at both the state and national levels. In recent years, several states have passed legislation that allows pharmacists to initiate or modify drug therapy, through collaboration with a physician or through independent authority. In Michigan, pharmacists may prescribe under the delegated authority of a licensed physician.

Pharmacist Licensure

The graduate of the four-year Pharm.D. curriculum earns the degree Doctor of Pharmacy and is eligible for the NAPLEX examination to obtain licensure as a pharmacist. Licensure, either by examination or reciprocity, is available in all states and the District of Columbia.

Internship is a professional and practical experience under the supervision of a preceptor in a pharmacy approved by the Michigan State Board of Pharmacy, beginning after the student has been licensed by the Board of Pharmacy as an intern. Students must obtain a Michigan Internship License when they begin the professional curriculum of the College.

For additional information regarding internship, examination, or licensure in Michigan, write:

Director, Licensing Division
Bureau of Health Services
Department of Consumer and Industry Services
P.O. Box 30670
Lansing MI 48909

Reciprocity information is available from:

The Executive Director
National Association of Boards of Pharmacy
700 Busse Highway
Park Ridge IL 60068-2402

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• Pharmacy (Pharm.D.) (http://bulletins.wayne.edu/graduate/college-pharmacy-health-sciences/pharmacy-practice/pharmacy-pharmd)
• Pharmacy (Pharm.D. Research Scholars) (http://bulletins.wayne.edu/graduate/college-pharmacy-health-sciences/pharmacy-practice/pharmacy-pharmd-research-scholars)
Pharmacy

PHA 5110 Pharmacogenomics Cr. 2
Principles and applications of human genetics and genomics in drug therapy optimization, patient care, and counseling. Offered Spring/Summer.
Restriction(s): Enrollment limited to students with a class of PharmD Yr 2 or PharmD Yr 3; enrollment is limited to Professional level students.

PHA 5115 Principles of Pharmacotherapy II: Cardiology, Nephrology Cr. 5
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of cardiovascular and renal disease. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 5115

PHA 5125 Principles of Pharmacotherapy III: Endocrinology, Gynecology, Urology Cr. 4
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of endocrinologic, gynecologic, and urologic disorders. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 5125

PHA 5135 Pharmacotherapeutic Problem Solving II: Nephrology, Cardiology, Endocrinology, Gynecology, Urology Cr. 2
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of nephrologic, cardiologic, endocrinologic, and gynecologic conditions.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 5135

PHA 5155 Principles of Pharmacotherapy V Cr. 4-5
Pharmacotherapeutic principles in neurology, psychiatry, and drug abuse. Offered Fall.
Corequisite: PHA 5175
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PHA 5165 Principles of Pharmacotherapy VI Cr. 4-5
Pharmacotherapeutic principles of endocrine, renal, and gastrointestinal diseases. Offered Fall.
Corequisite: PHA 5175
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PHA 5175 Pharmacotherapeutic Problem Solving III Cr. 2
Third in a four-semester sequence focusing on the learning of pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics within the context of patient-based problems. Offered Fall.
Corequisite: PHA 5155, PHA 5165
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PHA 5195 Research Scholars: Research Conduct Elective Cr. 1-4
Conducting research project for students pursuing the Research Scholars path. Offered Every Term.
Prerequisite: (PHA 4395)
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Repeatable for 4 Credits

PHA 5215 Principles of Pharmacotherapy IV: Infectious Diseases Cr. 4
The chemistry, pharmacology, and toxicology of anti-infective agents and the pathophysiology, microbiology, and therapeutics of infectious diseases. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 4210

PHA 5225 Principles of Pharmacotherapy V: Neurology, Psychiatry Cr. 4
Medicinal chemistry, pharmacology and therapeutics of neurologic and psychiatric disorders. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 5225

PHA 5235 Pharmacotherapeutic Problem Solving III: Infectious Diseases, Neurology, Psychiatry Cr. 2
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of infectious, neurologic, and psychiatric diseases. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Course Material Fees: $75
Equivalent: PHA 5235

PHA 5270 Principles of Pharmacotherapy VII Cr. 4-5
Pharmacotherapeutic principles in oncology, toxicology, dermatology, and drug-induced diseases. Offered Winter.
Corequisite: PHA 5275
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PHA 5275 Pharmacotherapeutic Problem Solving IV Cr. 2
Fourth in a four-semester sequence focusing on the learning of pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics within the context of patient-based problems. Offered Winter.
Corequisite: PHA 5270, PHA 5280
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PHA 5280 Principles of Pharmacotherapy VIII Cr. 2-3
Pharmacotherapeutic principles of special populations, men’s and women’s health, patient problem solving. Offered Winter.
Corequisite: PHA 5275
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PHA 6125 Principles of Pharmacotherapy VI: Oncology, Advanced Immunology Cr. 3
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of oncologic and immunologic disorders. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 5270

PHA 6135 Pharmacotherapeutic Problem Solving IV: Oncology and Advanced Pharmacotherapeutics Cr. 3
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of neoplastic disorders and advanced pharmacotherapeutics. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PHA 5275
### Pharmacy Practice

**PPR 5135 Hospital Introduction to Pharmacy Practice (H-IPPE) Cr. 2**
Offered Yearly.

*Restriction(s):* Enrollment limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** $348.67

**Repeatable for 998.99 Credits**

**Equivalent:** PPR 4120

**PPR 5145 Patient Care Lab II Cr. 1**
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Fall.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**Course Material Fees:** $45

**PPR 5155 Social Administrative Sciences and Professional Development III: Practice Management Cr. 2**
Focus on topics that will enable an understanding of how pharmacy services are managed and how to manage personnel and provide leadership. Offered Fall.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**Equivalent:** PPR 4190

**PPR 5165 Introductory Pharmacy Practice Experience II Cr. 1**
Beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. Offered Fall.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**PPR 5215 Applied Pharmacokinetics and Pharmacogenomics Cr. 2**
Application of knowledge of pharmacokinetics and pharmacogenomics to patient-specific drug dosing. Offered Winter.

*Prerequisites:* (PSC 5115)

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**Equivalent:** PPR 7670

**PPR 5235 Community Introduction to Pharmacy Practice Experience (C-IPPE) Cr. 2**
Offered Yearly.

*Restriction(s):* Enrollment limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PPR 5245 Patient Care Lab III Cr. 1**
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Winter.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**Course Material Fees:** $35

**Equivalent:** PPR 4230

**PPR 5255 Social Administrative Sciences and Professional Development IV Cr. 2**
Designed to enable understanding of the importance of constructing medication systems and processes around proven best practices to maximize patient safety and to begin developing the ability to conceptualize, implement, and manage these systems in all health care settings. Offered Winter.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**PPR 6115 Applied Therapeutics in Self-Care Cr. 2**
Application of concepts of patient assessment, therapeutics, patient education, and health care systems to patient self-care. Offered Fall.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**PPR 6145 Patient Care Lab IV Cr. 1**
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Fall.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**PPR 6155 Social Administrative Sciences and Professional Development V Cr. 3**
Development of and justification for a pharmacy service, including background, service objectives, service design, implementation plan, and evaluation. Offered Fall.

*Restriction(s):* Enrollment limited to students in the Doctor of Pharmacy program.

**Equivalent:** PPR 4220
PPR 6165 Community-Introductory Pharmacy Practice Experience (C-IPPE) Cr. 2
Introduction to the organization and provision of community pharmacy services. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PPR 5235

PPR 6175 Hospital-Introductory Pharmacy Practice Experience (H-IPPE) Cr. 2
Introduction to the organization and provision of health-system pharmacy services. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PPR 5135

PPR 6180 (WI) Advanced Ethics and Professional Responsibility Cr. 2
Advanced concepts in health care provision. Students required to submit a written paper, manuscript length and style, on an ethics in pharmacy project conducted as a course requirement. Satisfies the Writing Intensive requirement for Pharm.D. students. Offered Fall.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6235 Social Administrative Sciences and Professional Development V Cr. 2
Understanding, developing and evaluating population health and population-based health care programs. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PPR 6290

PPR 6245 Pharmacy Ethics and Professional Responsibility Cr. 2
Understanding ethical precepts and applying normative principles to the practice of pharmacy in the context of professional service to the community. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Equivalent: PPR 6180

PPR 6290 Population-Based Medication Management Cr. 2
Evaluation of medication use within selected populations. Discussions include therapeutic, humanistic, and economic outcomes and drug utilization review. Offered Yearly.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy or Master in Public Health programs; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6295 Clinical Capstone Cr. 2
Utilization of pharmacotherapeutic-related knowledge and skills to evaluate patient cases and practice-related problems in order to assess students' preparedness for advanced pharmacy practice experiences. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6300 Patient Perspectives of Health, Illness and Culture Cr. 2
People from various cultures (religious, ethnic, sexual orientation, disability, chronic illness, economic status) discuss in small groups how these cultures influence living with a chronic illness. Students also discuss readings on health culture and keep a journal on their course experience. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Equivalent: OT 6320

PPR 6320 Underserved Care: Local and Global Experiences Cr. 2
Provides the opportunity for hands-on clinical experience in local and international under-served communities. Offered Every Term.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6520 Contemporary Issues in Nutrition Support Cr. 2
Prerequisite: PHA 5155 or PHA 5225

Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6525 Principles of Pain Management Cr. 2
Prerequisite: PHA 5155 or PHA 5225

Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6580 Contemporary Issues in Nutrition Support Cr. 2
Prerequisite: PHA 5155 or PHA 5225

Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7195 Advance Research Scholars: Advance Pharmacy Practice Experience Cr. 4
Provides capstone research instruction aimed at project completion, writing and peer review processes, and research program advancement. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
PPR 7225 Vaccines in Clinical and Public Health Practice Cr. 2
Explanations of topics related to use of vaccines for infants, children and adults in practice settings that include clinics, pharmacies and public health programs. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of PharmD Yr 2; enrollment limited to students in the Doctor of Pharmacy or Master in Public Health programs; enrollment is limited to Professional level students.

PPR 7410 Advanced Pharmacy Practice Inpatient/Acute Care Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Course Material Fees: $75
Repeatable for 12 Credits

PPR 7420 Advanced Pharmacy Practice Ambulatory Care Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 12 Credits

PPR 7430 Advanced Pharmacy Practice Patient Care Core Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 12 Credits

PPR 7431 Advanced Pharmacy Practice Patient Care Elective I Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PPR 7440 Advanced Pharmacy Practice Non-Patient Care Elective I Cr. 4
Practical education to develop knowledge in specific areas of pharmacy practice in specialized pharmacy or health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PPR 7500 Advanced Pharmacy Practice Hospital Cr. 4
Practical training experience in hospital pharmacy practice, including pharmacy operations and clinical services. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7505 Advanced Pharmacy Practice Community Cr. 4
Practical training experience in management of a community pharmacy, and managing drug therapy of patients in community pharmacy setting. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7670 Clinical Pharmacokinetics Cr. 2
Use of pharmacokinetic principles in dosing and monitoring of drug therapy. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7840 Seminar in Pharmacy Cr. 1
Reports and discussions by students and members of the staff concerning current developments in clinical pharmacy. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7960 Economic Evaluation of Health Care Interventions Cr. 2-3
Designed for advanced professional students (3rd year pharmacy, medicine, health sciences), students in the Master of Public Health degree program, graduate students and Fellows who would like an introduction to cost-effectiveness analysis. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7990 Directed Study in Pharmacy Practice Cr. 1-3
Minor projects in pharmacy for students whose interests and needs are not adequately met in other scheduled classes or in the doctoral research project. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.