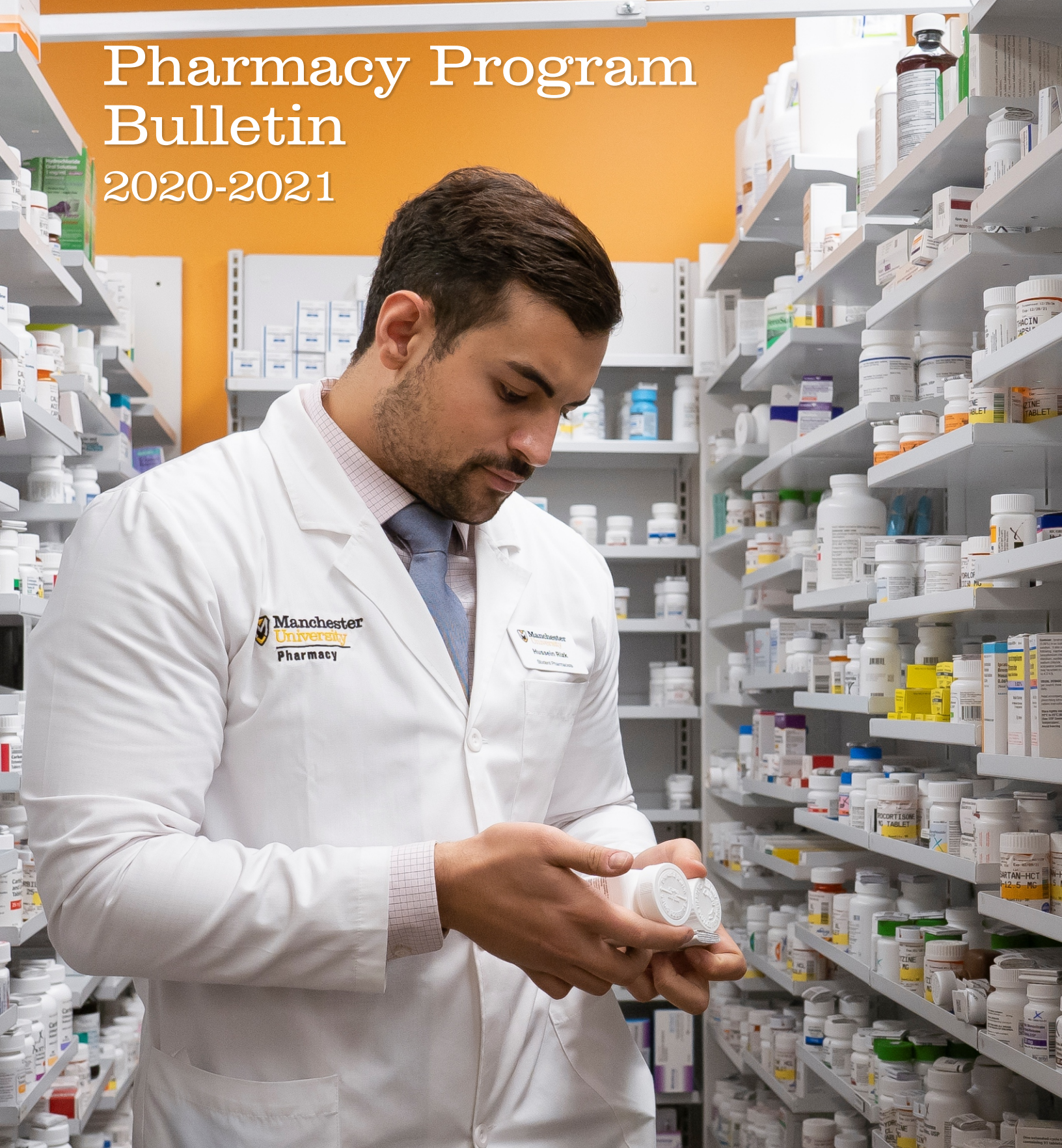


# Pharmacy Program Bulletin 2020-2021



**Manchester**  
University

# **Manchester University Pharmacy Program Bulletin 2020-2021**

## **Manchester University**

- Mission and Value Statements
- Accreditation
- Non-Discrimination

## **Pharmacy Program**

- Doctor of Pharmacy
- Mission
- Goals
- Values
- Accreditation

## **Admission**

- Application
- Admissions Process
- Manchester University students and the Pharmacy Program Admissions Process
- International Students and the Pharmacy Program Admissions Process
- Non-Discrimination in the Pharmacy Program Admissions Process

## **Degree Requirements**

- Doctor of Pharmacy Curriculum
- Course Descriptions
- Service Learning
- Portfolio

## **Track Requirements**

## **Academic Policies**

- Registration
- Grading System
- Withdrawal from the Pharmacy Program
- Refund Policy
- Progression in the Pharmacy Program
- Academic Probation



- Remediation
- Suspension and Dismissal from the Pharmacy Program
- Health Science Academic Standards and Progression Committee
- Pharmacy Program Honor Code
- Graduation and Commencement
- Advising, Mentoring and Student Success
- Privacy and Student Records

**Student Services**

- Information Technology Services
- Help Desk
- Library Resources
- Disability Support
- Financial Aid

**People of Manchester University Pharmacy Program**

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Disclaimer: The policies and curriculum set forth in this Bulletin are in effect for the academic year 2020-2021. The policies and curriculum described in this Bulletin are subject to change at any time as determined by Manchester University's faculty and administration.

# Manchester University

## Mission and Values Statements

### Mission

Manchester University respects the infinite worth of every individual and graduates persons of ability and conviction who draw upon their education and faith to lead principled, productive, and compassionate lives that improve the human condition.

### Values Statement

As a primarily undergraduate, residential, liberal arts community rooted in the tradition of the Church of the Brethren, Manchester University values:

**Learning**, because high academic expectations in an environment combining liberal arts and professional preparation equip graduates to live healthy, productive, and principled lives;

**Faith**, because our diverse faiths call us to make the world a kinder and better place, establish justice, build peace amid strife, and model lives of *agape* (selfless love), *tikkun olam* (repairing a broken world), and *salam* (peace);

**Service**, because committing self in service to others connects faith with action and abilities with convictions;

**Integrity**, because honesty and trust are the foundations of teaching and learning, enriching, enduring relationships, and strong communities;

**Diversity**, because understanding differences develops respect for ethnic, cultural, and religious pluralism; an international consciousness; and an appreciation for the infinite worth of every person; and

**Community**, because a positive community sharpens self-identity, promotes acceptance of the demands of responsible citizenship, and transforms conflict into mutual respect.

### Accreditation

Manchester University is accredited by The Higher Learning Commission and is a member of the North Central Association of Colleges and Schools. The full accreditation statement may be found at <http://www.manchester.edu/Common/AboutManchester/Accreditation.htm>.

### Non-Discrimination

Manchester University is committed to non-discrimination in campus life. The University does not discriminate on the basis of national origin, ancestry, race, color, age, sex, gender identity or expression, sexual orientation, familial status, religion, disability, or veteran status in admissions or any area of campus life, including its educational programs, scholarships and loan awards, residence life programs, athletic programs, extracurricular programs, promotion and tenure policies and practices, and alumni affairs.

Manchester University is committed to carry out the positions of Section 504 of the Rehabilitation Act of 1973 and the Americans With Disabilities Act, which provide for accessibility of University programs to the physically disabled.

## Pharmacy Program

### Doctor of Pharmacy Program

The Manchester University Pharmacy Program is a four-year doctoral program requiring at least two years of pre-pharmacy coursework. The program is an integrated educational environment involving the disciplines of pharmaceutical sciences and pharmacy practice. The program will consist of three years of didactic study, including Introductory Pharmacy Practice Experiences (IPPE) interwoven into the didactic curriculum sequence, and one year of Advanced Pharmacy Practice Experiences (APPE) involving six required and four elective rotations. Upon graduation,

students will be required to take and pass the North American Pharmacist Licensure Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE) in order to obtain licensure.

### **Mission**

To cultivate graduates of ability and conviction to provide patient-centered care guided by respect for the infinite worth of individuals and dedicated to improve communities by advancing pharmacy education, practice, service and scholarship.

### **Vision Statement**

To improve the human condition through service.

### **Values**

- We have a deep commitment to integrity.
- We respect the infinite worth of every individual. Diversity and inclusivity are vital for growth and understanding.
- We seek excellence in all that we do. We are accepting of new ideas. We create and innovate without fear.
- We foster personal and professional transformation. It is through learning that we become our better selves.
- We serve for the betterment of others.
- We seek and value collaboration and teamwork.

### **Accreditation**

Manchester University's Doctor of Pharmacy program is fully accredited with the Accreditation Council for Pharmacy Education, 135 South LaSalle Street, Suite 4100, Chicago, IL 60503; 312/644-3575; FAX 312/664-4652; website [www.acpe-accredit.org](http://www.acpe-accredit.org).

### **Admission**

#### **Application**

The Pharmacy Program will accept completed applications between July and March of each year. The complete application is housed through the Pharmacy College Application Service (PharmCAS). The PharmCAS application and Manchester University Pharmacy Program school information page may be found at the following website: [www.PharmCAS.org](http://www.PharmCAS.org).

#### **Admissions Process**

Admission to the Manchester University Pharmacy Program is limited and competitive. Approximately 65 new students are admitted each year. For this reason, achieving the minimum prerequisite subject and grade criteria does not guarantee admission. Students should begin the application process one year before their anticipated enrollment in the Manchester University Pharmacy Program.

The Pharmacy Program annual admission cycle is as follows:

- July – PharmCAS opens and interested candidates may access the online application
- September to May – Interview days held
- May – Pharmacy Program application (PharmCAS) deadline (unless otherwise notified)
- May – Final Admissions decisions made; waitlist established
- August – Orientation and Pharmacy Program classes begin

The Pharmacy Program uses a rolling admissions process. Application evaluations begin after the PharmCAS application is submitted. Completed admission files are forwarded to the Admissions committee and faculty for review. Qualified candidates are invited for an on-campus, or virtual, interview. Interview days will be held to continue the evaluation of candidates. Within two weeks of the completed interview, each candidate receives an admission status (accept, committee hold, or denial).

### **Manchester University Students and the Pharmacy Program Admissions Process**

Students who complete the pre-pharmacy program at Manchester University with a cumulative GPA of at least 3.3 will be guaranteed an interview for the Doctor of Pharmacy program. Students with strong records who meet the minimum cumulative and prerequisite GPA requirements of 2.5 will still be considered for admission; however, these students are not guaranteed an interview. An Early Assurance program exists for incoming first year students at Manchester with a cumulative high school GPA of at least 3.5. Early Assurance leads to a reserved seat in the Pharmacy Program class for students who maintain at least a 3.5 cumulative GPA at Manchester and who meet other admission requirements.

### **International Students and the Pharmacy Program Admissions Process**

The Manchester University Pharmacy Program does consider international students who have completed all prerequisite coursework at an accredited U.S. or Canadian institution. These applicants must meet all other minimum admissions requirements, as well as successful passing of the TOEFL or IELTS exam for students whose primary language of instruction is not English.

### **Non-Discrimination in the Pharmacy Program Admissions Process**

The Manchester University Pharmacy Program is committed to non-discrimination in the admissions process. The University does not discriminate on the basis of national origin, ancestry, race, color, age, sex, gender identity or expression, sexual orientation, familial status, religion, disability, or veteran status in admissions including its admission decisions, scholarships, or loan awards.

## **Degree Requirements**

To earn the Doctor of Pharmacy degree, students must:

1. Complete all required courses, and the required number of elective courses, in the curriculum with a grade of C or better (or P);
2. Complete all community service and outreach and co-curricular requirements;
3. Pass all required competency assessments.

### **Manchester University Pharmacy Program Curriculum, Implemented Fall 2020 (beginning with the Class of 2024)**

Academic Term	PHRM Course Name	Credit Hours	Total
Fall, P1 Year	310 Pharmaceutical Biochemistry	5	
	322 Drug Information	2	
	330 Pharmacy Practice Lab I	1	
	334 Pharmaceutics I	2.5	
	336 Pharmaceutical Calculations	2	
	340 Patient Centered Care	5	

Spring, P1 Year	318	Immunology	2	
	319	Pathophysiology	3	
	325	Nonprescription Therapeutics	3	
	331	Pharmacy Practice Lab II	1	
	335	Pharmaceutics II	2	
	337	Pharmacokinetics/Genomics	2	
	370	IPPE I Community*	3	
				16
Fall, P2 Year	411	Integrated Pharmacotherapy (IPT) 1	4	
	412	IPT 2	5	
	421	Case Conference 1	1	
	430	Pharmacy Practice Lab III	1	
	442	Healthcare Systems and Patient Safety	4	
		Elective****	0-2	15 -17
Spring, P2 Year	413	IPT 3	5	
	414	IPT 4	3	
	420	Drug Literature Evaluation	2	
	422	Case Conference 2	1	
	431	Pharmacy Practice Lab IV	0.5	
	442	Pharmacy in Public Health	3	
	471	IPPE II Institutional**	4	
		Elective****	0-3	18.5-21.5
Fall, P3 Year	515	IPT 5	5	
	516	IPT 6	5	
	523	Case Conference 3	1	
	535	Pharmacy Practice Lab V	0.5	
	540	Practice and Personnel Management	3	
		Elective****	0-3	14.5-17

Spring, P3 Year	517	IPT 7	5	
	518	IPT 8	3	
	524	Case Conference 4	1	
	536	Capstone & Lab	4	
	541	Pharmacy Law	2	
		Elective****	0-3	15-18
P4 Year*****	610	APPE Advanced Community	4	
	620	APPE Advanced Institutional	4	
	630	APPE Ambulatory Care	8	
	640	APPE Acute Care	8	
	670	APPE Electives	16	
	601	Personal and Professional Development	0.5	40.5
TOTAL				142.5

**Manchester University Pharmacy Program Legacy Curriculum – Applies to the Class of 2021, 2022 and 2023**

Academic Term	PHRM	Course Name	Credit Hours	Total
Fall, P1 Year	310	Biomedical Sciences I	5	
	314	Pharmaceutics I	3	
	316	Pharmaceutical Calculations I	1	
	320	Introduction to Pharmacy I	4	
	322	Drug Information	2	
	323	Communications in Pharmacy Practice	2	
	330	Pharmacy Practice Lab I	1	
	301	Personal and Professional Development	0.5	18.5
Spring, P1 Year	311	Biomedical Sciences II	5	
	315	Pharmaceutics II	3	
	317	Pharmaceutical Calculations II	1	



	321	Pharmacy in the Healthcare System	3	
	324	Nonprescription Therapeutics	2	
	370	IPPE I Community*	3	
	331	Pharmacy Practice Lab II	1	18
Fall, P2 Year	450	IPT*** – Introduction	4	
	451	IPT – Nervous System I	4	
	452	IPT – Cardiovascular I	4	
	430	Pharmacy Practice Lab III	1	
	440	Patient Safety and Informatics	2	
	441	Public Health and Pharmacy	2	
	401	Personal and Professional Development*****	0.5	17.5
Spring, P2 Year	453	IPT – Cardiovascular II	3	
	454	IPT – Nervous System II	3	
	455	IPT – Infectious Disease I	4	
	431	Pharmacy Practice Lab IV	1	
	420	Drug Literature Evaluation	2	
	470	IPPE II Institutional**	3	
		Elective****	0-3	16-19
Fall, P3 Year	550	IPT – Infectious Disease II	2.5	
	551	IPT – Endocrine & Reproductive	3.5	
	552	IPT – Renal & Urologic	3.5	
	553	IPT – Pulmonary & Critical Care	2.5	
	530	Pharmacy Practice Lab V	1	
	540	Practice and Personnel Management	3	
	501	Personal and Professional Development*****	0.5	
		Elective****	0-3	16.5-19.5
Spring, P3 Year	554	IPT – Gastrointestinal	3	
	555	IPT – Immune, Musculoskeletal, Integumentary	3	

	556	IPT – Hematology/Oncology	3	
	531	Pharmacy Practice Lab VI	1	
	541	Pharmacy Law	2	
	521	Capstone	5	
		Elective****	0-3	17-20
P4 Year*****	610	APPE Advanced Community	4	
	620	APPE Advanced Institutional	4	
	630	APPE Ambulatory Care	8	
	640	APPE Acute Care	8	
	670	APPE Electives	16	
	601	Personal and Professional Development	0.5	40.5
TOTAL				149

IPPE: Introductory Pharmacy Practice Experiences have 2 weeks (80 hours) of rotation time during January. Students return to their practice site once per week for 4 hours throughout the spring semester. The introductory pharmacy practice experience service (IPPE Service) course will be in a student's P3 year of the pharmacy program IPPE service hours are required to meet the minimum number of clinical hours to become a licensed pharmacist in Indiana. The hours are designated as a progression requirement that must be completed prior to advancement to the next year of the academic program.

\*IPPE Community: Introductory Pharmacy Practice Experiences have 2 weeks (80 hours) of rotation time during January. Students return to their practice site once per week for 4 hours throughout the spring semester.

\*\*IPPE Institutional: Institutional Introductory Pharmacy Practice Experiences have 4 weeks (160 hours) of rotation time in either January or June.

\*\*\*IPT: Integrated Pharmacotherapy, taught in block format.

\*\*\*\*Electives: 5 total credit hours of elective didactic coursework are required.

\*\*\*\*\*APPE: Advanced Pharmacy Practice Experiences are 4 weeks in duration. There are 10 rotations: 6 required experiences and 4 elective rotations. Each student must take a minimum of two core rotations (PHRM 610, 620, 630, 640) which are precepted by full-time Manchester University faculty members. At least 2 of the 4 elective rotations must be inpatient care.

Some rotations are outside of the Fort Wayne area. Travel and/or lodging outside of Fort Wayne may be required at the student's expense.

\*\*\*\*\*PHRM 401 and PHRM 501 were discontinued as part of the course of study prior to fall 2020.

## Track Programs

## Track Programs

Manchester University Pharmacy Program combines a set of courses and experiences through which students develop advanced competency in a specific area. These specialized tracks allow students to demonstrate to a potential employer or post-graduate training program that they have skill and experience beyond the expectation of a Pharm.D. graduate.

Track programs offered:

- Residency
- Leadership in Pharmacy Practice
- Pharmaceutical Sciences Laboratory Research

## Residency Track

### Certificate Description

The Residency Track is designed to give motivated students the opportunity to expand their knowledge and skills related to the direct patient care. This track program will provide two options for patient care focus – acute care and ambulatory care - and it is up to the student to decide which one to pursue. It is intended to reinforce, build upon, and expand the application of topics covered throughout the required Doctor of Pharmacy curriculum at Manchester University College of Pharmacy. The goal of the program is for participants to obtain and excel in a postgraduate year 1 (PGY1) pharmacy residency and beyond.

### Track Leadership

#### Track Director

Robert D. Beckett, PharmD, BCPS  
Associate Professor of Pharmacy Practice  
Email: rdbeckett@manchester.edu

#### Acute Care Focus Coordinator

Dusty Linn, PharmD, BCCCP  
Associate Professor of Pharmacy Practice  
Email: ddlinn@manchester.edu

#### Ambulatory Care Focus Coordinator

Andrea Mekonnen, PharmD, BCACP  
Assistant Professor of Pharmacy Practice  
Email: awhitaker@manchester.edu

The track director will coordinate the application process, verify satisfactory completion of the program, and directs the residency boot camp. The coordinators will assist students with meeting requirements of the program, track students' progress in meeting requirements for the track program, and assist the director, as needed.

### Track Outcomes

Students participating in the certificate program will be able to:

1. Demonstrate an expanded knowledge base on providing pharmaceutical care for hospitalized or ambulatory patients.
2. Critically evaluate patient cases and intervene to optimize their pharmaceutical care.
3. Successfully manage their time to complete a longitudinal clinical research or quality improvement project.

### Benefits and Rationale

Students completing the certificate can expect to benefit by 1) expanding their knowledge base in topics in acute care or ambulatory care related topics 2) expanding their critical thinking skills 3) developing their clinical skills, and 4) refining

their time and project management abilities. The track program is primarily intended for students with significant interest in completing post-graduate training. The track program is comprised of four main components:

- Didactic coursework: Students will complete pre-specified elective courses
- Experiential education: Students will apply their knowledge in pre-specified APPE rotations. These may be required by the Doctor of Pharmacy program or electives.
- Residency recruitment preparation: Students will participate in workshops intended to prepare them to pursue a residency position.
- Clinical research: Students will participate in an original investigation or quality improvement project focused on caring for ambulatory patients.

Obtaining a PGY1 residency position in US has become very competitive. This program is designed to provide track participants with the necessary guidance, experiences, and core knowledge to succeed in obtaining and excelling in a PGY1 residency.

### Admission Requirements

To achieve the Residency Track designation upon graduation, the student is responsible for demonstrating proof of completion of all track requirements. It is the responsibility of the student to make sure they meet all requirements and submit proper documentation of each requirement to the track coordinator. There is no limit to the number of students who can complete the Residency Track. The residency track faculty will help facilitate track requirements, if needed.

The residency track allows students to choose from two areas of focus – acute care and ambulatory care. Each student must submit a letter of intent and curriculum vitae (CV) during their P3 year indicating they are working towards the track program and which focus they would like to pursue. The letter of intent is to make sure students have the necessary preliminary requirements and to assist in the coordination of and selection of appropriate APPEs. A letter of intent and CV must be submitted in order to achieve the Residency Track designation at graduation.

**The letter of intent and CV is due:** October 1, 2019 to track coordinator and respective focus liaison

The following items must be included in the letter of intent:

- Designate which focus of the Residency Track the student wishes to complete
- Describe why the student wishes to complete the Residency Track

### Required Program Experiences

**Successful completion of the Residency Track program requires successful completion of the following experiences:**

- All required core curriculum as required by the Manchester University College of Pharmacy Doctor of Pharmacy program
- Maintain enrollment in good standing throughout the duration at Manchester University College of Pharmacy, Natural & Health Sciences in the Doctor of Pharmacy degree program

	Acute Care Focus	Ambulatory Care Focus
<b>Academics</b>	• Maintain a 3.2 or higher GPA with all grades a C/P or higher upon graduation	
<b>Learning About Residencies</b>	• Attend at minimum two residency or post-graduate training-focused information sessions	
<b>Focus Area Elective Courses</b>	• PHRM 576 (Critical Care/Infectious Diseases Therapeutics, 2 credits, Spring P3)	• PHRM 571 (Ambulatory Care Pharmacy, 2 credits, Spring P3)
<b>Required Electives Courses</b>	• Enroll in PHRM 595 (Postgraduate Residency Training, 1 credit, Fall P3) • Enroll in PHRM 482 (Independent Research, 1 credit, Spring P3)	
<b>Drug Information</b>	• Choose one of the following:	

	<ol style="list-style-type: none"> <li>1. Enroll in PHRM 589 (Applications of Drug Literature, 1 credit, Fall P3)</li> <li>2. A drug information APPE rotation (4 credit hours, 4-week APPE rotation)</li> </ol>		
<b>Research</b>	<ul style="list-style-type: none"> <li>• Conduct a clinical research project individually or in a small group of two or three students. The deliverables are to: <ol style="list-style-type: none"> <li>1. Complete CITI training in accordance with the requirements of the institution where the IRB for the project will be submitted</li> <li>2. Complete IRB or necessary institution research paperwork, as needed</li> <li>3. Present a poster at a local or national meeting</li> </ol> </li> </ul>		
<b>APPE*</b>	<table border="1"> <tr> <td> <ul style="list-style-type: none"> <li>• Three acute care APPE rotations, one each in of the following: <ol style="list-style-type: none"> <li>1. Internal medicine</li> <li>2. Critical care</li> <li>3. Infectious diseases</li> </ol> (Three 4 credit hours, 4-week APPE rotation)</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• Three ambulatory care APPEs (Three 4 credit hour, 4-week APPE rotation)</li> <li>• At least one rotation must have a chronic disease state collaborative practice agreement</li> </ul> </td> </tr> </table> <ul style="list-style-type: none"> <li>• Participate in Residency Boot Camp</li> <li>• Attend a regional and/or the ASHP MCM residency showcase</li> </ul>	<ul style="list-style-type: none"> <li>• Three acute care APPE rotations, one each in of the following: <ol style="list-style-type: none"> <li>1. Internal medicine</li> <li>2. Critical care</li> <li>3. Infectious diseases</li> </ol> (Three 4 credit hours, 4-week APPE rotation)</li> </ul>	<ul style="list-style-type: none"> <li>• Three ambulatory care APPEs (Three 4 credit hour, 4-week APPE rotation)</li> <li>• At least one rotation must have a chronic disease state collaborative practice agreement</li> </ul>
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**\*Requires one elective APPE rotation**

Additional Details about requirements:

A longitudinal clinical research or quality performance improvement project.

- It is the responsibility of the students to complete this requirement either individually or in a small group of two to three students to conduct a research project. In addition to identifying the group, students should identify a research mentor and work with them to develop the project. The track coordinator and liaison can help facilitate the identification of possible mentors, but it is the responsibility of the student to follow through on the implementation and coordination of the project.
- During PHRM 482 (Independent Research Elective) students will complete CITI training, conduct background research on the subject being studied, complete a formal presentation on the background literature, and complete necessary IRB or institution research paperwork, as needed.
- The research mentor should be someone who is able to guide the students through the research project experience during the P3 and P4 year and be responsible for mentoring and assessing successful completion of the project.
- The project must be submitted for dissemination as a podium or poster presentation at a local, regional and/or national conference OR to a peer-reviewed scientific publication.

Attendance at Residency Boot Camp is required during the P3 Spring semester and P4 year of the curriculum.

- Workshop topics will vary based upon needs of track participants but may include writing a cover letter, ASHP Midyear preparation, residency match processes, interview skills, research methods and statistics, networking opportunities with residency program directors, etc.
- Students should be prepared to attend workshops that may occur outside normal business hours (i.e., during evenings or weekends).

### **Program Completion Documentation**

At the end of the P4 academic year, applicants who have completed all necessary requirements for achieving the Residency Track program at graduation must submit the following documents to the track coordinator:



1. Unofficial transcript documenting GPA and all required and elective didactic courses taken along with all 4<sup>th</sup> year APPE rotation
2. Documentation of presentation of research at local, regional, or national conference, completed CITI training, and IRB or institution research paperwork, if required.
3. Documentation of attendance of regional or national residency showcase
4. Appropriate sign-in sheets for Residency Boot Camp and residency informational meetings

### **Certificate Assessment**

The success of the certificate and need for modification will be determined using the following methods:

- Number/percentage of students applying for, matching with, and/or successfully scrambling for a residency will be recorded and tracked.
- A survey will be sent to all certificate program participants at the end of each academic year to assess student perceptions of the program, including areas to be improved or expanded, as well as an assessment of certificate faculty.
- At the end of the P4 year, each student will complete an exit interview with course coordinators describing the experience and further suggestions.

Assessment results will be collected and reviewed by certificate coordinators and faculty who will decide if any changes are needed to the certificate program. Additionally, pertinent comments and suggestions will also be shared with faculty outside of the certificate program who may be offering a didactic elective course which constitutes an elective choice in the program.

## **Leadership in Pharmacy Practice Track**

### **Description**

This track is designed to assist students in building their leadership skills. Students will examine their personal philosophies, innate characteristics, and the way they interact with others and their world. Students will engage in real world leadership experiences that provide them with growth opportunities and prepare them for the changing environment of health care upon graduation.

### **Outcomes**

Students completing the program will be able to:

1. Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth. [F2]
2. Demonstrate responsibility for creating and achieving shared goals, regardless of position. [C3, F2]
3. Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals. [F2]
4. Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society. [C1, C3, D2, F2]

### **Benefits and Rationale**

Our required curriculum provides exposure to basic leadership skills over four years. The experiences in this program will build on those in order to deepen and strengthen students' ability to lead others. Students completing this track will be well prepared to assume future leadership roles within a variety of organizations. They will be aware of their personal

strengths and attributes and use this awareness to lead in their own way. Students will explore different ways of communicating with others in order to achieve shared goals. Through knowing themselves as well as their colleagues, they will be able to inspire others to achieve their best performance.

### **Admission Requirements**

**Students must satisfy the following criteria to be considered for admission to the Leadership track:**

- Current enrollment in good standing in the Manchester University Pharmacy Program in the second professional year
- Successful completion of all required coursework through the fall semester of the second professional year

**Interested students must submit the following application materials during the spring of their second professional year (exact date to be announced):**

- Current curriculum vitae
- Cover letter describing interest in participating in the track program, professional goals, and the reason(s) the candidate merits consideration for the track program

**The following selection criteria will be used by track coordinators to determine which students will be offered admission to the program:**

- Completeness and content of application materials.
- Compatibility of the applicants' reasons for interest in the program and professional goals with the goals of the program.

Applicants will be notified no later than April 1st regarding status of their application.

### **Required Program Experiences**

**Completion of the track program requires completion of the following experiences:**

- All required core curriculum as required by the Manchester University Pharmacy Program
- Meet the requirement of a minimum of 5 elective credit hours to complete the Pharm.D. program. This will require at least one other elective in addition to the three leadership elective courses below.
- The following elective didactic courses:
  - PHRM 596 – Leadership for Pharmacists (2 credit hours; Fall P3)
  - PHRM 597 – Leadership: People & Change (2 credit hours; Spring P3)
- Two APPE rotations with significant leadership or management experience
  - One of these rotations must be focused on working with a leader in any setting.
  - The second rotation could be with another leader at a different site or could be in any other practice area and involve some type of leadership project completed for that site.
- A longitudinal leadership project. This project could be either research-based or be implemented practically at a partner health care site or the College.
  - The project will be identified either through track coordinators or by student suggestion and coordinator approval. Students may work in groups at the discretion of the course coordinators.

- Participants will be assigned a track course faculty member to serve as their mentor. This individual will guide them through the research project experience and be responsible for mentoring and assessing successful completion of the project.
- The project must be submitted for either:
  - dissemination as a podium or poster presentation at a local, regional and/or national conference or a peer-reviewed scientific publication; OR
  - consideration for implementation in an organization the student has worked with during his or her time in the track program.
- Attendance at no fewer than two professional development events per semester during the P3 and P4 years of the curriculum.

These events could be College-sponsored workshops, community events, a session at a professional organization conference, or some other event. At least one of the sessions should be focused on a leadership-related topic. These events may be identified by either the track faculty or the student; however, they must be pre-approved by the track faculty. Students should be prepared to attend sessions that may occur outside normal business hours (i.e., during evenings or weekends).

**Student Assessment**

Track Outcome	Assessment Strategy
Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.	Maintenance of a leadership journal and participation in required didactic classes.
Demonstrate responsibility for creating and achieving shared goals, regardless of position.	Successful completion of the leadership/management APPE elective rotations.
Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.	Completion of a leadership project with real world value.
Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.	Self-reflections and evaluations on required experiences.

**Track Assessment**

The success of the track and need for modification will be determined using the following methods:

- Number/percentage of students going into a leadership position at two and five years after graduation.
- A survey will be sent to all track program participants at the end of each academic year to assess student perceptions of the program, including areas to be improved or expanded, as well as an assessment of track faculty.
- At the end of the P4 year, students will complete an exit interview with track faculty describing the experience and further suggestions.

Assessment results will be collected and reviewed by track coordinators and faculty who will decide if any changes are needed to the track program. Additionally, pertinent comments and suggestions will also be shared with faculty outside of the track program who may be offering a didactic elective course which constitutes an elective choice in the program.

## **Pharmaceutical Sciences Laboratory Research Track**

### **Description**

The pharmaceutical sciences laboratory research track is designed to give motivated students the opportunity to expand their laboratory knowledge and/or research skills. It is intended to expose students to the types of laboratory research that could be done as a PharmD and to improve critical thinking and problem-solving ability.

### **Outcomes**

Students participating in the track will be able to:

1. Demonstrate and expanded knowledge base in research methodologies and techniques.
2. Conduct experiments with minimal guidance.
3. Critically read and evaluate primary research literature and apply it to their research project.
4. Successfully manage their time to complete a research project.
5. Gain laboratory experiences to increase competitive position when applying for industrial or academic research fellowships or positions.
6. Disseminate their research at a local, regional, or national meeting.
7. Use the scientific method, generate hypotheses, and/or design experiments.

### **Benefits and Rationale**

Students participating in the track will 1) conduct independent experiments 2) improve critical thinking 3) analyze research literature 4) master laboratory techniques and 5) effectively manage their time. Their track is primarily intended for students with significant interest in completing post-graduate research fellowships or in obtaining industrial research positions. The track program will be comprised of four main components:

- Coursework: Students will complete two elective courses, one in research methods and techniques and the other in independent research.
- Experiential education: Students will apply their knowledge in a research focused elective APPE rotation.
- Industrial and Research Fellowship preparation: Students will participate in a workshop intended to prepare them to apply for research positions.
- Presentation of research: Students will disseminate the results of their research at the Spring Celebration of Scholarship event or at another venue.

This program is designed to provide track participants with the necessary guidance, experiences, and core knowledge to obtain and succeed in a laboratory research position.

### **Admission Requirements**

**Students must satisfy the following criteria to be considered for admission to the track:**

- Current enrollment in good standing in the Manchester University Pharmacy Program in the second professional year
- Successful completion all required coursework through the fall semester of the second professional year
- Cumulative GPA of at least 3.0 in all courses taken in Manchester University Pharmacy Program. Admitted students whose GPA falls below 3.0 will be ineligible to continue in the program.

**Interested students must submit the following application materials to the Research Track Director (Dr. Brown) by November 1st during the second professional year:**

- Current curriculum vitae including GPA
- Cover letter describing interest in participating in the track program, professional goals, and the reason(s) the candidate merits consideration for the track program

**The following selection criteria will be used to determine which students will be offered admission to the program:**

- Completeness and content of application materials.
- Compatibility of the applicants' career aspirations, reasons for interest in the program, and professional goals with the goals of the program.

Each year, up to 6 applicants will be selected for entry into the track program. Applicants will be notified no later than December 1st regarding status of their application.

### **Required Program Experiences**

**Successful completion of the track program requires successful completion of the following experiences:**

- All required core curriculum as required by the Manchester University Pharmacy Program
- Two elective didactic courses:
  - PHRM 463 Research Techniques in Pharmaceutical Sciences – (2 credit hours; Spring P2)
  - PHRM 482 – Independent Research (3 credit hours; Fall or Spring P3) This is approximately a 6-9-hour commitment each week, between lab and homework. (the research must be pharmaceutical sciences laboratory-based)
- The following APPE rotation
  - Research Elective (4 credit hours, 4-week APPE rotation)
- A laboratory research project and poster presentation at a local, regional, or national meeting.
  - The project will be identified by the course coordinators or by student suggestion and coordinator approval during the Fall P3 semester. Students may work in groups at the discretion of the research mentor.
  - Participants will be assigned a course coordinator to serve as their mentor. This individual will guide them through the research project experience during the P3 and P4 year and be responsible for mentoring and assessing successful completion of the project.
  - The project must be submitted for dissemination as a podium or poster presentation at a local, regional and/or national conference OR to a peer-reviewed scientific publication.
- Attendance at the workshop session.
  - Workshop topics will vary based upon needs of track participants
  - Students should be prepared to attend workshops that may occur outside normal business hours (i.e., during evenings or weekends).

### **Student Assessment**



Outcome	Assessment Strategy
1. Demonstrate an expanded knowledge base in research methodologies and techniques.	Successful completion of the described courses and APPE rotation
2. Conduct experiments with minimal guidance.	Completion of independent research project in the P3 year and evaluation of laboratory notebook entries.
3. Critically read and evaluate primary research literature and apply it to their research project.	Journal club presentation of an assigned reading.
4. Successfully manage their time to complete a research project.	Successful completion of assigned project.
5. Gain laboratory experiences to increase competitive position when applying for industrial or academic research fellowships or positions.	Track number of students applying for or entering research positions following graduation.
6. Disseminate their research at a local, regional, or national meeting. Present research at the NM Student Research Symposium	Submission of the project to local, regional, or national meeting and/or submission to a journal. Presentation of research at the NM Student Research Symposium
7. Use the scientific method, generate hypotheses, and/or design experiments.	Completion of lab notebook with required elements.

### Track Assessment

The success of the track and need for modification will be determined using the following methods:

- Number/percentage of students applying for research positions will be recorded and tracked.
- A survey will be sent to all track program participants at the end of each academic year to assess student perceptions of the program, including areas to be improved or expanded, as well as an assessment of track faculty.
- At the end of the P4 year, each student will complete an exit interview with course coordinators describing the experience and further suggestions.

Assessment results will be collected and reviewed by track coordinators and faculty who will decide if any changes are needed to the track program.

### Course Descriptions

#### **PHRM 310** Pharmaceutical Biochemistry I - 5 hours

This course will cover essential topics in medicinal and biochemistry, including structure-function of biomolecules, enzymology, metabolism, molecular biology, receptor physiology, and fundamentals of drug design and action.

#### **PHRM 318** Immunology - 2 hours

This course covers key immunologic concepts, including the organization and function of the different components of the immune system, and mechanisms that lead to beneficial immune responses, hypersensitivity reactions, and immune

disorders. The applications of immunology in the design of vaccines, immunotherapeutics, and organ transplantation will also be discussed.

**PHRM 319 Pathophysiology - 3 hours**

This course focuses on the pathophysiology of common disease conditions affecting human beings across the lifespan. It includes clinically relevant concepts based on the principles of physiology, biochemistry and microbiology. The course moves from basic pathological processes to diseases by organs or organ systems to multiple system diseases and associated processes.

**PHRM 322 Drug Information - 2 hours**

Drug Information is designed to provide students with a foundation for an evidence-based approach to pharmacy practice in all settings. Students will gain familiarity with the types of drug literature and their uses, regulations of drug development and promotion, and a variety of drug information specialty practices. Students will be expected to demonstrate critical thinking and commitment to lifelong learning. By the end of the course, students should be able to identify and use appropriate drug information resources to systematically respond to basic requests for drug information from patients and healthcare professionals.

**PHRM 325 Nonprescription Therapeutics - 3 hours**

The focus of this course is the pharmacotherapeutic use of over the counter (OTC) medications, including dietary supplements. The course will introduce the student to issues surrounding the self-care decision making process. Special emphasis will be placed on how pharmacists may assist patients in safely and effectively self-treating common medical problems and to recognize when self-care is inappropriate. Home diagnostic tests, glucometers, and smoking cessation counseling/products are also discussed. PHRM 324 will be paralleled by activities in PHRM 331 and PHRM 370 in which students gain interviewing and problem-solving skills as they apply concepts learned in Nonprescription Therapeutics classes.

**PHRM 330 Pharmacy Practice Lab I - 1 hour**

Pharmacy Practice Lab I is the first in a series of courses designed to provide students with practical experience to apply skills learned in didactic course work. Students will engage in a variety of activities simulating professional practice scenarios. Lab will focus on applications of pharmaceutical care principles, pharmaceutical knowledge, and professional techniques to solve medication-related issues. In addition, communication skills will be practiced through patient counseling exercises, presentations, group assignments, and written assignments. It is expected that students will actively engage in lab sessions through various activities and simulations. Students will also be expected to work collaboratively in teams.

**PHRM 331 Pharmacy Practice Lab II – 1 hour**

Pharmacy Practice Lab II is a longitudinal integration of material from both past courses and concurrent classes. This course will provide students with the opportunity to practice a variety of pharmacy practice skill sets. Students will engage in a variety of activities simulating professional practice scenarios through the use of peer-teaching, faculty-student interactions, demonstrations, student interactions with standardized patients, and a variety of activities focusing on pharmacy-specific and inter-professional frameworks. Students will be expected to demonstrate critical thinking skills and develop lifelong learning techniques through a variety of activities. The lab experiences will correspond to didactic lessons in Biomedical Sciences II, Introduction to Pharmacy II, Pharmaceutics II, Nonprescription Therapeutics and elements of IPPE I (Community Practice). Skills learned during this course will be reinforced and applied during IPPE experiences as well as throughout the Doctor of Pharmacy curriculum.

**PHRM 334 Pharmaceutics I – 2.5 hours**

The Pharmaceutics course series is designed to teach essential concepts of physical pharmacy, pharmaceutics, and dosage form design, including compounding and evaluation of both sterile and non-sterile dosage forms. The student will gain background knowledge and skills necessary to apply biopharmaceutical principles to the selection and evaluation of dosage forms for use in patients.

**PHRM 335** Pharmaceutics II - 2 hours

The Pharmaceutics course series is designed to teach essential concepts of physical pharmacy, pharmaceutics, and dosage form design, including compounding and evaluation of both sterile and non-sterile dosage forms. The student will gain background knowledge and skills necessary to apply biopharmaceutical principles to the selection and evaluation of dosage forms for use in patients.

**PHRM 336** Pharmaceutical Calculations I - 2 hour

This course explores the various methods used to perform pharmaceutical calculations required for safe medication use. Accurately performing pharmaceutical calculations is a critical component in providing patient care in every pharmacy practice environment. The development of pharmaceutical calculations skills plays a significant role in building a competent pharmacist.

**PHRM 337** Pharmacokinetics/Pharmacogenomics - 2 hours

This hybrid course (face-to-face and online) examines the basic principles and concepts underlying the sciences of pharmacokinetics and pharmacogenomics. These concepts establish much of the basis for the rational use of pharmacotherapeutic agents. The influence of pharmacogenomic factors on pharmacokinetics are examined in detail. The course emphasizes integration of concepts and application to both basic and clinical sciences

**PHRM 340** Patient-Centered Care – 5 hours

This course will help prepare students for their roles and responsibilities as pharmacists in the areas of listening to, informing, and involving patients in their care, communicating effectively with other healthcare professionals, and advocating on behalf of patients and for the pharmacy profession. Students will be introduced to the Pharmacists' Patient Care Process, which is essential to contemporary practice of pharmacy. Focus will be placed on cultural sensitivity and pharmacy law and ethics to ensure a high standard of patient care. This course will start to shape student attitudes about pharmacy practice as they begin to chart a course for their pharmacy education and future career.

**PHRM 381** Kidney Camp – 2 hours – elective

The kidney camp elective is a required course for students who are selected from an application process to attend kidney camp. The didactic portion of this elective is preparation for kidney camp and will cover basic kidney physiology, pediatric kidney disease, peritoneal and hemodialysis, transplant, and medications used in these conditions. The course will also cover what to expect at kidney camp and simulate experiences for medication check-in, reconciliation and dealing with camper problems. Team-building exercises and assignments will be part of this course to enhance the dynamic among the participants at camp. The course will culminate with attending a six-day camp experience at Camp Tecumseh in Brookston, Indiana at the end of May/early June. In addition, students can take this course more than once for credit to further their experience.

**PHRM 420** Drug Literature Evaluation - 2 hours

Drug Literature Evaluation builds on the foundational evidence-based medicine practice skills developed in Drug Information. Students will gain familiarity with medication use management strategies, multiple types of pharmacy-related study design, and the process of evaluating the clinical usefulness of a medication. Students will be expected to demonstrate superior critical thinking; synthesize information from multiple resources; and write clearly, concisely, and professionally. By the end of the course, students should be able to comprehend, assess, and evaluate relevant primary literature and determine its potential impact on clinical practice.

**PHRM 430** Pharmacy Practice Lab III - 1 hour

Pharmacy Practice Lab III is a longitudinal integration of material from both past courses and concurrent fall classes designed to prepare the student for management of patient care in a clinical setting. A study of the practical applications of pharmacy is presented with an emphasis on the use of patient charts, assessments, diagnostics, critique of pharmacotherapy and patient education. Additional emphasis is placed on literature evaluation and the practice of evidence-based medicine.

**PHRM 431 Pharmacy Practice Lab IV – 1 hour**

Pharmacy Practice Lab IV is a longitudinal integration of material from both past courses and concurrent spring classes and will provide students with the opportunity to practice a variety of pharmacy practice skill sets. Students will engage in activities simulating professional practice scenarios through the use of peer-teaching, faculty-student interactions and demonstration, student interactions with standardized patients, and a variety of activities focusing on pharmacy-specific and inter-professional frameworks. Students will be expected to demonstrate critical thinking and lifelong learning techniques through a variety of activities that correspond to didactic lessons in Integrated Pharmacotherapy (IPT) courses (Nervous System II, Cardiovascular II, Infectious Diseases I), Drug Literature Evaluation, and elements of IPPE II (institutional practice). Skills learned during this course will be reinforced and applied during the IPPE experience as well as throughout the Doctor of Pharmacy curriculum.

**PHRM 440 Patient Safety and Informatics - 2 hours**

Healthcare Safety and Informatics is designed to provide students with the necessary knowledge and skills to protect the safety of patients and other individuals encountering the healthcare system. Students will gain familiarity with the tools, with special emphasis on informatics and technology, needed to improve the safety in a variety of healthcare settings. Students will be expected to demonstrate critical thinking and develop the attitudes needed to advocate for safe practices. By the end of the course, students should be able to effectively minimize, identify, report, and evaluate medication errors and adverse drug events.

**PHRM 441 Public Health and Pharmacy - 2 hours**

Pharmacists are an integral part of the health care system. Their central role in the health of the population demands of pharmacists an awareness of public health issues and their root causes; the ability to identify how the profession can contribute to public health; the knowledge of where to find information about a variety of public health issues; and the ability to serve in proactive leadership roles. This course is an organized introduction to the vast field of public health and aims to spark students' imagination on meaningful ways of contributing to the health of the population through the art and science of the profession of pharmacy.

**PHRM 450 IPT – Introduction to Integrated Pharmacotherapy - 4 hours**

This course examines the basic principles and concepts underlying the science of pharmacology and its two principle sub-disciplines, pharmacokinetics and pharmacodynamics. These concepts establish much of the basis for the rational use of pharmacotherapeutic and chemotherapeutic agents. The influence of pharmacogenomic factors on pharmacological effects and the possibility of individualization of drug dosing based on pharmacogenetics is also discussed. The course emphasizes integration of concepts and application to both basic and clinical sciences.

**PHRM 451 IPT – Nervous System I - 4 hours**

This course provides an integrated study of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to the neurologic disorders.

**PHRM 452 IPT – Cardiovascular I - 4 hours**

This course provides an integrated study of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, pharmacoeconomic, medication use in special populations, and review of pertinent drug literature as they relate to major cardiovascular diseases, including: hypertension, dyslipidemia/atherosclerosis, heart failure, ischemic heart disease and angina.

**PHRM 453 IPT – Cardiovascular II - 3 hours**

This course provides a continued integration of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, pharmacoeconomics, medication use in special populations, and review of

pertinent drug literature as they relate to major cardiovascular diseases. PHRM 453 will be associated with activities in PHRM 451 in which students will use problem-solving skills to apply concepts learned in this course.

**PHRM 454** IPT – Nervous System II - 3 hours

This course provides an integrated study of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to psychiatric disorders.

**PHRM 455** IPT – Infectious Disease I - 4 hours

This course provides an integrated study of epidemiology, microbiology, pathophysiology, medicinal chemistry, physical assessment, pharmacology & pharmacogenomics, chemotherapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to infectious diseases.

**PHRM 462** Research and Innovative Practice Seminar – 1 hour

Current topics, innovative practice, and current research in pharmacy, pharmaceutical sciences, and related scientific disciplines will be presented. Invited speakers from within and outside the Manchester community will provide a formal seminar, exposing students to research methodologies, potential student research projects, and networking opportunities.

**PHRM 463** Research Techniques in Pharmaceutical Sciences – 1 hours

This course will provide an introduction to the laboratory techniques used in contemporary pharmaceutical sciences research. Students will learn the theory behind the most common laboratory experiments, including mammalian tissue culture, Western blotting, isolation and purification of nucleic acids, quantitative polymerase chain reaction, and others. These techniques will then be applied in the laboratory setting.

**PHRM 465** Drug Induced Diseases – 2 hours

Drug-induced diseases elective is an opportunity for students to further their critical thinking and problem-solving skills in evaluating patients for various adverse reactions. Course content will focus on major drug-induced diseases likely to be encountered in both inpatient and ambulatory settings delivered in a case-based, active format. Students who complete the course will be prepared to apply drug safety principles, emphasizing drug-induced diseases, to their execution of the Pharmacists Patient Care Process (PPCP).

**PHRM 470** IPPE II Institutional - 3 hours

This introductory institutional pharmacy practice experience (IPPE II) course will develop students' basic knowledge, professional identity and self-confidence in the area of institutional pharmacy. Under the supervision and guidance of pharmacy professionals, students will gain familiarity with all aspects of pharmacy practice in selected institutional settings. Students will be expected to build on knowledge and skills gained during their first professional year of school, achieving standard competencies for the practice of pharmacy in the institutional setting bearing in mind that competence at a mastery level in all areas is not to be expected at this stage of the student's education.

**PHRM 471** IPPE II Institutional - 4 hours

This introductory institutional pharmacy practice experience (IPPE II) course will develop students' basic knowledge, professional identity and self-confidence in the area of institutional pharmacy. Under the supervision and guidance of pharmacy professionals, students will gain familiarity with all aspects of pharmacy practice in selected institutional settings. Students will be expected to build on knowledge and skills gained during their first professional year of school, achieving standard competencies for the practice of pharmacy in the institutional setting bearing in mind that competence at a mastery level in all areas is not to be expected at this stage of the student's education.



**PHRM 482** Independent Research - 1-3 hours – elective

This elective course is designed to allow students to pursue research interests and become familiar with techniques used in research of discovery, integration, application, and/or scholarship of teaching and learning. In collaboration with a faculty research mentor, each student will select an appropriate research problem and work towards its solution. This course may be repeated for credit.

**PHRM 493** Teaching Assistant – 1-2 hours – elective

This course will enable students to serve as Teaching Assistants (TAs) in a variety of pharmacy courses. TAs will develop skills in using a learning management system from the perspective of a TA. TAs will learn about FERPA and the requirements of this law. TAs will provide support at study table sessions to assist students with core courses. TAs will work closely with their assigned course coordinator to complete other course-related tasks.

**PHRM 521** Capstone Course – 5 hours

The focus of this course is to reinforce and apply knowledge and skills obtained throughout the curriculum to facilitate the transition to become APPE-ready and subsequently practice-ready. Students will be able to successfully identify and resolve medication-related problems and develop comprehensive patient-centered plans to optimize drug therapy in order to achieve positive outcomes utilizing the JCPP Pharmacists' Patient Care Process. This course provides the opportunity to complete two nationally recognized track programs through APhA: 1. Delivery Medication Therapy Management (MTM) Services 2. The Pharmacist and Patient-Centered Diabetes Care.

The purpose of this course is to prepare students to become APPE-ready and subsequently practice-ready by synthesizing knowledge, enhancing critical thinking skills, and finding and utilizing literature to create evidence-based recommendations. Within this course, students will develop proficiency in projects that are required for APPE rotations, such as patient care activities requiring self-directed integration and application of knowledge previously gained in the curriculum. Students will cultivate the skills of applying feedback to improve performance, self-directed learning, and applying updated guidelines and late-breaking drug information. Active participation throughout the course will accomplish course goals.

**PHRM 530** Pharmacy Practice Lab V - 1 hour

Pharmacy Practice Lab V is a longitudinal integration of materials from both past courses and concurrent fall classes, and will provide students with the opportunity to practice a variety of pharmacy practice skill sets. Students will engage in activities simulating professional practice scenarios through the use of peer-teaching, faculty-student interactions and demonstration, student interactions with standardized patients, and a variety of activities focusing on pharmacy-specific and inter-professional frameworks.

Consistent with our ability-based outcomes, ACPE Appendix D pre-ACPE core domains, and ACPE Appendix B knowledge standards, students will be expected to demonstrate critical thinking and commitment to lifelong learning through a variety of activities that correspond to didactic lessons in Integrated Pharmacotherapy (IPT) courses (PHRM 550, PHRM 551, PHRM 552, PHRM 553) and PHRM 540. Skills learned during this course will be reinforced and applied throughout the Doctor of Pharmacy curriculum.

**PHRM 540** Practice and Personnel Management - 3 hours

This course will provide a focused examination of the role of the pharmacist as a leader and manager in various practice settings. Management principles and topics will include leadership, planning and organization, personnel issues, practice strategies, business models, marketing, financial analysis, and advocacy.

**PHRM 541** Pharmacy Law - 2 hours

This course focuses on the interpretation and application of laws and regulations pertaining to the practice of pharmacy. Also, the course focuses on ethical issues surrounding pharmacy practice and how those issues intersect with applicable laws and regulations.

**PHRM 550** IPT – Infectious Disease II - 2.5 hours

This course provides an integrated study of epidemiology, microbiology, pathophysiology, medicinal chemistry, physical assessment, pharmacology & pharmacogenomics, chemotherapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to infectious diseases. The emphasis of this course will be infectious diseases that are caused by fungi and viruses.

**PHRM 551** IPT – Endocrine & Reproductive - 3.5 hours

This course provides an integrated study of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to the endocrine and reproductive systems.

**PHRM 552** IPT – Renal & Urologic - 3.5 hours

This course provides a continued integration of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to major renal and urologic disorders.

**PHRM 553** IPT – Pulmonary & Critical Care - 2.5 hours

This course provides an integrated study of epidemiology, microbiology, pathophysiology, medicinal chemistry, physical assessment, pharmacology & pharmacogenomics, chemotherapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to pulmonary and critical care medicine.

**PHRM 554** IPT – Gastrointestinal - 3 hours

This course provides an integrated study of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, pharmacoepidemiology, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to the digestive system and nutrition therapy.

**PHRM 555** IPT – Immune, Musculoskeletal, Integumentary - 3 hours

This course provides an integrated study of anatomy, physiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to the immune and integumentary systems.

**PHRM 556** IPT – Hematology/Oncology - 3 hours

This course provides an integrated study of epidemiology, pathophysiology, physical assessment, medicinal chemistry, pharmacology & pharmacogenomics, therapeutics, clinical pharmacokinetics, patient care, alternative/complementary therapies, Pharmacoeconomics, medication use in special populations, and review of pertinent drug literature as they relate to the hematological system and neoplastic growths.

**PHRM 571** Ambulatory Care Pharmacy Practice – 2 hours – elective

This course is an introduction to ambulatory care pharmacy practice with a focus on various practice models, developing ambulatory care services, common disease states that pharmacists manage in primary care, and a holistic approach to managing patients. Throughout the course, students will be expected to participate in active learning coursework to further develop communication skills, problem solving, and team collaboration. The general format of the class will be open forum discussion with an emphasis on student participation. The class will consist of both lecture and case-based studies.

**PHRM 576** Pharmacotherapy of the Critically Ill Patient – 2 hours – elective

This course is designed to introduce students to selected disease states encountered in the intensive care unit and infectious diseases settings as well as current controversies regarding the clinical management of these patients. The management of these patients will be discussed using case study, application of medical literature, student-led presentations, and open discussion.

**PHRM 589 Applications of Drug Literature - 1hour – elective**

PHRM 589 builds on the evidence-based practice skills developed in Drug Information and Drug Literature Evaluation and combines it with the therapeutic decision-making skills nurtured by the IPT courses. Students will be expected to demonstrate superior critical thinking, professional writing, and professional presentation skills. By actively participating in literature evaluation and applying their drug literature assessment skills to clinical scenarios and key decision points encountered in ambulatory settings, students can expect to master the translation of drug information skills to individualistic optimization of complex patient therapies related to neuropsychiatric care. Prerequisite: PHRM 420 & PHRM 454.

**PHRM 595 Postgraduate Residency Training - 1 hour – elective**

The goal of this course is to prepare students to succeed in the PGY1 pharmacy residency recruitment process. Success not only includes obtaining a position through the residency match, but also understanding the responsibilities, expectations, benefits, and drawbacks of residency life, identifying characteristics of a strong residency candidate, determining whether a residency is the right choice for you, and finding a residency that will enable you to meet your personal goals. Students in this course will meet with residents, preceptors, and program directors, reflect on their strengths and weaknesses, prepare professional correspondence, participate in mock interviews, and make a plan for success in the residency recruitment process following the course.

**PHRM 596 Leadership for Pharmacists – 2 hours – elective**

This course is designed to provide students with an opportunity to build on the core curriculum in areas related to leadership. Theories and practices pertaining to leadership are reviewed and expanded upon using a variety of readings, case studies for application, and projects. Students will develop greater self-knowledge, learn ways to work with others, and apply leadership principles to current pharmacy and healthcare situations.

**PHRM 597 Leadership: People & Change – 2 hours – elective**

The focus of this final leadership course in the elective series will shift to leading teams, working constructively with others, and effecting change in the pharmacy profession. Theories and application of teamwork, transformational leadership, and change management will be presented. Students will utilize skills developed throughout the series to identify and develop a management related project within the pharmacy profession.

**PHRM 610 APPE Advanced Community - 4 hours**

The Advanced Community Rotation focuses on the day-to-day operations of a retail/community pharmacy such as counseling and monitoring ambulatory patients, communicating with various caregivers and healthcare providers along with medication procurement and dispensing. The overarching goal of this rotation is to prepare student pharmacist to think and act as a professional. Steps to achieving this goal include exploring as many experiences as possible, being confident in the performance of daily tasks, finding value and application in the rotation for your future career, and having a complete understanding of a community pharmacist's role in the healthcare system.

**PHRM 620 APPE Advanced Institutional - 4 hours**

The Advanced Institutional/Hospital Rotation focuses on the day-to-day operations of an institutional/hospital environment, such as providing general care to patients and procurement and distribution of medications. The overarching goal of this rotation builds upon the knowledge and skills previously learned in order to fully participate in hospital pharmacy operations and services. Steps to achieving this goal include exploring as many experiences as possible, being confident in the performance of daily tasks, finding value and application in the rotation for your future career, and having a complete understanding of an institutional/hospital pharmacist's role in the healthcare system.

### **PHRM 630** APPE Ambulatory Care - 4 hours

The Ambulatory Patient Care Rotation focuses on the ambulatory patient and their long-term medical needs and care. The overarching goal of this rotation is to provide pharmaceutical care in an ambulatory care setting. Steps to achieving this goal include exploring as many experiences as possible, being confident in the performance of daily tasks, finding value and application in the rotation for your future career, and having a complete understanding of an ambulatory care pharmacist's role in the healthcare system. This course may be repeated for credit.

### **PHRM 640** APPE Acute Care - 4 hours

The Acute Care Rotation focuses on enhancing your ability to observe and provide comprehensive medication therapy management for acutely ill patients in an institutional setting. You will be able to identify and optimize pharmacotherapy in a hospitalized patient. The overarching goal of this rotation is to learn what pharmacists do in the institutional setting by gaining hands-on experience with contributing to patient care. You will master disease states and drug-related issues to the level of an entry-level pharmacist. This course may be repeated for credit.

### **PHRM 670** APPE Electives – 4 hours

Elective advanced pharmacy practice experiences (APPE) in other settings (such as research, management, drug information, academia, managed care, long-term care, hospice, and home health care) should complement the required experiences and provide adequate and innovative opportunities for students to mature professionally and in accordance with their individual interests. The overarching goal of the elective APPE is for students to broaden their practice experience in pharmacy and pharmacy-related settings while positively contributing to the activities at the site.

**400 and 500 level courses** that are a part of the renewed curriculum will be available in the 2021-2022 bulletin.

### **Community Service and Outreach**

The Pharmacy Program's service program is intended to promote a service-learning philosophy and assist students in engaging with our community. This program will be a non-credit-bearing progression requirement in the P1, P2, and P3 years of the Doctor of Pharmacy Curriculum. All students must complete the required service-learning activities in order to progress into the next professional year. Required activities will include service time in the community, reflections, presentations, and attendance at service-learning events on campus. Each semester's service activities will culminate in a Day of Service which will celebrate our students' and faculty members' service accomplishments.

### **Co-curriculum**

The Pharmacy Program requires students to complete co-curricular requirements as a means to document their progression and achievement of desired competencies or outcomes. This approach allows students to reflect on their own professional development and experiences. By providing an opportunity for students to reflect on key issues throughout the curriculum, students are able to provide evidence of personal and professional growth based on these experiences. The co-curriculum is part of a student's professional development since components are individualized to present evidence of progression and mastery of the curricular outcomes.

## **Academic Policies**

### **Registration**

Registration for courses is coordinated through the Office of the Registrar using online forms and processes. Students will receive registration instructions prior to the beginning of each semester.

### **Transfer of Credit**

Because of the highly specialized nature of the Doctor of Pharmacy program, credit hours for previously completed courses from other programs typically may not be transferred for credit in the program. Each course within the program is essential for completion of the program.

### **Grading System**

The following grading system will be used in all letter-graded courses in the Pharmacy Program. Numerical course grades will be calculated to one decimal place when assigning letter grades.

Letter	Course grade range (%)	Quality Point value (used in determining GPA)
A	90 and above	4.0
B	80 - 89	3.0
C	70 - 79	2.0
F	Less than 70	0

Faculty may also designate a course Pass/Not Pass (P/NP) with approval from the Curriculum Committee. Students may not elect to take a graded course P/NP. These courses are not included in GPA calculations.

Other grades which may be earned include the following:

**AU:** Course audited. A course in the Pharmacy Program may be audited only upon recommendation of the assistant/associate dean for academic programs and permission of the course instructor.

**I:** Incomplete (Temporary grade). The student is unable to complete required coursework by the end of the semester. To earn a grade, all coursework must be completed within six weeks of the end of the semester; otherwise a grade of F (or NP) will be assigned.

**NR:** Grade not reported (Temporary grade). Course extends beyond end of semester or required course evaluations are not completed. To earn a grade, all coursework must be completed within eight weeks of the end of the academic year (the spring semester of the year in which the course was taken); otherwise a grade of F (or NP) will be assigned.

**UW:** Unauthorized Withdrawal. The student does not withdraw but stops attending class. Zero quality points are assigned, and the course is included in the GPA calculation.

**W:** Withdrawn. The student withdraws from a course during the first two-thirds of a course. The course is not included in GPA calculations.

**WF:** Withdrawn Failing. The student withdraws from a course during the final one-third of the course. Zero quality points are assigned, and the course is included in the GPA calculation.

### Dean's List

At the end of each semester, the dean of pharmacy and health sciences publishes the Dean's List. Students who are included in the Dean's List will:

- Be a student in good standing in the first, second, or third years of the Doctor of Pharmacy program;
- Earn a semester grade point average of 3.5 or higher;
- Have completed at least 12 graded semester hours; and
- Not have any Incomplete (I) or Not Recorded (NR) grades at the end of the semester.

### Withdrawal from the Pharmacy Program

Manchester University regards the registration of a student as a contractual agreement. For this reason, special procedures must be followed in the event a student withdraws from a program at Manchester University. Any student considering withdrawal from the Pharmacy Program for any reason after the beginning of classes initiates the process by having an interview with a member of the Pharmacy Program Office of Academic and Student Affairs staff. An official notification by the student to the registrar's office must be made. Before withdrawal is finalized, the student must meet with the dean of pharmacy and health sciences or the assistant/associate dean of academic programs and return all Manchester property to the Office of Academic & Student Affairs; this includes but is not limited to the Manchester-issued computer, photo identification card, white coat, and any keys issued to the student.

### Refund Policy

## **Refund Tuition/Fees**

In the case of official withdrawal from the university, a refund, less a withdrawal charge, is made according to the following schedules:

### **Fall and/or spring semester refund schedule**

- Withdrawal before the official start of the semester: 100 percent refund
- Withdrawal during the first and second weeks of the semester: 75 percent refund
- Withdrawal during the third and fourth weeks of the semester: 50 percent refund
- Withdrawal during the fifth and sixth weeks of the semester: 25 percent refund
- Withdrawal after the sixth week of the semester: No refund

### **Progression in the Doctor of Pharmacy Program**

- A student must complete all required courses with a grade of C or better (or P) to progress in the program. Students must also complete all designated non-course requirements (e. g. service learning, portfolio activities, etc.) to progress.
- A student must complete all required courses, including a minimum of 5 elective credits, in the first three professional years with a grade of C or better (or P) to progress to Advanced Pharmacy Practice Experience (APPE) rotations.
- A student must complete all required coursework within six years of admission into the program. Remediation, leaves of absence, withdrawals (medical or otherwise), suspensions, and delayed progression shall be included within the six-year period. A student shall be dismissed from the program when it is determined by the assistant/associate dean for academic programs that the student will not be able to meet the six-year requirement.
- A student who fails to pass the same required course twice will be dismissed from the program.

### **Academic Probation**

A student may be placed on probation when his/her performance fails to meet the criteria listed below. If performance does not improve, the student may be suspended or dismissed from the Pharmacy Program.

- A student will be placed on academic probation when one or more of the following occurs:
  - The student has failed a course;
  - The student's cumulative GPA falls below 2.0.
- A student may come off academic probation when:
  - The student passes a previously failed course and passes all required courses in the subsequent semester;
  - The student's cumulative GPA rises above or equal to 2.0.
- During the time a student is on academic probation, the student must devote maximum attention to studies and therefore:
  - The student may not serve as an ambassador for the Pharmacy Program;
  - The student may not serve as a representative on any Pharmacy Program or University-wide committees;

- The student may not hold elected office in any student organization, and must relinquish any current elected office position, making all the necessary arrangements for their replacement as soon as academic probation is in effect;
- The Office of Academic and Student Affairs will notify appropriate committee chairs and student organization mentors to ensure the terms of probation are followed.

### **Remediation (policy for Class of 2024)**

The purpose of remediation is to give students the best chance to demonstrate proficiency in course outcomes while maintaining timely progression in the Doctor of Pharmacy curriculum.

- Remediation of course outcomes will occur on or before two working days following the end of the semester. The remediation process may occur during the semester.
- The remediation plan/process is specific to each course, is determined by course faculty, and is outlined in the course syllabus or posted on the course specific learning management system (e.g. Canvas) site.

### **Remediation (policy for Class of 2021, 2022, 2023)**

The purpose of remediation is to give students the best chance to demonstrate proficiency in course outcomes while maintaining timely progression in the Doctor of Pharmacy curriculum.

- Remediation Limits: A student may or may not be eligible for a course remediation based on the following criteria:
  - A student who earns a percentage grade below 60% within the failed course will not be eligible for remediation. The student will receive an F in the course and will be assigned an alternate course of study by the assistant/associate dean for academic programs. The student and the dean of pharmacy programs will sign off on the future course of study;
  - A student who fails two required courses in one semester will not be eligible for remediation. The student will receive a grade of F in both courses and will be assigned an alternate course of study by the assistant/associate dean for academic programs. The student and the dean of pharmacy programs will sign off on the future course of study;
  - A student who fails three or more courses in one semester will be dismissed from the program;
  - Remediation is not permitted for the same course twice.
    - If a student fails remediation for a required course, and subsequently fails the same course again, that student will be dismissed from the program.
    - If a student is ineligible for remediation for a required course and subsequently fails the same course again, the student may enter remediation given that eligibility requirements are met. If the student fails remediation, that student will be dismissed from the program.
    - If a student is ineligible for remediation for a required course and subsequently fails the same course without meeting the eligibility requirements for remediation, that student will be dismissed from the program.
  - Each student is allowed a maximum of four remediation attempts during the length of the program. A student who exceeds this limit will be dismissed from the program.
- Guidelines for remediation
  - The course coordinator, in consultation with the course faculty, will develop a plan of remediation.

- The course policies, learning objectives, content, and types of assessments in remediation should be consistent with those in the original course. The number of assessments used during remediation will be left to the discretion of the course faculty and course coordinators.
- In order to receive accommodations during the remediation period, the student in remediation must request accommodations and provide appropriate documentation to the faculty member or administrator responsible for assessment administration logistics during the remediation period. This request and documentation must be made and provided within two working days of signing the remediation plan. Typically, the course coordinator is responsible for assessment administration logistics during the remediation period. However, due to remediation falling outside of the regularly scheduled semester, assessment administration logistics may fall to someone other than the course coordinator.
- Students may not appeal a course remediation plan.
- Students will be expected to utilize the original course materials and course recordings as resources during the remediation period.
- Implementation of remediation
  - Remediation of the course outcomes will occur during the semester and/or within 2 business days after the semester is over.
  - Within two business days of completion of all course assessments, the course coordinator will provide the assistant/associate dean for academic programs a list of students whose combined assessment average falls below 70% for the course. This report should include the final percentage grade obtained by each of these students.
  - The assistant/associate dean for academic programs will notify students whose combined assessment average is below 70% for the course regarding their eligibility to enter remediation for the course, based on remediation limits ("Remediation" section, point 1).
  - If a student eligible for remediation chooses to remediate, the course coordinator will record a grade of NR (not recorded) in the original course with the registrar during remediation. This grade will be replaced with the final course grade at the conclusion of the remediation period. Until a final course grade is assigned, the student is ineligible to appeal said course grade. Therefore, a student who chooses to enter into remediation forgoes his/her right to appeal a final course grade until the conclusion of remediation and the documentation of the final course grade for said course.
  - If a student chooses to forgo remediation, the course coordinator will record a grade of F (failing) with the registrar. The student is eligible then to appeal the final course grade at that time.
  - To officially enter into remediation, the student must sign the course remediation plan. The course coordinator and the assistant/associate dean for academic programs will also sign this plan.
  - The assistant/associate dean for academic programs will notify the necessary Program and University officials and faculty mentors that a student is in remediation.
- Conclusion of remediation
  - Within two business days of completion of all remediation assessments, the course coordinator will provide the assistant/associate dean for academic programs results for all students participating in remediation. This report should include the final percentage grade obtained by each student in remediation.
  - For students passing remediation, the course coordinator should submit a grade of C (or P) in the course to the registrar and notify the student accordingly.



- For students failing remediation, the course coordinator should submit a grade of F in the original course to the registrar and notify the student accordingly. The assistant/associate dean for academic programs will recommend an alternate course of study. The student and dean will sign off on the future course of study. The assistant/associate dean for academic programs will communicate the alternate course of study with the student's faculty mentor.
- The assistant/associate dean for academic programs will notify necessary Program and University officials of the outcomes of each student's remediation.
- Experiential Education
  - For remediation and progression policies related to the fourth professional year (APPEs), please refer to the *Experiential Education Manual*.
- Remediation will not be offered for elective courses.

### **Course Retake**

- Students who do not successfully pass a course with a grade of 69.5% or higher will need to retake the class the next time it is offered.
- Prior to the next course offering, students may be required to complete additional, supplemental coursework at the discretion of the Assistant/Associate Dean of Academic and Student Affairs or the Pharmacy Academic Standards and Progression (PASP) committee to help them succeed in the program.

### **Suspension and Dismissal**

**Suspension:** A suspended student is removed from the Pharmacy Program for a length of time. During this time, he/she cannot graduate or progress toward the earning of a degree at the Program. Suspended students are not automatically readmitted to the Pharmacy Program. They may apply for readmission to the Program based on the criteria delineated in their suspension. If readmitted, the student's prior course credits count towards progression in the program.

**Dismissal:** A dismissed student is removed from the Pharmacy Program. The student may reapply for admission as any other eligible student and may or may not be readmitted to the Pharmacy Program. If readmitted, the student's prior course credits do not count towards progression in the program.

These actions will be communicated to students at the end of each semester. The assistant/associate dean for academic programs will also present a semester-end report to the faculty showing the number of students in each category at the end of each semester.

### **Pharmacy Academic Standards and Progression Committee (PASP)**

**Purpose:** To review all grade appeals and appeals to the academic policies within the Doctor of Pharmacy Program. The committee has the right and responsibility to render decisions and apply stipulations regarding the appeals.

**Structure:** Three faculty-elected faculty members with representation from each department. Members serve 3-year terms, with one faculty member being elected every year. Two alternate members will also be elected to serve in the event that a committee member must recuse themselves from an appeal process if there is a conflict of interest (e.g. the committee member assigned a grade that is being appealed or serves as the appealing student's mentor) or is absent as approved by their supervisor. The committee is chaired by the Assistant/Associate Dean of Academic and Student Affairs, who serves in an ex-officio capacity. For appeals regarding experiential education, an administrator from the Office of Experiential Education (OEE) will participate in an ex-officio capacity. Ex-officio members of the committee have the right to participate in meetings of the PASP but have no voting rights. Administrative support to the PASP is provided by the Office of Academic and Student Affairs (OASA). All records from the committee's discussions and decisions are housed in the OASA.

## Course Grade Appeal Process

A student is eligible to appeal a final course grade. A student who chooses to enter remediation is not eligible to appeal the course grade, as a final grade is not yet rendered. When the remediation period is complete and a final course grade is rendered, a student is eligible to appeal.

- Appeal to the Course Coordinator
  - Student will communicate with the course coordinator about the course grade, the plan to appeal, and the basis for the planned appeal. In the case of experiential course grade appeals, an administrator from the OEE can conduct this communication. The communication must occur after the course grade is finalized and before submitting a formal letter of appeal to the Pharmacy Academic Standards and Progression Committee (PASP). Following the communication with the course coordinator, the student writes a summary of the discussion and emails that summary to the course coordinator for corroboration/verification. This email will be shared with the PASP as part of the appeal process.
    - *Purpose:* To allow an opportunity for the course coordinator and student to come to a final course grade agreement, if possible. The communication provides opportunity for the faculty member to explain the student-earned grade and for the student to identify any potential concerns directly to the course coordinator. As all didactic course work was reviewed and graded during the course, this is not an opportunity for regrading.
  - If the student chooses to enter into the formal appeal process following the communication with the course coordinator, they can appeal to the Pharmacy Academic Standards and Progression Committee.
- Appeal to Pharmacy Academic Standards and Progression Committee (PASP)
  - Within five business days of receiving official notification of the final course grade by the OASA or through the Office of the Registrar (whichever is first), the student must submit the appeal form that is provided on the Pharmacy Home page in Canvas. The appeal form provides the mechanism for submitting the Formal Letter of Appeal (LOA).
    - The form will automatically notify the following individuals: the chair of the PASP, the course coordinator and the student's faculty mentor, who will serve as a guide to the student during the appeal process.
    - If the appeal is regarding experiential education, the Office of Experiential Education will contact the preceptor to notify him/her/them of the grade appeal, and the preceptor is given the opportunity to participate in the appeal process. The Chair of PASP will be copied on this correspondence.
      - If the preceptor elects to not participate in the appeal process, an administrator from the OEE will be responsible for representing the preceptor in the appeal process.
      - If the preceptor elects to participate in the appeal process, he/she/they will receive a copy of the LOA and be in communication with PASP during the appeal process.
  - In the LOA, the student must demonstrate that it is more likely than not one or more of the following occurred, resulting in a negative impact on the student's grade:
    - Unfair grading (e.g. arbitrary, the grade that was earned was **not** based on objective criteria or the student was held to a different standard than their peers.);
    - Procedural or clerical error
  - The PASP will convene to review all appeals within five business days of receiving the LOA.

- During the five days leading up to the review, at least two members of PASP must communicate with the course coordinator (and any preceptor who has elected to be included in the process) involved in the appeal to gather any and all pertinent information regarding the LOA (preferably in person, or on the phone). The course coordinator (and any preceptor who has elected to be included in the process) has the right to respond to the student's allegations within the LOA.
  - During the review, the PASP will invite the student, course coordinator, faculty mentor and other necessary persons to participate in the review. Invited persons may elect to not attend. Choice of attendance will not be taken into consideration as part of the review process.
  - The PASP decision will be determined at the conclusion of its review.
- Chair of PASP communicates the PASP decision in writing to the student, and copies the student's faculty mentor, the OASA, and the course coordinator (and any preceptor who has elected to be included in the process) in a formal letter sent to the student via their Manchester email account.
  - The student is permitted to appeal to the Dean of Pharmacy Programs the stipulations placed by the PASP committee and/or the PASP committee's processing of the course grade appeal (i.e., that a procedural error occurred).
- Appeal to the Dean of Pharmacy Programs
  - Within five business days of receiving the PASP decision, the student must submit a letter appealing the stipulations or process of the PASP decision via the Dean's Manchester email account.
    - The student must copy the student's faculty mentor, the course coordinator, and the chair of the PASP.
    - If the student fails to copy the aforementioned individuals, the appeal will not be reviewed, and the student has one business day to correct the error.
  - Within five business days of receiving the appeal, the Dean will review the appeal.
    - The Dean will conduct an independent investigation regarding the appeal and may collect any information necessary to render a decision.
  - The Dean communicates in writing the decision to the student, and will copy the student's faculty mentor, the course coordinator, and the chair of the PASP in a formal letter sent to the student via their Manchester email account.
  - The Dean is limited only to one of the following decisions:
    - The Dean may uphold the decision made by PASP without modification.
    - The Dean may uphold the decision made by PASP, yet modify the stipulations placed by PASP.
    - The Dean may reject the decision made by PASP based on the determination of a procedural error or unfair process.
      - In this instance, the Dean will convene a new ad-hoc PASP committee of the faculty to review the student's course grade appeal.
      - The ad-hoc PASP faculty committee will follow the process outlined above.
- The decision of the ad-hoc PASP faculty committee is final.

## Academic Policy and Progression Appeal Process

- The student is notified by the Office of Academic & Student Affairs of failure to meet requirements of an Academic Policy (e.g., inability to progress).
- Appeal to Pharmacy Academic Standards and Progression Committee (PASP)
  - Within three business days of receiving notification from the Office of Academic & Student Affairs, the student must submit the appeal form that is provided on the Pharmacy Home page in Canvas. The appeal form provides the mechanism for submitting the Formal Letter of Appeal (LOA).
    - The form will automatically notify the following individuals: chair of the PASP and student's faculty mentor, who will serve as a guide to the student in the appeal process.
  - LOA must state what the policy that is being appealed and the grounds for the appeal.
    - If the appeal includes a grade appeal, one LOA must be submitted that will include both the grade appeal and the appeal of the academic policy, each clearly delineated. A student should only submit one LOA.
    - A course grade appeal that is submitted with an academic policy appeal will follow the procedures described for a course grade appeal.
      - The chair of the PASP will communicate any information regarding the course grade appeal with the course coordinator, or in the case of appeals regarding experiential education, an administrator from the OEE.
  - The PASP will convene to review all appeals within five business days of receiving the LOA.
    - During the five days leading up to the review, PASP will gather any necessary data and evidence regarding the student's academic and professional performance including but not limited to: course grades, rotation evaluations, honor council records, etc.
    - During the review, the PASP will invite the student, faculty mentor, or other necessary persons to participate in the review. Invited persons may elect to not attend. Choice of attendance will not be taken into consideration as part of the review process.
    - The PASP decision will be determined at the conclusion of its review.
  - Chair of PASP communicates the PASP decision to the student and copies the student's faculty mentor in a formal letter sent to the student via their Manchester email account.
    - The student, is permitted to appeal to the Dean of Pharmacy Programs the stipulations placed by the PASP committee and/or the PASP committee's processing of the course grade appeal (i.e., that the committee did not adhere to the protocol outlined above).
- Appeal to the Dean of Pharmacy Programs
  - Within five business days of receiving the PASP decision, the student must submit a letter appealing the stipulations or process of the PASP decision via the Dean's Manchester email account.
    - The student must copy the student's faculty mentor and the chair of the PASP.
    - If the student fails to copy the aforementioned individuals, the appeal will not be reviewed, and the student has one business day to correct the error.
  - Within five business days of receiving the appeal, the Dean will review the appeal.

- The Dean will conduct an independent investigation regarding the appeal and may collect any information necessary to render a decision.
- The Dean communicates the decision to the student and will copy the student's faculty mentor and the chair of the PASP in a formal letter sent to the student via their Manchester email account.
- The Dean is limited only to one of the following decisions:
  - The Dean may uphold the decision made by PASP without modification.
  - The Dean may uphold the decision made by PASP, yet modify the stipulations placed by PASP.
  - The Dean may reject the decision made by PASP if the Dean determines that PASP's decision was made unfairly or without following the outlined process.
    - In this instance, the Dean will convene a new ad-hoc PASP committee of the faculty to review the student's original appeal.
    - The ad-hoc PASP faculty committee will follow the process outlined above.

The decision of the ad-hoc PASP faculty committee is final.

### **Academic and Professional Conduct Committee**

Students are expected to abide by the general principles of academic integrity and a defined code of conduct representing the Pharmacy Program. The Academic and Professional Conduct Committee provides the framework to communicate the integrity and professionalism of all members of the Pharmacy Program (students, faculty, staff, and administration) community pertaining to academic training, as well as behaviors inside or outside of the classroom, that are deemed essential characteristics of a professional. The Academic and Professional Conduct Committee will consist of two primary articles: academic integrity and unprofessional behavior.

Academic integrity will feature six violation categories: cheating, plagiarism, facilitating academic dishonesty, abuse of academic materials, stealing, and lying. Unprofessional behavior will feature three categories of conduct: within the College, in experiential rotation settings, and within the Profession.

Students will affirm the Honor Code during new student (P1) orientation and the White Coat Ceremony. Students will attest to this affirmation by signing the Honor Code. Students will reaffirm the Honor Code throughout their academic program. The Academic and Professional Conduct Committee will address violations of the Honor Code and other complaints against Doctor of Pharmacy students.

The entire Academic and Professional Conduct Committee process may be found in the Pharmacy Program Student Handbook.

### **Graduation and Commencement**

A student will graduate from the Doctor of Pharmacy program when he or she has been judged by the faculty to have met all academic and professional requirements of the program, and has also:

- Completed all required courses, and the required number of elective courses, in the curriculum with a grade of C or better (or P);
- Completed all non-course requirements (e.g., co-curricular, community service and outreach, etc.);
- Passed all required competency assessments.

### **National and State Licensure Exams**

Upon graduation students will be required to pass the North American Pharmacist Licensure Examination (NAPLEX), the Multistate Pharmacy Jurisprudence Examination (MPJE), or any other state required law exam before obtaining licensure.

- The NAPLEX, or North American Pharmacist Licensure Examination, measures a candidate's knowledge of the practice of pharmacy. It is just one component of the licensure process and is used by the boards of pharmacy as part of their assessment of a candidate's competence to practice as a pharmacist. For more information on the NAPLEX exam, visit <http://www.nabp.net/programs/examination/naplex/>.
- The MPJE, or Multistate Pharmacy Jurisprudence Examination, combines federal- and state-specific questions to test the pharmacy jurisprudence knowledge of prospective pharmacists. It serves as the pharmacy law examination in participating jurisdictions. Among other things, the MPJE tests candidates on (visit <http://www.nabp.net/programs/examination/mpje/>)
  - Legal aspects of pharmacy practice, including responsibilities with regard to the distribution and dispensing of pharmaceuticals and care of patients
  - Licensure, registration, certification, and operational requirements
  - Regulatory structure and terms of the laws and rules that regulate or affect pharmacists, pharmacies, manufacturers, and distributors

## Advising, Mentoring and Student Success

### Pharmacy S.M.A.R.T. Program

This program is a multi-faceted approach to supporting the success of all pharmacy students. A variety of services and programs have been implemented to support the mission and goals of Manchester University Pharmacy Program:

- **S – Student (Peer) Mentor Program** – each student will have a student mentor assigned prior to starting the program, serving as a valuable information and communication resource.
- **M - Faculty Mentoring Program** – each student will have a faculty mentor throughout their time in the program, serving as a valuable information and communication resource.
- **A - Academic Support** – includes programs, resources, and structures that promote all members of the community to learn efficiently and effectively, develop effective study strategies, and develop the critical thinking skills necessary to succeed academically.
- **R - Referral System** – an online system that provides an opportunity for concerned members of the Pharmacy Program community to reach out and offer help and assistance to students in the program.
- **T - TeamWorks** – Students will become more aware of the importance of teamwork through the annual creation of working teams within each cohort. These teams will be used throughout the semester or academic year in most courses.

### Academic Check and Study Tables

The purpose of ongoing grade checks is to identify students throughout the semester/course who are in academic difficulty and provide them with resources and counseling to help them succeed in the program. Please see the Student Handbook for more details regarding the grade check and notification process.

### Privacy and Student Records

Manchester University Pharmacy Program fully complies with the Family Educational Rights and Privacy Act of 1974, as Amended (FERPA), which establishes that a post-secondary student has the right to inspect and review his or her academic records, and prohibits outside parties from obtaining the information contained in these records without the student's written consent. However, a student may waive the right to review certain confidential information contained in his or her file.

The University collects, records and uses information about students to carry out its educational mission. The University recognizes its responsibility for protecting the privacy rights of students regarding their academic and personal records.

Students are provided access to information contained in their own official education records, a procedure for correction or deletion of inaccuracies found in their records, and a degree of control over the release of information from their records.

Records of students and graduates are maintained in accordance with all applicable federal and state laws. The Registrar is responsible for maintaining and updating student files, which include application materials, transcripts from previously attended institutions, grades, and information related to academic and clinical performance in all phases of coursework. Faculty and administration have access to student files for legitimate educational purposes only.

Certain items of personal information are considered directory information and may be published without students' permission. Directory Information items include name, dates of attendance, degrees earned, local and home address, email address, phone number, major, participation in officially recognized activities and sports, height and weight and honors received.

A student has the right to request in writing, prior to the first day of classes of any semester, that any item listed as directory information not be released without his/her consent.

Procedures for student access to records may be obtained from the Office of the Registrar.

## **Students Services**

### **Information Technology Services (ITS)**

The Manchester University Pharmacy Program incorporates a great deal of information technology. The Canvas support system can answer any questions relating to the learning management system. Information Technology Services department supports all computer and network technology for the program. The following is the contact information for these services:

#### **Canvas Support**

For assistance with Canvas, please use the Canvas Support system.

Email: [canvashelp@manchester.edu](mailto:canvashelp@manchester.edu)

Chat: available within Canvas, located in the menu bar

Phone: 1-877-227-9487

#### **Respondus Lockdown Browser**

This tool is frequently used for quizzes given in Canvas. For more information about Respondus Lockdown Browser, please see [Student Resources and Support](#). Please note that Manchester University has already installed Respondus on your laptop, but you are responsible for making sure the program is up-to-date.

#### **ExamSoft/Exemplify**

ExamSoft is the application that faculty use to create secure exams. Exemplify is the ExamSoft program that students will use to download, take, and submit exams. For basic instructions on using Exemplify, please see the [Help Videos page](#).

#### **ITS Check Out**

Equipment spares are on hand at the Helpdesk. Students can borrow laptops, chargers, privacy screens, network cables, and more. An ID card, or other collateral, must be left at helpdesk while equipment is out.

#### **Laptop Support**

Software problems with your university-issued laptops can be repaired by Helpdesk and almost any form of physical damage to a university-issued laptop is covered under Manchester's warranty policy. Make sure to contact Helpdesk first with any laptop problems you encounter.

## Help Desk Contact Information & Hours

For assistance with computer software or services provided by Manchester University (including password retrieval), please contact the Information Technology Services (ITS) Help Desk using one of the methods below.

Please note that a request for ITS help can be made at any time (24/7) using the ticket submission system. The link to the ticket submission system is located below, and within every Canvas course. The tickets will be monitored at all times and responded to within 12 hours of the ticket submission. This includes times that the Help Desk is closed.

		Response Time
Web:	<a href="https://service.manchester.edu">https://service.manchester.edu</a>	
To submit a ticket:	<a href="https://service.manchester.edu/incidents/new.portal">https://service.manchester.edu/incidents/new.portal</a>	Within 12 hours of ticket submission
Email:	<a href="mailto:helpdesk@manchester.edu">helpdesk@manchester.edu</a>	Varies
Phone:	1-260-470-2727	Immediately, if available Hours are Monday-Friday, 8am – 5pm EST

## Library Resources

The library provides materials to serve the University curriculum, bibliographic and interlibrary loan support for research and instruction in the use of information sources. Library services are available on site, as well as online through the Funderburg Library website ([www.manchester.edu/Library](http://www.manchester.edu/Library))

The Drug information Center on the Fort Wayne campus provides a print and electronic library collection that students may use. Students will be able to use the electronic collection within the main library website and will also have access to a designated page <https://accesspharmacy.mhmedical.com/> specifically for the program coursework. The print collection will be housed in the Drug Information Center as reference material.

## Disability Support Services

In compliance with Section 504 of the Rehabilitation Act and the ADDAA, Disability Support Services provides support services to students with documented disabilities to give them equal access to academic programs and participation in the total Manchester experience. If a student has a recognized physical, learning, sensory or psychological disability or medical impairment, they can access tools and resources to help them succeed academically and personally at Manchester.

The disability support coordinator within the Academic Support department oversees the process which includes reasonable accommodations, student consultations, and promotion of self-advocacy skills. In addition, the administrative assistant for the office of academic & student affairs will coordinate exam proctoring.

## Financial Aid

Students must file the Free Application for Federal Student Aid (FAFSA) for consideration of federal direct student loan eligibility. Questions about financial aid should be addressed to Student Financial Services, Manchester University, 604 E. College Ave., North Manchester, Indiana 46962. Phone: 260-982-5066.

## People of MU Pharmacy Program

### Cabinet, 2020-2021

#### President

David F. McFadden, Ph.D.



**Vice President for Academic Affairs**

**Celia-Cook Huffman, Ph.D.**

**Vice President for Student Affairs**

**Abby Van Vlerah, Ph.D.**

**Vice President for Advancement**

**Melanie B. Harmon**

**Assistant Vice President for Enrollment and Marketing**

**Ryon Kaopuiki**

**Vice President for Health Science Initiatives**

**Lea A. Johnson, Ed.D.**

**Chief Business Officer and Vice President for Finance**

**Clair W. Knapp**

**Faculty**

**Ryan Ades, Pharm.D., RPh**, director of experiential education

**Zainab Alsamarai, Pharm D.** assistant professor of pharmacy practice

**Teresa Beam, Ph.D.**, chair, department of pharmaceutical sciences, professor of pharmaceutical sciences

**Robert D. Beckett, Pharm.D., RPh, BCPS**, assistant dean for assessment for pharmacy, director of Drug Information Center, associate professor of pharmacy practice

**Tracy L. Brooks, Pharm.D., RPh, BCNSP**, associate professor of pharmacy practice

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**Joseph Chambers, Ph.D.**, assistant professor of pharmaceutical sciences & pharmacogenomics

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**Sarah Gordon, Pharm. D., RPh, BCPS**, assistant professor of pharmacy practice, IPE coordinator

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**Ann Savariar-Drummond**, instructor of pharmacogenomics

**Thomas Smith, Pharm.D., RPh, BCPP**, associate professor of pharmacy practice and pharmacogenomics

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**Trent Towne, Pharm.D., RPh, BCPS, (AQID)**, associate professor of pharmacy practice

**Andrea L. Wilhite, Pharm.D., RPh**, associate professor of pharmacy practice

## **Staff**

**Paula Avila**, laboratory technician specialist

**Julie Bemiss**, administrative assistant, health sciences initiatives

**Dottie Bowers**, administrative assistant, nursing

**Julie Cogley-Pifko**, assistant director of admissions and enrollment management for pharmacy programs

**Celia Elder**, administrative assistant, experiential education; DSO

**Karen Failor**, experiential education operations specialist

**McKenzie Gould**, graduate admissions advisor

**Olan Griffiths**, help desk manager

**Gregory Hetrick**, assistant dean of enrollment and community engagement

**Pam Karkoksy**, administrative assistant, admissions and enrollment management and MAT

**Michelle Cordova-Kibiger**, director of assessment for pharmacy programs

**Laura Kozlowski**, senior administrative assistant

**Sarah Lauck**, academic and student affairs coordinator

**Jessica Montalvo**, director of student services for pharmacy programs

**Shawn Patterson**, executive assistant to the dean

**Melissa Rasmussen**, director of instructional design for pharmacy programs

**Kody Shoemaker**, custodian and maintenance tech

**Brook Schumann**, pharmacy practice lab coordinator

**Tayshia Williams**, campus facilities coordinator & human resources liaison