

TO: Randy Smith, Vice Provost for Academic Programs
Eric Bielefeld, Chair, Council on Academic Affairs
FROM: Shari Speer, Associate Dean for Academic Affairs, Graduate School
DATE: February 6th, 2020
RE: Proposal for online delivery MS Pharmaceutical Sciences Health-Systems
Pharmacy Administration, College of Pharmacy

The College of Pharmacy is proposing online delivery for its Master of Science in Pharmaceutical Sciences Health-Systems Pharmacy Administration.

The proposal was received by the Graduate School on October 15th, 2019. It was reviewed by GS/CAA on October 24th, 2019, and revisions were requested. GS/CAA reviewed it for a second time on December 18th, 2019. No further revisions were requested, and the proposal was recommended for approval by the Graduate Council. The proposal was approved by the Graduate Council on January 10th, 2020.



November 15, 2019

Shari Speer, PhD

Professor and Associate Dean of Academic Affairs, Graduate School

Chair, Graduate School/CAA Curriculum Subcommittee

Dr. Speer:

Thank you for the Graduate School/CAA Curriculum Subcommittee review of the proposal for a Change in Delivery for the Master of Science in Pharmaceutical Sciences with a specialization in Health-Systems Pharmacy Administration. I appreciate the feedback provided and the remarks that the proposal was clear and well-constructed.

Attached are two versions of the revised proposal (one with track changes and the other a clean version with changes accepted) addressing the two areas in which the subcommittee requested additional information.

- On page 8-11 of the revised proposal, changes were made to address the relationship between the learning outcomes and assessment plan for the current program and the assessment plan for the program when the mode of delivery is changed to an online offering.
- On page 7 of the revised proposal, changes were made to provide enrollment projections for the online program with additional information provided regarding plans to staff the program.

Please contact me at 614-292-1141 or ulbrich.7@osu.edu if you have any questions or need additional information.

Sincerely,

Timothy R. Ulbrich, PharmD

Professor (Clinical) of Pharmacy Practice

Program Director, MS in Health-System Pharmacy Administration

College of Pharmacy

The Ohio State University



Cynthia Carnes, PharmD, PhD
College of Pharmacy

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October 1, 2019

Alicia L. Bertone, DVM, PhD
Vice Provost for Graduate Studies
Dean of the Graduate School
Ohio Stadium
1961 Tuttle Park Place
Columbus, OH 43210

Dean Bertone:

The College of Pharmacy has reviewed and fully endorses the proposed change in delivery method for the Master of Science in Pharmaceutical Sciences with a specialization in Health-Systems Pharmacy Administration. Currently, the program is only offered in person. We have been approached by Ohio-based hospital systems and out-of-state alumni who are interested in having their employees/residents enroll in this specific graduate specialization if it were to be offered online.

The proposed transition to a fully online program would serve the needs of learners involved in the health-systems pharmacy administration field and will bring the latest educational methods of delivery for the program. In addition, we anticipate that this change in delivery will result in increased enrollment.

Please contact me at 614-292-1715 or carnes.4@osu.edu with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Carnes".

Cynthia Carnes, PharmD, PhD, FAHA, FHRS
Senior Associate Dean, Graduate Education and Research
Professor, Division of Pharmacy Practice and Science



THE OHIO STATE UNIVERSITY

COLLEGE OF PHARMACY

Master of Science in Pharmaceutical Sciences
(Specialization in Health-System Pharmacy Administration)

Proposal for Change in Delivery

Originally submitted September 18, 2019

Revision submitted November 15, 2019

Program Overview

The Ohio State University (OSU) Master of Science in Pharmaceutical Sciences with a Specialization in Health-System Pharmacy Administration (MS HSPA) educates and trains pharmacists to conceptualize, plan, coordinate and evaluate pharmaceutical care in organized health care settings. OSU was a leader in establishing the educational model for Health-System Pharmacy Administration training programs across the country. Starting in 1959, this program has had more than 350 graduates, many of whom are nationally recognized leaders in pharmacy administration and leadership. Program graduates include past national pharmacy organization presidents, prestigious national award recipients, and more than 50 current directors of pharmacy across the country.

Through this program, students learn to:

- conceptualize, plan, coordinate, and evaluate pharmaceutical care in organized healthcare settings;
- employ managerial and financial skills to maintain and improve health system pharmacies;
- design pharmacy services that meet the needs of the changing health care system;
- convey concepts and ideas clearly and succinctly via verbal or written communication;
- relay ideas that are well researched and objectively stated;
- collect and interpret data useful to improving health system pharmacy services (data-driven decision-making); and
- establish a vision for health-system pharmacy based on current and historical philosophies of pharmacy practice.

Since the program inception in 1959, it has been only accessible (with few exceptions) to health-systems in central Ohio that offer a two-year health-system pharmacy administration residency that is accredited by the American Society of Health-System Pharmacists (ASHP). These partners currently include Ohio State University Wexner Medical Center, Nationwide Children's Hospital, OhioHealth, Pharmacy Systems, Inc., and The Kroger Health Co. The OSU MS HSPA program planning committee is comprised of the Residency Program Directors from these five organizations (Figure 1).

Figure 1 – OSU MS HSPA Residency Practice Site Partners



Vision Statement: We envision a health-system that achieves optimal medication outcomes with a medication system designed to foster quality medication therapy which is continually monitored for areas of improvement.

Students enrolled in the MS HSPA program will be required to complete the following courses:

Course	Course #	Credit Hours
Operations Finance and Revenue Cycle	PHR 8100	1.5
Capital Budgeting and Business Case Development	PHR 8110	1.5
Information Systems for Health-System Pharmacy	PHR 8120	1.5
Advanced Leadership Principles	PHR 8130	2
Systems Issues with Medication Safety	PHR 8150	2
Operations Management in Health-System Pharmacy	PHR 8160	2
Planning, Leading and Managing the Pharmacy Enterprise	PHR 8170	2
Economic Evaluation of Patient Services	PHR 8180	1
Community-Based Pharmacy Practice	PHR 8194	2
Pharmaceutical Supply Chain Principles for Health-System Pharmacy	PHR 8250	2
Seminar*	PHR 8884	varies
Supervised Project in Health-System Pharmacy	PHR 8993	16
Operations Management for Health Service Organizations	PubHMP 7680	3
Clinical Research Design and Methods	NURS 7782	3

* Required for each semester student is enrolled in the program

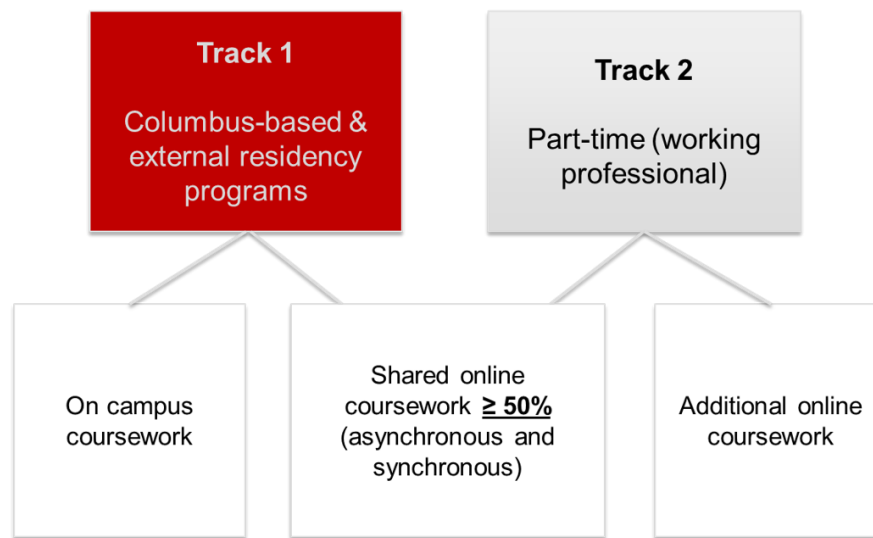
Rationale for Change in Delivery

As we strive to build upon the programs' rich history and tradition of excellence, we have a unique opportunity to leverage its' national reputation and network of alumni to reach health-systems across the country. Through this, Ohio State University College of Pharmacy has the opportunity to become the national leader in MS HSPA training.

After gathering stakeholder input in fall 2018 from students, faculty, alumni and health-system partners, the program planning committee determined the online conversion of the MS HSPA program would best be achieved through offering two tracks (Figure 2). These two tracks will share identical program and course outcomes.

- Track 1 will be offered to those students that are completing the program over two years in tandem with pharmacy residency training. The vast majority of the students enrolled in Track 1 will be in the Columbus area that are from health-system in central Ohio. Approximately 55% of the coursework will be offered online and the remaining coursework will be completed in-person (for those in Columbus) and synchronously using distance technology (for pharmacy residents outside of the area).
- Track 2 will be offered to students enrolling on a part-time basis that are working professionals with at least 3 years' experience in pharmacy practice or completion of an ASHP post-graduate year 1 (PGY-1) residency. This offering will be 100% online with a mixture of synchronous and asynchronous sessions.

Figure 2 – Two-Track System for Online Conversion



Workforce Needs in Health-System Pharmacy Administration

For 2018-2028, the Bureau of Labor Statistics (BLS) is projecting a 0% growth in pharmacist jobs. This is down from 6% for the 2016-2026 projections.¹ Furthermore, the Pharmacist Demand Indicator (PDI) shows a decline in the demand of generalist/staff positions with a change in PDI score from 3.86 to 2.91 from 2008 to 2018 (where 1 = demand being much less than pharmacist supply, 3 = demand in balance with supply, and 5 = high demand).²

While the job outlook for pharmacists portrayed by the BLS data¹ and PDI² implies a lack of demand and a trend towards surplus, these trends do not accurately reflect the demand needed for health-system pharmacy leaders that have additional training (Master's +/- residency). For example, the unweighted PDI score in Q4 of 2018 for pharmacist managers and specialized pharmacists was 3.14 and 3.48, respectively.² Therefore, those completing a combined MS/residency training program can arguably be in even greater demand than either the manager or specialist categories alone. Furthermore, consideration should be given that as demand decreases for generalist/staff pharmacist positions, it is likely some of those individuals will pursue additional degree trainings, such as an MS HSPA specialization, to open up new job opportunities.

The need for an expanded pipeline in pharmacy leadership was documented in 2005 in an article titled *Will there be a pharmacy leadership crisis?*³ The survey findings concluded that there was a leadership crisis on the horizon. This was evident by a majority of directors of pharmacy and middle managers indicating they were planning to leave their jobs and a minority of practitioners indicating they were planning to seek a leadership position.³ Considering the changes that have taken place in the pharmacy workforce since that article was published, it is important to re-evaluate whether that need still exists.

In a 2011 survey intended to assess pharmacy leadership needs, 75% of directors and 74% of middle managers responding to the survey noted that they did not anticipate remaining in their current positions.⁴ While these findings did not differ significantly from the 2005 report³, the leadership pipeline of current practitioners intending to seek a leadership position saw an uptick from 30% in 2005 to 45% in 2011.^{3,4} However, the authors noted this anticipated increase still leaves additional work to be done to build the pipeline of pharmacy leaders including a recommendation to ‘continue and enhance the current leadership development and training programs for emerging, aspiring, and current leaders.’ Furthermore, the authors go on to say ‘applicable newer technology (e.g., podcasts, YouTube videos, MP3 downloads) should be evaluated and integrated to improve and expand the learning experience.’⁴

National Trends in MS HSPA Programs

When conducting a market analysis to evaluate national trends, the primary focus should be on other online programs that offer an MS HSPA degree program (or similar focus on pharmacy leadership training) with or without residency training. Programs that fall into this category are listed in Table 1.

*Table 1 – Master’s Pharmacy Leadership Training Programs Offered Online**

Program	Degree offering	Web site
Northeast Ohio Medical University College of Pharmacy	Master of Science (M.S.) in Health-System Pharmacy Administration	https://www.neomed.edu/graduatestudies/health-system-pharmacy-administration/
University of Cincinnati	Master of Science (M.S.) in Pharmacy Leadership	https://pharmacy.uc.edu/academic-programs/graduate-certificates/pharmacy-leadership-online.html
University of North Carolina	Master of Sciences (M.S.) in Pharmaceutical Sciences	https://pharmacy.unc.edu/academics/the-ms/masters-degree-information/
University of Pittsburgh	Master of Pharmacy Business Administration (MPBA)	https://mspba.pitt.edu/
University of Wyoming	Master of Science (M.S.) in Health Services Administration	https://www.uwyo.edu/pharmacy/online-ms-program/index-alt.html

** List acquired through readily availability information on the web and through knowledge of existing programs. Therefore, this may not be an exhaustive list of online Master’s level pharmacy administration training programs.*

A secondary focus when conducting a market analysis should consider MS HSPA programs that offer an in-person only option and other Master’s degree programs (e.g., MBA, MHA, MPH) that one may pursue in place of an MS HSPA degree.

For programs that offer an in-person only option, according to the ASHP Pharmacy Residency Directory, there are currently 46 residency programs that are designated as a ‘PGY1 Pharmacy & PGY2 Health-System Pharmacy Administration and Leadership with Masters’.⁵ The vast majority of these programs offer an in-person only academic degree in partnership with a local college/university. Of these 46 programs, six are current partners with the Ohio State University MS HSPA program. While this group of

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46 programs may not be apparent partners for the OSU MS HSPA online offering proposed herein, many residency programs are seeking greater flexibility with the academic training component that is being completed in tandem with a demanding patient care schedule. Combined with another 14 combined PGY1/PGY2 health-system pharmacy administration and leadership residency programs that do not have a Master's degree component, there appears to be significant opportunity for the OSU MS HSPA program to expand nationally in partnership with existing health-system pharmacy administration residency programs.

In regards to other Master's degree programs, (e.g., MBA, MHA, MPH) that one may pursue in lieu of an MS HSPA, according to the 2019 Pharmacy Forecast survey conducted by the ASHP Research and Education Foundation, over 50% taking the survey responded it was somewhat unlikely or very unlikely that "in 25% of health systems, at least one pharmacist will have an executive leadership role outside of pharmacy (e.g., CEO, COO, CIO)." ⁶ This is noteworthy as one of the main arguments for pursuing an MBA, MHA, or MPH in lieu of an MS HSPA is to have greater recognition at the C-Suite level that transcends the department of pharmacy. This most recent finding suggests that the need for training specific to health-systems pharmacy is greater than ever.

Status of Online Courses for the MS HSPA Specialization at OSU

Under the assumption that the program would be moving online, PHR 8170 (Planning, Leading and Managing the Pharmacy Enterprise; 2 credit hours) was converted to an online offering in Spring 2019 with the support of the Ohio State Office of Distance Education and E-Learning (ODEE). Then, in the fall of 2019, PHR 8194 (Community-Based Pharmacy Practice) was a new course that was created as an online offering. Currently, work is underway to convert PHR 8180 (Economic Evaluation of Patient Services) for an online offering beginning Spring 2020 which will result in the program having 4 courses online at the end of the 2019-2020 academic year (NURS 7782, PHR 8194, PHR 8170 and PHR 8180).

This transition of offering a few courses online during the 2019 academic year was intentional to:

- build a strong relationship with the OSU ODEE;
- build a process for working with course directors to convert a course online;
- build momentum for internal and external support of the online teaching model; and
- allow for the lessons learned from the first few online conversions to inform the future courses that will be converted online during the 2020 academic year.

Advantages of Changing Delivery to Online Offering

The advantages of changing the delivery of the OSU MS HSPA program to an online offering have been highlighted throughout this proposal. To summarize, the main advantages include:

- filling the anticipated need for pharmacy leadership positions^{3,4,6};
- leveraging innovative teaching modalities that engage today's learner and provide more flexibility to the residency programs and working professionals that want to complete this training program;
- leveraging the expertise (for teaching, course directing, advising) of the 350+ alumni that have completed the program since 1959 and are in leadership positions all across the country; and
- increasing the program's enrollment in a manner that allows for a sustainable budget model.

Enrollment Projections

As of 11/12/19, there are 21 students enrolled in the MS HSPA program. This includes 18 students taking the program full-time while completing residency training and three additional students completing the program part-time as working professionals.

Assuming the two-track program offering moves forward as described in this proposal with a start date of fall 2020, below is a table outlining enrollment projections over the next five years.

Academic Year	Current Offering Enrollment ^a	Track 1 Enrollment ^b	Track 2 Enrollment ^c	Total Enrollment
2020 - 2021	10	10	10	30
2021 - 2022	1	20	25	46
2022 - 2023	n/a	20	45	65
2023 - 2024	n/a	20	55	75
2024 - 2025	n/a	20	60	80

^a Represents students that are currently in the program that will graduate after the transition to an online offering

^b Assumes Track 1 participants completing program in 2 years with combined PGY1/PGY2 residency where credit hours are equally divided between the two years

^c Assumes Track 2 participants completing program in 3 years with 15 credit hours / year

See the Track 1 and Track 2 ODEE Distance Education Program Revenue Projection documents that supplement this proposal for additional details associated with the enrollment growth including the projected instructional fees, state subsidy, support units tax, and anticipated College savings under the new budget model.

The current support staff for the MS HSPA program includes a portion (~0.25 FTE) of a Graduate Program Coordinator position within the College of Pharmacy. Furthermore, the Program Director who started November 1, 2018 has approximately 60% of his time dedicated to the MS HSPA program which is an increase from the previous Program Director. Therefore, it is anticipated the Graduate Program Coordinator and Program Director will have the capacity to support the initial conversion of the program to an online offering. It is anticipated the current capacity for the 0.25 FTE Graduate Program Coordinator and Program Director is 30 students. Therefore, if enrollment increases as projected in the table above, during the 2020-2021 academic year, additional support (0.5 – 1.0FTE Graduate Program Coordinator) will be proposed for the 2021-2022 academic year.

In an offer letter to the current Program Director executed on July 2, 2018, the College of Pharmacy authorized additional funds for the MS HSPA program in the amount of \$50,000 annually for four years (totaling \$200,000) to be used for the program development and support. It is anticipated that these funds will be used, in part, to provide the additional support needed for the program growth during the transition period considering the budget model operates on a one-year lag, two-year average from the start of the online program. Beyond these temporary funds, it is anticipated the growth in enrollment will justify the hiring of additional permanent resources that are dedicated to the program.

Program Assessment Summary

The mission of the OSU MS HSPA program is “to improve pharmacy care by developing leaders in health-system pharmacy.” In order to accomplish this mission, it is expected a graduate of the program will be able to:

- Conceptualize, plan, coordinate, and evaluate pharmaceutical care in organized healthcare settings.
- Employ managerial and financial skills to maintain and improve health system pharmacies.
- Design pharmacy services that meet the needs of the changing health care system.
- Convey concepts and ideas clearly and succinctly via verbal or written communication.
- Relay ideas that are well researched and objectively stated.
- Collect and interpret data useful to improving health system pharmacy services (data driven decision making).
- Establish a vision for health-system pharmacy based on current and historical philosophies of pharmacy practice.

These program-level outcomes are achieved through 44 credit hours spanning 18 courses. To ensure alignment with nationally recognized standards, these program-level outcomes span six domains that are consistent with the ASHP domains for Health-System Pharmacy Administration Residency Programs. The MS HSPA coursework, organized by these six domains, are noted below:

Domain	MS HSPA Courses
Safe and Effective Medication-Use Systems	<ul style="list-style-type: none">• PHR 8150: System Issues with Medication Safety (2 credits)• PHR 8160: Operations Management in Health-System Pharmacy (2 credits)• PHR 8170: Planning, Leading and Managing the Pharmacy Enterprise (2 credits)• PHR 8250: Pharmaceutical Supply Chain Principles for Health Systems (2 credits)
Quality Improvement	<ul style="list-style-type: none">• NURS 7782: Clinical Research Design and Methods (3 credits)• PHR 8993: Supervised Project in Health-System Pharmacy (16 credits)• PubHMP 7680: Operations Management for Health Service Organizations (3 credits)
Management of Human Resources	<ul style="list-style-type: none">• PHR 8130: Advanced Management and Leadership Principles (2 credits)
Management of Financial Resources	<ul style="list-style-type: none">• PHR 8100: Operations Finance / Revenue Cycle (1.5 credits)• PHR 8110: Capital Budgeting and Business Case Development (1.5 credits)• PHR 8180: Economic Evaluation of the Pharmacy Enterprise (1 credit)
Use of Technology	<ul style="list-style-type: none">• PHR 8120: Information Systems for Health-System Pharmacy (1.5 credits)
Advanced Leadership	<ul style="list-style-type: none">• PHR 8130: Advanced Management and Leadership Principles (2 credits)• PHR 8170: Planning, Leading and Managing the Pharmacy Enterprise (2 credits)

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	<ul style="list-style-type: none"> • PHR 8884: Seminar (4 credits)
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As previously mentioned, the Track 1 and Track 2 offering (while differing in the mode of delivery) will share identical program and course-level outcomes. During a 3-year transition period (2020-2023), there will be no significant changes made in program and course-level outcomes for two main reasons:

1. The current offering is performing well evidenced by formal (graduation rates, student performance, course feedback, etc.) and informal (interest in the program, student and faculty feedback, program perception by alumni and external partners, etc.) metrics.
2. To ensure there is a historical point of comparison throughout the online transition that can appropriately inform future changes that need to be made. If significant program and course level outcomes were changing at the same time the structure of the program was changing to an online offering, it would be difficult to ascertain what may be affecting any changes to the indicators of program success.

A variety of assessment techniques are used throughout the program to ensure student competency in individual course objectives that align with program-level outcomes. These assessment techniques (both formative and summative) include, but are not limited to, written examinations, papers, individual and group presentations, and practice site-based projects. As we convert coursework online, the course directors will be working with the instructional designers from ODEE to go through a backward-design process that focuses on updating assessments, where necessary, to ensure they are providing rich learning experiences for the students. Considering students enrolled in this program are already licensed practicing pharmacists, assignments are selected that link the classroom content to students' work/residency experience.

For example, in a recently developed online course PHR 8194 (Community-Based Pharmacy Practice), rather than work on theoretical case studies or take knowledge-based assessments, students are expected to complete site-based projects that apply course information at a higher learning level. In this course, students complete two large projects that are broken down into smaller weekly assignments that allow for feedback along the way to increase the likelihood of implementation. For the two major projects in PHR 8194, below is a summary showing how large projects are broken up into smaller assignments that align with course and program-level outcomes.

Project	Individual Assignments	Course Objective(s) Alignment	Program-Level Outcomes Alignment
Advocacy Project	<ul style="list-style-type: none"> • Topic exploration • Idea justification • Plan for stakeholder engagement • Stakeholder meeting debrief • Red-line changes to proposed legislation • Plan for legislator engagement • Legislator engagement meeting debrief • Social sharing strategy • Final presentation 	<ul style="list-style-type: none"> • Reflect upon the role and responsibility in advocating for the needs of community-based pharmacy practice 	<ul style="list-style-type: none"> • Establish a vision for health-system pharmacy based on current and historical philosophies of pharmacy practice. • Convey concepts and ideas clearly and succinctly via verbal or written communication.

Vision Statement: We envision a health-system that achieves optimal medication outcomes with a medication system designed to foster quality medication therapy which is continually monitored for areas of improvement.

			<ul style="list-style-type: none"> Relay ideas that are well researched and objectively stated.
Community-Based Pharmacy Position Justification Project	<ul style="list-style-type: none"> Plan for director of pharmacy engagement Director of pharmacy meeting debrief Practice site description Position rationale and evaluation Position overview Plan for stakeholder engagement Final presentation 	<ul style="list-style-type: none"> Explain regulatory, quality, and financial considerations in the community-based pharmacy setting. Develop strategies for effectively leading community-based pharmacy services 	<ul style="list-style-type: none"> Conceptualize, plan, coordinate, and evaluate pharmaceutical care in organized healthcare settings. Design pharmacy services that meet the needs of the changing health care system. Convey concepts and ideas clearly and succinctly via verbal or written communication.

While there are no expected changes in program outcomes with the online conversion, the Program Director, in tandem with the Program Planning Committee, will be closely tracking and discussing at its' quarterly meetings several variables to ensure alignment with previous in-person offerings and to ensure consistency between the Track 1 and Track 2 offerings. Areas that will be tracked include, but are not limited to, the following:

- Course level student performance
- Student Evaluations of Instruction (SEIs)
- Course Director feedback (formal and informal)
- On-time graduation and student progression
- Interest in the program as determined by volume of applications and number of qualified candidates
- Positions secured at the point of graduation (both yes/no and types of positions)
- Projects from PHR 8993 that get accepted into reputable peer-reviewed journals
- Alumni input / perception

Considering the independent research/project is such a significant portion of the program, it is worth noting how student performance will be assessed in this course. At the end of each semester offering of PHR 8993, the advisor will review the *MS HSPA Major Project Meeting Minutes Forms* that were submitted alongside the project timeline and quality of work submitted to determine a grade of S/U/I (S=satisfactory, U=unsatisfactory, I=incomplete). With both U and I grades, the advisors establish a plan for the graduate student to complete in order to achieve an S grade. The *MS HSPA Major Project Meeting Minutes Forms*, as shown in Figure 3, is submitted monthly and is intended to (1) help the

Vision Statement: We envision a health-system that achieves optimal medication outcomes with a medication system designed to foster quality medication therapy which is continually monitored for areas of improvement.

student stay on track with project completion and (2) ensure the student, college-based advisor and practice-set research mentors are all informed of the project status.

Figure 3 – MS HSPA Major Project Meeting Minutes Form

MS HSPA Major Project Meeting Minutes Form

Student Name:	
Project Title:	
College Advisor:	
Practice Site Advisor(s):	
Date of Meeting	Date of last meeting
Attendees:	
Summary of Progress (after initial meeting, this section should include an update of progress made since previous meeting):	
Plan for Project completion (including outstanding action steps and timeline)	
Advisor Comments:	

References

1. Occupational Outlook Handbook: Pharmacists. Bureau of Labor Statistics.
<https://www.bls.gov/ooh/healthcare/pharmacists.htm>. Accessed September 13, 2019.
2. National Pharmacist Demand Average Response. Pharmacist Demand Indicator.
<https://pharmacym manpower.com/index.php>. Accessed September 13, 2019.
3. White SJ. Will there be a pharmacy leadership crisis? An ASHP Foundation Scholar-In-Residency report. *Am J Health-Syst Pharm*. 2005;62:845-55.
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5. Online Residency Directory. American Society of Health-System Pharmacists.
<https://accred.ashp.org/aps/pages/directory/residencyprogramsearch.aspx>. Accessed September 13, 2019.
6. Vermeulen LC, Eddington ND, Gourdine MA, et al. ASHP Foundation Pharmacy Forecast 2019: Strategic Planning Advice for Pharmacy Departments in Hospitals and Health Systems. *Am J Health-Syst Pharm*. 2019;76:71-100.

Office of Distance Education and eLearning (ODEE)
Distance Education Program Revenue *Projection - DRAFT*

09/13/19

College:	College of Pharmacy
Program Name:	Master of Science in Pharmaceutical Sciences with a Specialization in Health-System Pharmacy Administration (MS HSPA)

Number of Courses:	19
Total Credit Hours	43.5
Rank	Graduate
Residency (in/Out State Split)	50% eligible

Assumptions:

- (1) Track 1 completed in 2 years with combined PGY1/PGY2 residency
 (2) 29/44 credit hours of the program will be online
 (3) credit hours equally divided between the two-years

Track 1 Budget Model - Hybrid in-person/online offering

Rank		1st year	2nd year	3rd year	4th year	5th year
<u>Graduate</u>	# of Courses	10 Course	10 Course	10 Course	10 Course	10 Course
	# of Students	10 Students	20 Students	20 Students	20 Students	20 Students
	# of Credit Hours	15 Cr Hours	15 Cr Hours	15 Cr Hours	15 Cr Hours	15 Cr Hours
	Total Credit Hours of Instruction	145.0 hours	217.5 hours	290.0 hours	290.0 hours	290.0 hours
	Instructional Fee					
	Fees - Effective Rates		\$1,038.72	\$1,038.72	\$1,038.72	\$1,038.72
	State Subsidy		\$396.39	\$396.39	\$396.39	\$396.39
	Projected Fees		\$75,310	\$188,270	\$263,570	\$301,230
	Projected Subsidy		\$14,370	\$35,920	\$50,290	\$57,480
	Projected Revenue Generated	\$0	\$89,680	\$224,190	\$313,860	\$358,710
	Marginal Revenue	\$0	\$89,680	\$134,510	\$89,670	\$44,850
	Support Units Tax rate	24%	24%	24%	24%	24%
	Support Units Tax	\$0	\$21,520	\$32,280	\$21,520	\$10,760
	Cumulative Support Units Tax	0	21,520	53,800	75,320	86,080
	Net Margin	\$0	\$68,160	\$102,230	\$68,150	\$34,090
	Colleges Share %	70%	70%	70%	70%	70%
	Colleges Share - Annual PBA	\$0	\$47,710	\$71,560	\$47,710	\$23,860
	Colleges Share (Cumulative Cash Generated)	\$0	\$47,710	\$119,270	\$166,980	\$190,840
	ODEE Share %	30%	30%	30%	30%	30%
	ODEE Share Annual PBA	\$0	\$20,440	\$30,660	\$20,440	\$10,220
	ODEE Share (Cumulative Cash Generated)	\$0	\$20,440	\$51,100	\$71,540	\$81,760
<u>Current Budget Model:</u>						
	SSA 1 - Student Service Assessment 1 - UG - \$122.58		\$0	\$0	\$0	\$0
	SSA 2 - Student Service Assessment 2 - Grad - \$509.86		\$36,960	\$92,410	\$129,380	\$147,860
	SSA 3 - Student Service Assessment 3 - \$3.63		\$260	\$660	\$920	\$1,050
	Total Current Assessments	\$0	\$37,220	\$93,070	\$130,300	\$148,910
	College Assessment savings under new model	\$0	\$16,780	\$41,970	\$58,760	\$67,150

Assumptions:

No other Student Services Assessments would apply to Colleges under this model.
 The Distance Education assessment applies to marginal revenues.
 The Distance Education assessment only apply to students who are 100% distance Ed.
 No inflationary adjustment is taken for instructional fees.
 The projected numbers in this model are best estimates and the actual allocations might be slightly different.

Revenue and Assessments Calculation is based on the following current FY20 rates:

	Fees	Subsidy
Undergraduate	\$407.15	\$230.64
Graduate	\$1,038.72	\$396.39

Office of Distance Education and eLearning (ODEE)
Distance Education Program Revenue *Projection - DRAFT*

09/13/19

College:	College of Pharmacy
Program Name:	Master of Science in Pharmaceutical Sciences with a Specialization in Health-System Pharmacy Administration (MS HSPA)

Number of Courses:	19
Total Credit Hours	45.5
Rank	Graduate
Residency (in/Out State Split)	50% eligible

Assumption: completing program over 3 years at 15 credit hours per year

Track 2 Budget Model - 100% online offering

Rank		1st year	2nd year	3rd year	4th year	5th year
Graduate	# of Courses	8 Course	15 Course	21 Course	21 Course	21 Course
	# of Students	10 Students	25 Students	45 Students	55 Students	60 Students
	# of Credit Hours	15 Cr Hours	15 Cr Hours	15 Cr Hours	15 Cr Hours	15 Cr Hours
	Total Credit Hours of Instruction	150.0 hours	262.5 hours	525.0 hours	750.0 hours	862.5 hours
	Instructional Fee					
	Fees - Effective Rates		\$1,038.72	\$1,038.72	\$1,038.72	\$1,038.72
	State Subsidy		\$396.39	\$396.39	\$396.39	\$396.39
	Projected Fees		\$77,900	\$214,240	\$409,000	\$662,180
	Projected Subsidy		\$14,860	\$40,880	\$78,040	\$126,350
	Projected Revenue Generated	\$0	\$92,760	\$255,120	\$487,040	\$788,530
	Marginal Revenue	\$0	\$92,760	\$162,360	\$231,920	\$301,490
	Support Units Tax rate	24%	24%	24%	24%	24%
	Support Units Tax	\$0	\$22,260	\$38,970	\$55,660	\$72,360
	<i>Cumulative Support Units Tax</i>	0	22,260	61,230	116,890	189,250
	Net Margin	\$0	\$70,500	\$123,390	\$176,260	\$229,130
	Colleges Share %	70%	70%	70%	70%	70%
	Colleges Share - Annual PBA	\$0	\$49,350	\$86,370	\$123,380	\$160,390
	Colleges Share (Cumulative Cash Generated)	\$0	\$49,350	\$135,720	\$259,100	\$419,490
	ODEE Share %	30%	30%	30%	30%	30%
	ODEE Share Annual PBA	\$0	\$21,150	\$37,010	\$52,870	\$68,730
	ODEE Share (Cumulative Cash Generated)	\$0	\$21,150	\$58,160	\$111,030	\$179,760
	Current Budget Model:					
	SSA 1 - Student Service Assessment 1 - UG - \$122.58	\$0	\$0	\$0	\$0	\$0
	SSA 2 - Student Service Assessment 2 - Grad - \$509.86	\$38,240	\$105,160	\$200,760	\$325,040	\$325,040
	SSA 3 - Student Service Assessment 3 - \$3.63	\$270	\$750	\$1,430	\$2,310	\$2,310
	Total Current Assessments	\$0	\$38,510	\$105,910	\$202,190	\$327,350
	College Assessment savings under new model	\$0	\$17,360	\$47,750	\$91,160	\$147,590

Assumptions:

No other Student Services Assessments would apply to Colleges under this model.
The Distance Education assessment applies to marginal revenues.
The Distance Education assessment only apply to students who are 100% distance Ed.
No inflationary adjustment is taken for instructional fees.
The projected numbers in this model are best estimates and the actual allocations might be slightly different.

Revenue and Assessments Calculation is based on the following current FY20 rates:

	Fees	Subsidy
Undergraduate	\$407.15	\$230.64
Graduate	\$1,038.72	\$396.39

MEMORANDUM OF UNDERSTANDING

College:	College of Pharmacy
Department:	Pharmacy Practice and Science
Faculty director:	Tim Ulbrich, PharmD (Program Director) – ulbrich.7@osu.edu
Primary contact, if different from faculty director:	Jessica Costic (Graduate Program Director) – costic.4@osu.edu
Fiscal officer:	Adam Betz, MHA (CAO) – betz.24@osu.edu
Marketing director:	Brittany McClaskey - mcclaskey.25@osu.edu
Enrollment contact for state authorization compliance:	Jessica Costic (Graduate Program Director) – costic.4@osu.edu
Additional colleges/contacts:	Cynthia Carnes, PharmD, PhD (Senior Associate Dean) – carnes.4@osu.edu

Name of program:	The Master of Science in Pharmaceutical Sciences with a specialization in Health-Systems Pharmacist Administration (MS HSPA)	
Approval process (change in delivery or new program)	Change in delivery (MS HSPA specialization only)	
Will this program have a different fee structure from what would normally be assessed similar students at the university? If so, then please explain:	No	
Total credit hours:	43.5	
# of courses to be created:	<p>For the Track 1 offering (hybrid online/in-person for those taking the MS HSPA along with residency training), 6 more courses will have to be converted to an online offering to add to the 4 courses (PHR 8170, PHR 8194, PHR 8180 and NURS 7782) that will be online during the 2019-2020 AY.</p> <p>For the Track 2 offering (100% online option for working professionals), 16 more courses will have to be converted to an online offering to add to the 4 courses (PHR 8170, PHR 8194, PHR 8180 and NURS 7782) that will be online during the 2019-2020 AY. Of note, the Track 1 courses that are converted to an online offering will also be offered to Track 2 participants.</p>	
# of courses already in an online format that need ODEE review:	<p>2 courses are already offered online (PHR 8170 and PHR 8194) that were developed in partnership with ODEE</p> <p>1 other course is in progress (PHR 8180) for online conversion (in partnership with ODEE) that will begin Spring 2020</p> <p>1 other online course is offered by another college (NURS 7782) and is a required course for students enrolled in the MS HSPA program</p> <p>2 new online electives for the MS HSPA program are currently being developed in partnership with ODEE (PHR 5525 and PHR 7680)</p>	
# of anticipated students:	Beginning Fall 2020, it is estimated we will enroll 10 students in Track 1 (hybrid online/in-person for those taking the MS HSPA along with residency training) and 10 students in Track 2 (100% online option for working professionals)	
State authorization:	For this program, does your college plan to do any of the following outside of Ohio? Yes/No	
	Maintain a physical location, facility or instruction site (may include server or other equipment or administrative offices)	No
	Recruit students (either occasionally or consistently)	Yes
	Conduct soliciting, marketing or advertising	Yes
	Employ full time and/or adjunct faculty (1099 /W-2)	TBD

	<i>Conduct instructional activities such as clinical, labs, practicums, internships or externships (where students meet face to face)</i>	Yes for Track 1; no for Track 2 except for in-person events (2-3 times per year) to allow for cohort interactions, alumni interactions and engagement with Track 1 participants
	<i>Have contracts or agreements to provide services to students, such as proctored exams</i>	TBD
	<i>Have partnerships with educational institutions</i>	TBD

Track 1*Hybrid online/in-person for those taking the MS HSPA along with residency training*

Course Name	Faculty Lead	OAA Approved for Online Delivery	Developed	Delivered	5 Hour Review (semester immediately following first delivery)	Reviewed (every 3 years)
NURS 7782 – Clinical Research Design & Methods	Esther Chipps, PhD, RN, NEA-BC	SP 14	SP 14	AU 14	SP 15	SP 18
PHR 8170 – Advancement of Patient Care Services	Robert Weber, PharmD, MS, BCPS, FASHP, FNAP	AU 18	AU 18	SP 19	SU 19	SU 22
PHR 8194 – Community-Based Pharmacy Practice	Tim Ulbrich, PharmD & Dana Wilkerson, PharmD, MS	SP 19	SU 19	AU 19	SP 20	SP 23
PHR 8180 – Economic Evaluation of Patient Services	Robert Weber, PharmD, MS, BCPS, FASHP, FNAP Tim Ulbrich, PharmD & Dana Wilkerson, PharmD, MS	AU 19	AU 19	SP 20	SU 20	SU 23
PHR 8250 - Pharmaceutical Supply Chain Principles for Health Systems	Steven Loborec, PharmD, MS, MPH, BCPS	SP 20	AU 20	SP 21	SU 21	SU 24
Operations Management for Health Service Organizations (course title and number TBD – replacement for PubHMP 7680)	TBD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8993 – Supervised Project in Health-System Pharmacy 1	Tim Ulbrich, PharmD		SP 20	AU 20	SP 21	SP 24
PHR 8993 - Project in Health-System Pharmacy 2	Tim Ulbrich, PharmD		SP 20	AU 20	SP 21	SP 24

PHR 8993 - Project in Health-System Pharmacy 3	Tim Ulbrich, PharmD		AU 20	SP 21	SU 21	SU 24
PHR 8993 - Project in Health-System Pharmacy 4	Tim Ulbrich, PharmD		AU 20	SP 21	SU 21	SU 24

Track 2*100% online option for working professionals*

Course Name	Faculty Lead	OAA Approved for Online Delivery	Developed	Delivered	5 Hour Review (semester immediately following first delivery)	Reviewed (every 3 years)
NURS 7782 – Clinical Research Design & Methods	Esther Chipps, PhD, RN, NEA-BC	SP 14	SP 14	AU 14	SP 15	SP 18
PHR 8170 – Advancement of Patient Care Services	Robert Weber, PharmD, MS, BCPS, FASHP, FNAP	AU 18	AU 18	SP 19	SU 19	SU 22
PHR 8194 – Community-Based Pharmacy Practice	Tim Ulbrich, PharmD & Dana Wilkerson, PharmD, MS	SP 19	SU 19	AU 19	SP 20	SP 23
PHR 8180 – Economic Evaluation of Patient Services	Robert Weber, PharmD, MS, BCPS, FASHP, FNAP Tim Ulbrich, PharmD & Dana Wilkerson, PharmD, MS	AU 19	AU 19	SP 20	SU 20	SU 23
PHR 8250 - Pharmaceutical Supply Chain Principles for Health Systems	Steven Loborec, PharmD, MS, MPH, BCPS	SP 20	AU 20	SP 21	SU 21	SU 24
Operations Management for Health Service Organizations (course title and number TBD – replacement for PubHMP 7680)	TBD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8993 – Supervised Project in Health-System Pharmacy 1	Tim Ulbrich, PharmD	SP 20	SP 20	AU 20	SP 21	SP 24
PHR 8993 - Project in Health-System Pharmacy 2	Tim Ulbrich, PharmD	SP 20	SP 20	AU 20	SP 21	SP 24

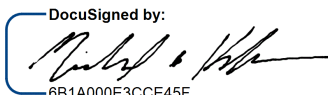
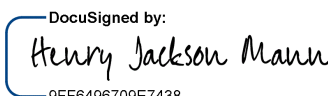
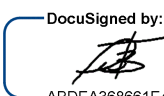
PHR 8993 - Project in Health-System Pharmacy 3	Tim Ulbrich, PharmD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8993 - Project in Health-System Pharmacy 4	Tim Ulbrich, PharmD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8100/8100 – Operations Finance / Revenue Cycle & Capital Budgeting and Business Case Development <i>(currently two courses that will be combined into one)</i>	TBD	AU 19	SP 20	AU 20	SP 21	SP 24
PHR 8160 – Operations Management in Health-System Pharmacy	TBD	AU 19	SP 20	AU 20	SP 21	SP 24
PHR 8150 – Systems Issues with Medication Safety	TBD	AU 19	SP 20	AU 20	SP 21	SP 24
PHR 8130 – Advanced Leadership Principles	TBD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8120 – Information Systems for Health System Pharmacy	TBD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8884 – Seminar	Tim Ulbrich, PharmD	AU 19	SP 20	AU 20	SP 21	SP 24
PHR 8884 – Seminar	Tim Ulbrich, PharmD	AU 19	SP 20	AU 20	SP 21	SP 24
PHR 8884 – Seminar	Tim Ulbrich, PharmD	SP 20	AU 20	SP 21	SU 21	SU 24
PHR 8884 – Seminar	Tim Ulbrich, PharmD	SP 20	AU 20	SP 21	SU 21	SU 24

Colleges entering into this agreement will:
Secure approval from the following, where applicable: <ul style="list-style-type: none"> ▪ Graduate School ▪ Council on Academic Affairs (CAA) ▪ University Senate ▪ Board of Trustees ▪ Department of Higher Education
Contact the university budget office regarding new program and to request a distance education specific fee table. Differential fees must be approved the Board of Trustees, if applicable.
Meet the program standards set forth by your accrediting body (if applicable) for alternative delivery models
Submit courses for online delivery and any course revisions to curriculum.osu.edu (after CAA Approval)
Label students in Student Information System with appropriate subplan. Distance students = subplan ONL
Provide budget forecasting/market analysis using ODEE funding model (attached) <ul style="list-style-type: none"> ▪ Incur the costs for your program specific advertising ▪ Incur additional costs associated with distance education programming (e.g. student advising, increased TA support)
Collaborate with ODEE on State Authorizations as well as State Licensure approvals, if applicable <ul style="list-style-type: none"> ▪ Notify ODEE of states/countries where they would like to enroll students ▪ Communicate to prospective students their ability to enroll and seek federal financial aid based on State Authorizations
Collaborate with ODEE on the technical solutions for effective course delivery: <ul style="list-style-type: none"> ▪ Online-specific syllabus requirements (ODS statement, COAM statement, etc.) ▪ OSU identity/branding guidelines ▪ Carmen course template providing students with effective navigation and online course expectations, etc. ▪ Provide course content materials for placement into mutually agreed upon formats and technologies for distance delivery ▪ Utilize Quality Matters principles in course design ▪ Focus on outcome-based learning and incorporate assessment into courses
Work with faculty on the workload assignment
Encourage distance education faculty/instructors/students to participate in ODEE's Distance Education Learning and Teaching Academy
Collaborate with relevant student support services (ODS, UCAT, Writing Center, Libraries, Veterans Affairs, etc.) <ul style="list-style-type: none"> ▪ Incur costs to provide required accessibility accommodations for videos and activities not produced by ODEE
Collaborate with ODEE to review and update courses every three years.
Provide at least one required student participation activity each week in a course <ul style="list-style-type: none"> ▪ Course designers will implement activities each week of a course to verify enrollment. This is beyond a simple login to a course space, but constitutes a discussion posting, quiz attempt, artifact submission, etc.
Identify student technology support for tools only used by your program
Provide replacement instructor(s) in a timely manner should an instructor separate from the University during the course development process or terminate and postpone course development until a replacement instructor can be identified.

ODEE entering into this agreement will:
Administer state authorization program <ul style="list-style-type: none"> ▪ Necessary to ensure program meets federal student financial aid guidelines ▪ Communicate with the colleges the status of approved state authorizations
Collaborate with the college on the technical solutions for effective course delivery: <ul style="list-style-type: none"> ▪ Online-specific syllabus requirements (ODS statement, COAM statement etc.) ▪ OSU identity guidelines ▪ Course templates providing students with effective navigation and online course expectations, etc. ▪ Placing course content materials into mutually agreed upon formats and technologies for distance delivery ▪ Utilize Quality Matters principles in course design ▪ Focus on outcome-based learning and incorporate assessment into courses
Provide instructional designer production time

Provide distance education professional development opportunities for faculty/instructors/students through ODEE's Distance Education Learning and Teaching Academy
Collaborate with the college to review and update courses every three years
Collaborate with course instructors to provide at least one required student participation activity each week in a course <ul style="list-style-type: none"> Course designers will implement activities each week of a course to verify enrollment. This is beyond a simple login to a course space, but constitutes a discussion posting, Quiz attempt, artifact submission, etc.
Provide distance education faculty and students access to: <ul style="list-style-type: none"> An OCIO managed Tier 1 help desk for ODEE/OCIO provided tools/services
Provide OSU online program advertising <ul style="list-style-type: none"> Two minute program specific introductory video Consult with college marketing on strategies for program specific advertising Program included in general OSU online marketing strategy Marketing will only be conducted in states/countries in which the program has been authorized
Collaborate with program directors to revise the course development process should an instructor separate from the university during that time. Options include continue work on course through the end of the 14 week development process with a replacement instructor or terminate and postpone course development until a replacement instructor can be identified.

** Products and services used will be held to each service level of agreement*

MOU created by:	Timothy Ulbrich	
MOU approved by:	Mike Hofherr, Vice President and Chief Information Officer:  6B1A000E3CCE45F...	Date: 10/07/2019
	Dean, College:  9FF6496709E7438...	Date: 10/07/2019
	Fiscal Officer, College:  ABDEA368661E40C...	Date: 10/01/2019

** Please review and attach program revenue projections worksheet*



**CHANGE REQUEST FORM
ONLINE OR BLENDED/HYBRID DELIVERY**

This form must be used when a CCGS member institution intends to deliver 50% or more of a degree program via electronic or other distance learning means. This form should be used when changing delivery modes of a previously approved program, or as supplemental information when seeking approval for a new program that proposes to use this delivery mode.

This form must be submitted through the institution's CCGS representative. In order to ensure sufficient time for review, please submit all requests **at least four weeks prior to an upcoming meeting of the CCGS**. Documents may be submitted as PDF or Microsoft Office documents (e.g., Word or Excel).

Institution offering the degree program: The Ohio State University

Degree designation (e.g. M.S. in Biotechnology): Master of Science in Pharmaceutical Sciences with a Specialization in Health-System Pharmacy Administration (MS HSPA)

In order to make this request, please confirm that the program will satisfy the following criteria:

- ☒ Program will use Quality Matters or similar metric-driven online course design/assessment tools
- ☒ All instructors will be trained in offering online content and online assessments
- ☒ The offering university has an institutionally approved plan for securing authorizations to deliver distance learning content in other states (e.g., NC-SARA membership).
- ☒ The offering university has approved all online courses for this program as academically appropriate for graduate study

Is this degree program subject to approval/accreditation by a governing body beyond ODHE and HLC (e.g., CAEP, CCNE, ABET, AACSB)?

- ☒ No
- ☐ Yes (If yes, please name the accrediting body here.)

Does this degree program include the creation of original research or scholarship?

- ☐ No
- ☒ Yes (If yes, please complete question 1 on the following Supplementary Information form.)

Does this degree program include an experiential component (e.g., clinical or professional development experience)?

☒ No

☐ Yes (*If yes, please complete question 2 on the following Supplementary Information form.*)

Will the program be offered in partnership with a third-party commercial on-line service provider?

☒ No

☐ Yes (*If yes, please provide name of provider and their responsibilities [e.g., content creation, recruitment, admissions, advising]*)

Approximately what percentage of program content will be completed on-line? see below

After gathering stakeholder input, it was determined that the online conversion of the MS HSPA program would result in a two-track offering that would share identical program and course outcomes but differ in the mode of delivery:

- Track 1 will be offered to those students that are completing the program over two years in tandem with pharmacy residency training. The vast majority of the students enrolled in Track 1 will be in the Columbus area that are from health-system in central Ohio. Approximately 55% of the coursework will be offered online and the remaining coursework will be completed in-person (for those in Columbus) and synchronously using distance technology (for pharmacy residents outside of the area).
- Track 2 will be offered to students enrolling on a part-time basis that are working professionals with at least 3 years' experience in pharmacy practice or completion of an ASHP post-graduate year 1 (PGY-1) residency. This offering will be 100% online with a mixture of synchronous and asynchronous sessions.

The person listed below verifies that this request has received the necessary institutional approvals and that the above information is truthful and accurate.

Signature (Chief Academic Officer or Delegate – e.g., Graduate Dean)

Typed Name & Title

Date of Approval

SUPPLEMENTARY INFORMATION FORM

- 1.) A.** On a separate page, describe how program faculty will oversee and direct original research performed by students in the program. At a minimum, address the following areas:

- how students will gain access to required facilities and resources
- how students will be trained in necessary procedures
- how students will present their progress
- how the progress and quality of student projects will be assessed

Include any additional information needed to provide assurance that the quality of the research performed will be equivalent to the face-to-face offering of this degree.

B. On a separate page, describe how program faculty will mentor students, and how students will participate in the socialization that is necessary for the effective scholarly exchange of ideas at the level appropriate for the degree sought. At a minimum, address the following areas:

- how students will select a primary mentor and members of any required oversight committee
- frequency of any mandatory interactions between program faculty and students
- opportunities that exist for students to develop and refine ideas through scholarly exchange with faculty and others in the field
- career development opportunities will be provided

Include any additional information needed to provide assurance that student mentoring will be effective and assure professional competence and exposure in the field.

- 2.)** On a separate page, describe how professional or clinical experiences are implemented and assessed. At a minimum address the following areas:

- criteria for selecting the location(s) of such experiences
- qualifications of preceptors or faculty
- provide a list of competencies that will be evaluated
- assessment strategies used to evaluate student performance

Include any additional information needed to provide assurance that the quality of the experiential component will be equivalent to that of students who are overseen in local environments.

Supplementary Information

Section A – Faculty Oversight of Research

Overview of MS HSPA Degree Requirements for Research

Each student enrolled in the MS HSPA specialization is encouraged to develop individual areas of expertise and pursue those areas of particular interest. The student is expected to engage in a supervised scholarly project under the guidance of their advisor. It is expected that the results of the scholarship project will be disseminated via a podium/poster presentation and submitted for publication in a peer-reviewed journal.

The scholarly project requirement for the MS HSPA specialization is completed in the course PHR 8993 (Supervised Project in Health-System Pharmacy). Embedding the scholarly project requirements within a required course allows a mechanism to have appropriate faculty oversight and ensure a level of quality that is expected of a graduate of the program.

How do students gain access to required facilities and resources?

No access to laboratory space within the College of Pharmacy at Ohio State University will be necessary based on the nature of projects completed by the MS HSPA students. Required access will be needed for library resources, Institutional Review Board (IRB) and statistical support, which will be available upon enrollment in a similar manner to any student who currently enrolls in the program.

Furthermore, each student is required to have an M status graduate faculty advisor from the College of Pharmacy. This individual is responsible for evaluating the work completed in PHR 8993 and determining successful completion of the project. This individual also serves as a primary point of contact for students such as access to the appropriate facilities and resources.

How will students be trained in necessary procedures?

Students must complete the CITI Basic Course in Biomedical or Social and/or Behavioral Research training module available from the OSU Research Foundation prior to initiating any research project. All students must receive Institutional Review Board approval, where applicable, for any scholarly project prior to beginning data collection. When patient data is required, HIPAA review is also necessary (<http://orcp.osu.edu/irb>).

Furthermore, students enrolled in the MS HSPA program are required to complete a three credit hour course in clinical research design and methods. This course is *NURS 7782: Clinical Research Design and Methods*.

How do students present their progress?

While enrolled in PHR 8993, students will be required to hold virtual or in-person monthly meetings with their project team (including their faculty advisor, on-site preceptor(s), statistician, etc.). Students will utilize the *MS HSPA Major Project Meeting Minutes Form* (Appendix 1) to report their progress and to develop an action plan to ensure on-time project completion. It is expected the student will send the completed meeting minutes form to the project team within one week of the meeting. The faculty

advisor will then have the opportunity to provide further comment. After the advisor has the opportunity to comment, the student will send a copy of the *HSPA Major Project Meeting Minutes Form* (Appendix 1) to the project team, residency program director (for students completing the combined MS/residency) and MS HSPA Program Director.

In the event that a monthly meeting is not necessary, that should be communicated by the student to the project team, residency program director (for students completing the combined MS/residency) and MS HSPA Program Director. Considering the timeline for project completion, it is expected that no two consecutive monthly meetings will be cancelled.

How will the progress and quality of student projects be assessed?

At the end of each semester offering of PHR 8993, the advisor will review the *MS HSPA Major Project Meeting Minutes Forms* that were submitted alongside the project timeline and quality of work submitted to determine a grade of S/U/I (S=satisfactory, U=unsatisfactory, I=incomplete). With both U and I grades, the advisors establish a plan for the graduate student to complete in order to achieve an S grade.

How will be quality of the research performed be equivalent to the face-to-face offering of this degree?

All students, whether completing the Track 1 or Track 2 offering, will have the same requirements as it relates to completion of a Major Project through PHR 8993. These requirements (including the project expectations, selection of a faculty advisor, project timeline, etc.) will be no different from that for the current offering of the program.

Section B – Faculty Mentorship

How will students select a primary mentor and members of any required oversight committee?

In addition to working with individuals from their practice-site, each student is required to have an M status graduate faculty advisor from the College of Pharmacy. This individual is responsible for serving as the student's advisor and evaluating the scholarly project completed in PHR 8993. Students will be provided with a list of M status faculty and be encouraged to choose an advisor that has expertise/interest in the area of interest for their scholarly project.

What will be the frequency of mandatory interactions between program faculty and students?

Track 1 (hybrid in-person/online) participants will have regular mandatory interactions with their instructors for the courses that will be offered in-person (for those in Columbus) or synchronously using distance technology (for those outside of Columbus).

Track 2 (online) participants will have regular mandatory interactions with their instructors for synchronous components of online courses. This will include a weekly seminar course (PHR 8884) that will be offered synchronously for every week of every semester a student is enrolled in the program. This will allow regular peer and faculty interactions. Furthermore, all online courses are being developed in a way that promotes regular faculty-student interactions through active discussion components and inclusion of synchronous sessions where necessary.

All students, regardless of track, will have mandatory interactions with faculty through the requirement to meet at least once per month with the advisor when completing PHR 8993.

What opportunities exist for students to develop and refine ideas through scholarly exchange with faculty and others in the field?

In addition to informal opportunities for the sharing of ideas, students are required to enroll in PHR 8994 (1 credit hour for every semester enrolled in the program). This weekly seminar course provides students with experience in (1) communication of current topics, (2) refining skills in leading discussions and (3) providing effective evaluation of peer presentations.

Students will also be expected (as a part of their scholarly project with PHR 8993) to present their research findings at a national meeting, with their peers in the program as a podium presentation as a part of PHR 8884 and submit their project for publication.

What career development opportunities will be provided?

Students enrolled in the MS HSPA program will have available to them the career development resources offered by both the [College](#) and [University](#). Furthermore, students enrolled in the MS HSPA program at Ohio State University will be a part of the [Latiolais Leadership Program](#), which is a network of the alumni of the OSU MS HSPA program (dating back to 1959). This program offers auxiliary support for emerging pharmacy leaders, which includes current students and graduates of the program.

Appendix 1 - MS HSPA Major Project Meeting Minutes Form

Student Name:	
Project Title:	
College Advisor:	
Practice Site Advisor(s):	
Date of Meeting	Date of last meeting
Attendees:	
Summary of Progress (after initial meeting, this section should include an update of progress made since previous meeting):	
Plan for Project completion (including outstanding action steps and timeline)	
Advisor Comments:	