



# Departments of Pharmacy Practice & Biomedical Pharmaceutical Sciences /Skaggs School of Pharmacy /Doctor of Pharmacy (PharmD Degree Program) AY 2022-23 Assessment Report

All areas shaded in gray are to be completed by the department/program.

This document will be posted online and must be [accessible electronically](#) (including appendices).

## MISSION STATEMENT

### Skaggs School of Pharmacy

To prepare graduates to be highly skilled scientists, educators, and patient-centered health care providers. To advance scientific knowledge through research and graduate education ranging from bench to bedside. To promote life-long learning, community service, social responsibility and interprofessional collaborative practice, and to foster cultural sensitivity in all graduates. To prepare graduates to be highly skilled scientists, educators, and patient-centered health care providers. To advance scientific knowledge through research and graduate education ranging from bench to bedside. To promote life-long learning, community service, social responsibility and interprofessional collaborative practice, and to foster cultural sensitivity in all graduates.

### Doctor of Pharmacy Program (Approved Jan 17, 2018)

The mission of the Doctor of Pharmacy Program is to prepare future pharmacists, in both formal and informal learning environments, to provide patient-centered and population-based care and to manage the systems within which pharmacists work while fostering professionalism, leadership and advocacy, interprofessional collaboration, self-directed learning, cultural competency and scholarship.

### Doctor of Pharmacy Program and Student Outcomes

In achieving the mission of the Doctor of Pharmacy Program, graduates will have the ability\* (knowledge, skills, attitudes and values) to:

#### I. Provide patient-centered care

- I. A. Integrate and apply biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences
- I. B. Ensure optimal pharmacotherapy for patients

#### II. Communicate effectively with patients, families, caregivers, and health care professionals

#### III. Use critical thinking and problem-solving skills to enhance patient care

#### IV. Work effectively within an interprofessional team

#### V. Manage and use resources of the health care system for the benefit of individual and public health

- V.A. Promote patient and public safety
- V.B. Perform quality assurance techniques to improve the medication use system and the health care system
- V. C. Seek to reduce health care disparities

#### VI. Efficiently utilize information resources and technology

- VI.A. Identify, retrieve and interpret relevant professional literature
- VI.B. Communicate evidence-based information to other health care providers, patients, and the public

#### VII. Promote the public's health

- VII. A. Promote health improvement, wellness, and disease prevention
- VII.B. Raise awareness of and contribution to solutions of public and population health issues

#### VIII . Practice professionally

- VIII.A. Apply legal, ethical, social, and economic principles to practice
- VIII.B. Respond to patients' needs in a culturally-sensitive manner
- VIII.C. Apply practice standards to optimize patient care
- VIII.D. Maintain professional competence by becoming a self-aware and self-directed learner

**IX. Be a good citizen, demonstrate leadership and contribute to the community, to the state, and to the profession.**

**X. Engage in scholarly activity**

- X.A. Use a scholarly approach to become an agent of change to advance pharmacy practice
- X.B. Demonstrate skills and a commitment to life-long learning

## **DEPARTMENT ALIGNMENT WITH PRIORITIES FOR ACTION**

After listing each departmental objective, indicate which of the five [Priorities for Action](#) the objective supports. In this section, you may also briefly describe any innovative or noteworthy programs/initiatives that support the Priorities for Action.

1. **Create learning experiences that promote the students' development of their knowledge of the underlying biomedical, pharmaceutical, social-behavioral, administrative, and clinical sciences, and the development of their skills in team-based patient care and pharmacy-related services.**

**PLACE STUDENT SUCCESS AT THE CENTER OF ALL WE DO:** Students receive individualized, tailored academic advising prior to applying for the professional program and throughout their time in the Pharm.D. program. Performance throughout the program is monitored by the School's student services office to ensure students are progressing towards graduation. This office also provides guidance for services related to personal, financial or medical health issues. Faculty are encouraged to help identify students who are struggling as early as possible to allow for accommodation or remediation as needed. In addition to required coursework, students have access to additional elective courses and additional training in complementary fields through dual degree and certificate options in business, public health and pharmaceutical sciences drug design program. Students who complete the first two professional years may now apply for a BS Pharmacy degree. They cannot get licensed as a pharmacist with the BS degree, but they can apply for graduate programs including three dual degree programs (PharmD-MBA; PharmD-MPH, and PharmD-MS-in-PSDD). Students are represented in various School committees and encouraged to share their ideas and concerns at all times. In addition, students receive information and support for pursuing post-graduation training in pharmacy residencies, fellowships, and graduate programs. The increased number of APPE hours in the final year of the program now make graduates eligible for licensure in all states. The return to in-person class time has also facilitated efforts to monitor student well-being and encourage learning.

**DRIVE EXCELLENCE AND INNOVATION IN TEACHING, LEARNING, AND RESEARCH:** Students in the Pharm.D. program have opportunities to work with researchers in both departments to gain first-hand knowledge of the research process including lab-based experiences and clinical case studies. Writing and public speaking skills are practiced repeatedly throughout the program to ensure skills are refined and professional. The School continues to provide interprofessional education activities to assist with the development of team and communication skills. An updated curriculum is now implemented and the School is revising its methods for assessing student learning in that new curriculum. The addition of virtual/augmented reality into instructional methods occurred in one of the biomedical-oriented courses. The expansion of the number of credit hours and time students spend in their final year of the program when they are placed in patient care sites for experiential courses continues to ensure the students have more time to develop and demonstrate their level of independence and competence in their work.

**EMBODY THE PRINCIPLE OF "MISSION FIRST, PEOPLE ALWAYS:** As already described above, the School provides strong support for students in the program to ensure they progress. This support includes responding to concerns and requests in a timely manner. Student input has been proactively sought and used to guide decisions about building

access, use of remote teaching technologies, and other activities during and after the pandemic. Professionalism in interactions among students, with faculty, and the community including patients is always monitored and failures to behave professionally addressed through the professionalism policy. Many students experienced two years of pandemic education methods and the return to in-person courses has been a welcomed change for most. The end of pandemic limitations has also allowed students in their final year practicums (APPEs) to experience more direct face-to-face patient care in a more typical practice environment. Faculty have also found new skills for combining in-person and remote teaching and identifying where they are most appropriately used to facilitate learning.

**PARTNER WITH PLACE:** The curriculum contains a number of courses and activities in which students interact with the general public and other healthcare students and professionals. These include service-learning projects focused on health and wellness in the first year, several embedded introductory pharmacy practice experiences (IPPEs) and separate IPPE courses that require interacting with members of the community and healthcare providers during the didactic years, and an entire year of practicum-style advanced practice experiences (APPEs) in Montana as well as other states and countries. In addition to courses, students have multiple options for co-curricular/extracurricular activities such as a state-wide screening program (IPHARM), wellness fairs sponsored by community groups, influenza vaccination events, and most recently, mass vaccination clinics for Covid-19. The pandemic did create some barriers to usual practice when working with community or patient groups. Adjustments were made to ensure best learning experiences including remote videoconferences and telehealth methods. The current Fall 2022 semester has seen a return to normal practice experiences and the return of more in-person community events.

2. **Provide opportunities to apply classroom and laboratory knowledge and skills in patient care settings in supervised experiential courses.**

**PLACE STUDENT SUCCESS AT THE CENTER OF ALL WE DO:** The number of hours P4 students spend in direct patient care experiences (APPEs) in healthcare settings remains at the increased level of 1680hr and increased length of each placement from 4 to 6 weeks to provide additional time for the student to refine their skills and build their confidence and independence. Achievement is measured using entrustable professional activities (EPA) style levels that indicate level of supervision needed to complete an action. The expected level by graduation for key professional activities is an EPA is 4 which is equivalent to level of independent performance one would expect of a licensed pharmacist.

**EMBODY THE PRINCIPLE OF “MISSION FIRST, PEOPLE ALWAYS”:** Student placements in healthcare sites is tailored to the interests of the students and allows some time for elective placements so they can explore areas of pharmacy practice further. Experiential rotations also place students with patients from urban and rural areas to further improve their knowledge of the issues and concerns that come from living in less densely populated areas, variety of socio-economic levels, and different health literacy levels. The pandemic did eliminate international placements and some domestic placements. These will begin to be re-instituted in Summer 2023.

**PARTNER WITH PLACE:** All required APPE placements are within the state so students provide care to Montana residents for most of their final (P4) year. Elective placements allow students to work with communities outside of the state, if that is what they opt to do. Many of the training sites have long term relationships with the School and provide placements and supervision of pharmacy students each year. The School and training sites worked together during the pandemic to ensure the best possible learning experiences in spite of Covid-19 barriers. As already mentioned, there is a return to more normal experiences for students starting this year.

3. **Provide opportunities for students to actively participate in community and campus organizations and agencies through committees, student organizations, and service learning projects.**

**PLACE STUDENT SUCCESS AT THE CENTER OF ALL WE DO:** To ensure all students have opportunities to engage in a variety of experiences outside of the classroom and laboratory courses, efforts have been made to provide a long list of options. Some additional interprofessional experiences have been added to the curriculum. These experiences further prepare the students to be ready to practice pharmacy in a variety of populations. The pandemic limited community event participation but also led to some innovative uses of videoconferencing and telehealth modalities to connect with others. Now that the restrictions due to Covid-19 have ended, there has been a noticeable increase in the number of in-person events for students in Fall 2022 semester.

**DRIVE EXCELLENCE AND INNOVATION IN TEACHING, LEARNING, AND RESEARCH:** New accreditation requirements to provide co-curricular and interprofessional experiences that will help develop skills such as leadership, entrepreneurship, cultural humility, and communication have led to increased emphasis and requirement for student involvement in “real world” experiences even though some of those connections were via digital or telehealth methods during the pandemic. Virtual reality (VR) has been introduced into one of the pharmaceutical science courses to facilitate understanding of cellular mechanisms of action of drugs.

**EMBODY THE PRINCIPLE OF “MISSION FIRST, PEOPLE ALWAYS”:** Students are encouraged to put people first through their experiential courses (IPPE, APPE, Service Learning) that involve direct patient care and required and volunteer activities where they work with community agencies and the general public to educate and provide services. The need to also have students attend to their own well-being emerged more strongly than ever during the pandemic and led to increased monitoring of their behavior.

**PARTNER WITH PLACE:** Students are involved in a variety of community-based experiences including direct patient care at health care sites and pharmacies and community general population events such as wellness fairs. The direct patient care experiences are provided through the curriculum as well as some community events that are part of the service learning experience. Additional contributions to the health of the community are organized and run through pharmacy student organizations or programs/services organized by the School such as the medication therapy management (MTM) telehealth service or the rural screening outreach program (IPHARM).

**PROUDLY TELL THE UM STORY:** Pharmacy students have been providing Covid-19 and influenza vaccinations to Missoula County residents through both volunteer activities and an embedded immunization certification program within the first-year curriculum. These activities have received news coverage from local newspaper and television news programs. They are also featured on the School’s social media accounts and website. The return to more in-person events has also increased the ability of students to proudly share their experiences and aspirations as pharmacy students.

## STUDENT LEARNING GOALS and MEASUREMENT TOOLS

Student Learning Goals	Exam/Quiz	Observe skill / technique	Discuss case / article	Oral presentation	Written work and papers
1. Provide patient-centered care in a variety of practice settings	X	X	X	X	X
2. Communicate effectively with patients, families, caregivers, and health care professionals		X	X	X	X
3. Use critical thinking and problem-solving skills to benefit patients	X	X	X	X	X
4. Work effectively within a multidisciplinary team (i.e., interprofessional)		X			
5. Manage and use resources of the health care system for the benefit of individual patients and the public	X	X	X	X	X
6. Effectively use information resources and technology in one's practice		X		X	X
7. Promote the public's health	X		X	X	X
8. Practice professionally		X			
9. Be a good citizen		X			
10. Develop life-long learning skills			X		X
11. Complete licensure requirements	Practice NAPLEX	X			

Student Learning Goals - continued	Patient care experiences	Portfolio review / EPAs	Peer / Self evaluations	Graduate & Alumni survey	Other measures
1. Provide patient-centered care in a variety of practice settings	X			X	
2. Communicate effectively with patients, families, caregivers, and health care professionals	X	X	X		
3. Use critical thinking and problem-solving skills to benefit patients	X	X			PCOA P3
4. Work effectively within a multidisciplinary team (i.e., interprofessional)	X		X	X	
5. Manage and use resources of the health care system for the benefit of individual patients and the public	X				
6. Effectively use information resources and technology in one's practice	X				
7. Promote the public's health	X		X		Service Learning Project
8. Practice professionally	X	X	X	X	
9. Be a good citizen				X	Co-Curricular; Student Organizations
10. Develop life-long learning skills		X	X		
11. Complete licensure requirements		Candidate Status for Board Exam	X		NAPLEX/MPJE/ Board of Pharmacy

## RESULTS and MODIFICATIONS

Learning Goal results	Modifications made to enhance learning
<p>Impact of the pandemic and adjustments to instructional methods and assessment are monitored frequently. This semester, there has been a return to the more normal in-person learning experiences.</p> <p>Unlike the first year of the pandemic when some session had to be postponed, the faculty have been able to deliver their course content on schedule.</p> <p>The School continues to see a small number of students who are in academic difficulty, and reasons for the poor performance now include some poor learning behaviors. Remediation efforts are made and this has helped some students resume progression in the program.</p>	<p>To achieve a balance of safety and learning, the School used a hybrid approach to its curriculum during the pandemic. Students are now expected to attend all courses on campus.</p> <p>Faculty continue to seek ways to identify students who are struggling academically earlier in the program to allow for remediation or adjusted.</p> <p>Remediation for students who are in academic difficulty is also ongoing and tailored to the needs of each student. A student honor society (Rho Chi) has upperclassmen who offer free tutoring.</p>
<p>Scores from the PCOA were not available during the pandemic. The knowledge exam given to 3<sup>rd</sup> year students became available again in AY 2021-22 and is used each year.</p> <p>The practice licensure exam for graduating students was discontinued due to costs and no apparent impact on the first-time pass rates. The first-time pass rates for the licensure exam (NAPLEX) went from 93% (2019) to 77% (2020) then back up to 87% (2021). There was no practice NAPLEX in 2021. This metric is monitored by the accrediting agency (ACPE).</p>	<p>Returned to plan to identify progression indicators in the P2 and P3 year and discontinued the practice licensure exam (practice NAPLEX) at the end of the P4 year prior to graduation. Retained a low-stakes assessment in the P3 year (PCOA).</p> <p>Continuing to offer a NAPLEX review experience (6-week APPE) that was created during the pandemic years as an elective during the P4 (final) year to further increase preparation and success in first time pass rates.</p>
<p>Monitor and document achievement of learning outcomes across the curriculum using a portfolio with EPA benchmark levels throughout all four years.</p>	<p>To facilitate measuring progress and to guide preparation for achieving the next level, a rubric was created (Spring 2021). Still need to implement with embedded IPPE experiences.</p> <p>Currently looking at feasibility of adding some progression exams or experiences not part of the EPAs to complement the first-year calculations high-stakes exam. An initial plan was created but has yet to be vetted by whole faculty.</p>
<p>Expand the monitoring of co-curricular and interprofessional activities and achievement of skills in ACPE Standards 3 &amp; 4 to include more discussion and planning with the individual students.</p> <p>Reviewed reflection form to reduce student entry errors and misclassifications.</p>	<p>Responsibility for reviewing reflections on co-curricular and interprofessional activities moved to academic advisors.</p> <p>Completion rates for reflections over 90% for P2 students in their first year; too early to determine rate for current first year students.</p> <p>Form completion was reviewed and led to a simplification of the form in the activities description section.</p>
<p>Assessment methods maps had been updated every 5 years by instructional faculty and course coordinators. This year, the Assessment Committee tried a new method for tracking assessment methods based on syllabus content.</p>	<p>Initial findings are less detailed than the previous map but are considered more accurate as they are based on the syllabus and not a faculty member's recall.</p>

## **FUTURE PLANS FOR CONTINUED ASSESSMENT**

- The School will continue its efforts to fully implement the EPA achievement levels in the P1-P3 years in coordination with those already implemented in the final P4 year.
- The School will continue to explore the feasibility of adding high stakes progression exams or experiences in P2 and P3 years to complement the high stakes calculation exam in the P1 year.
- Licensure exam first-time pass rates are monitored closely and the review APPE rotation continues to be offered.
- New mapping for assessment methods in the professional curriculum didactic courses was implemented this academic and will be monitored for performance in summer 2023.

## **APPENDICES**

1. Assessment methods map – new format (updated 2022)
2. Student outcomes by required courses (updated 2021)
3. Co-curricular and interprofessional reflections requirement (updated 2022)
4. EPA levels by class year (updated 2020)