

**New Program Proposal
Doctor of Pharmacy (PharmD)
Medical University of South Carolina**

Summary

The Medical University of South Carolina (MUSC) requests approval to offer a program leading to the Doctor of Pharmacy (PharmD) to be implemented in Spring 2017. The proposed program is to be offered through traditional instruction. The following chart outlines the stages of approval for the proposal; the Advisory Committee on Academic Programs (ACAP) voted to recommend approval of the proposal. The full program proposal and support documents are attached.

Background

Upon notification from MUSC and the University of South Carolina (USC) of the intent to offer Doctor of Pharmacy degrees (PharmD) separately, as offered prior to 2006, Commission staff initiated a series of meetings and teleconferences with administrators from the institutions and with the program accreditor, the Accreditation Council for Pharmacy Education (ACPE). The purpose was to determine the following: 1) the rationale for the proposed change; 2) program accreditation requirements; 3) transition planning, including adequate faculty resources and infrastructure for effective program delivery at both sites; 4) implications for students, including scholarships; and 5) the most appropriate path for Commission consideration. Assurance that students are not disadvantaged by the proposed change has been the guiding principle.

Timeline

- Commission approval of separate PharmD programs: MUSC 1973, USC 1984
- Commission approval of the joint PharmD and the South Carolina College of Pharmacy: 2005-06
- Notification to the Commission to offer separate PharmD degrees: 2016

Commission support in 2005-06 for the joint PharmD as a model of institutional collaboration, and program accreditation from ACPE of the program as a joint degree, are the primary reasons staff determined that full Commission consideration was the best path for the institutions to pursue for approval. Approval will result in the re-establishment of separate Doctor of Pharmacy degrees offered by each institution, separate ACPE program accreditation, and the dissolution of the South Carolina College of Pharmacy.

Stages of Consideration	Date	Comments
Program Proposal Received	8/5/16	Not Applicable
ACAP Consideration	9/29/16	ACAP considered the USC and MUSC PharmD proposals concurrently. The representative from USC explained the need for the proposed programs and discussed the collaboration between the two institutions in offering the program jointly, and the reasons for amicably separating the program because of the ineffectiveness of offering the program jointly. She stated

Stages of Consideration	Date	Comments
		<p>that the two institutions have different administrative structures (e.g., reporting structures, faculty tenure and promotion policies, and payroll and student information systems). She also noted the separation would allow the institutions to better meet the requirements of the ACPE. Representatives from MUSC and USC also discussed the ways in which the institutions plan to continue collaborating.</p> <p>ACAP members voted to approve the program proposal.</p>
Comments and suggestions from CHE staff sent to the institution	10/12/16	Staff requested the proposal be revised to explain how the tuition funding was calculated and reformat the layout of course descriptions.
Revised Program Proposal Received	10/20/16	The revised proposal satisfactorily addressed the requested revisions.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing approve the program leading to the Doctor of Pharmacy to be implemented in Spring 2017.

Name of Institution: Medical University of South Carolina

Name of Program (include concentrations, options, and tracks)
Doctor of Pharmacy (PharmD)

Program Designation

- Associate's Degree Master's Degree
 Bachelor's Degree: 4 Year Specialist
 Bachelor's Degree: 5 Year Doctoral Degree: Research/Scholarship (e.g., Ph.D. and DMA)
 Doctoral Degree: Professional Practice (e.g., Ed.D., D.N.P., J.D., Pharm.D., and M.D.)

Does the program qualify for supplemental Palmetto Fellows and LIFE Scholarship awards?

- Yes
 No

Proposed Date of Implementation
Spring of 2017

CIP Code 512001

Delivery Site(s): Medical University of South Carolina, Charleston, SC

Delivery Mode

- Traditional/face-to-face* Distance Education
*select if less than 50% online 100% online
 Blended (more than 50% online)
 Other distance education

Program Contact Information (name, title, telephone number, and email address)

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Institutional Approvals and Dates of Approval

College of Pharmacy, Curriculum Committee – December 2, 2015
College of Pharmacy, Faculty – December 16, 2015
Education Advisory Council – August 1, 2016
Dean's Council – August 1, 2016
Board of Trustees – August 14, 2015

Background Information

State the nature and purpose of the proposed program, including target audience and centrality to institutional mission. (1500 characters)

Medical University of South Carolina (MUSC) proposes to re-institute its Doctor of Pharmacy (Pharm.D.) degree as an independent program. This program is consistent with MUSC's mission as an academic health science center to preserve and optimize human life in South Carolina and beyond.

The Commission approved MUSC to offer a PharmD program on July 12, 1973. Later, the South Carolina College of Pharmacy (SCCP) formed in 2005 through the merger of the Medical University of South Carolina (MUSC) and the University of South Carolina (USC) Colleges of Pharmacy. As a result of this merger, MUSC and USC offered a joint PharmD program instead of independent programs. The SCCP graduated its first PharmD graduates in 2010. Over the last 10 years the SCCP has been successful in educating and training student pharmacists and fulfilling the vision and mission of the college. In 2013, after the resignation of the Executive Dean, and at the request of each institution's provost, the MUSC and USC Campus Deans initiated an overall evaluation of the SCCP. An overriding tenet of our evaluation was that no student should be harmed or disadvantaged by our organization and that faculty must be treated fairly with consistency across campuses.

Our review indicated that while there has been much success, the SCCP continues to face some significant challenges that were not anticipated with the original merger, including no clear path to a unified tenure and promotion process for all faculty; nonintegrated standalone financial systems, students identifying primarily with their campus institutions (MUSC and USC, as opposed to SCCP), and differing university/contrasting policies and plans, among others. In the final analysis, the multiplicity of complications encountered in the merger between our universities/campuses ultimately precluded the achievement of the ultimate goal of the merger: to function effectively and fiscally responsibly as one College of Pharmacy.

Prior to the SCCP, the USC and MUSC Colleges of Pharmacy were independent and their PharmD programs had been fully accredited by Accreditation Council for Pharmacy Education (ACPE) for many years. MUSC has provided pharmacy education for more than 100 years and has produced thousands of pharmacists. During the last 10 years, when SCCP has been operational, MUSC and USC redistributed some of the faculty and staff efforts toward research or clinical service. As we transition back into the independent program, we will re-allocate faculty and staff effort accordingly to ensure the best educational experience for our students. Therefore, the MUSC College of Pharmacy is in excellent position to fulfill all of the needs and expectations of students entering the PharmD program and meet all of the ACPE standards to be a fully accredited program. The separation of the SCCP back into its component legacy PharmD programs at USC and MUSC is being undertaken with the full support of the faculty & administration on both campuses. ACPE reinstated MUSC COP's accredited status pending approval by the South Carolina Commission on Higher Education at the June 23-25, 2016 Board meeting.

Both universities have pledged to support the teach-out plan for the SCCP and teach-in plan for the MUSC and USC PharmD programs as outlined under the ACPE standards.

Each university will continue to commit all of the resources provided to SCCP to the MUSC and USC Colleges of Pharmacy. In addition, any resources required for pharmacy education and those needed to fulfill all of the requirements for a fully ACPE accredited Doctor of Pharmacy program will be provided. Our top priority is to offer all students the highest quality education and ensure no students will be disadvantaged during this transition. The transition plan is listed below:

Colleges Transition Teaching Plan by Academic Years				
2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020
SCCP P1, P2, P3, P4	SCCP P2, P3, P4	SCCP P3, P4	SCCP P4	
	MUSC P1	MUSC P1, P2	MUSC P1, P2, P3	MUSC P1, P2, P3, P4
	USC P1	USC P1, P2	USC P1, P2, P3	USC P1, P2, P3, P4

SCCP: South Carolina College of Pharmacy

MUSC: Medical University of South Carolina

USC: University of South Carolina

P1: 1st Professional Year, P2: 2nd Professional Year, P3: 3rd Professional Year, P4: 4th Professional Year

We expect the professional program curriculum taught in the SCCP will undergo limited changes until the last class graduates in 2019. The proposed MUSC and USC classes entering in the Fall of 2016 will essentially adopt the same curriculum taught to SCCP students (no change in credit hours). Maintaining a similar curriculum across colleges will facilitate graduation of any SCCP student who encounters progression problems and supports our tenet that no student will be disadvantaged/ hurt by the transition from SCCP to MUSC/USC. In addition, since the faculty has taught this curriculum previously and the outcome measures meet the expectations of stakeholders, the faculty believes significant changes to the curriculum are unnecessary. Instead, the focus will be on transitioning to a more active learning process that diminishes the reliance on synchronous distance education between campuses.

We, the MUSC and USC Colleges of Pharmacy, will continue to collaborate in the following areas (1) experiential education, (2) preceptor development, (3) research & graduate education, and (4) continuing education. Both MUSC and USC will continue to collaborate on experiential education. We will share a common experiential calendar, scheduling process, syllabi templates, evaluation forms, and practice sites for both introductory pharmacy practice experiences (IPPEs) and advanced pharmacy practice experiences (APPEs) to ensure our students receive high quality practice experiences. All students will continue to have access and placement at all sites used by SCCP. Both the USC and MUSC will cooperate and support preceptor development to maintain ACPE accreditation. USC and MUSC will offer, where appropriate, cross-campus appointments for faculty to facilitate/grow research and service collaborations. These appointments will allow faculty to maintain access to research cores and centers and to improve research competitiveness for federal and industry grant funding. Where appropriate, faculty should be appointed across campuses for Doctor of Philosophy advisory committees and continue joint campus graduate student education and research opportunities. We will continue to collaborate on continuing education to offer programming to all alumni (MUSC, USC, and SCCP) and other interested parties.

This is a full-time PharmD degree program requiring four academic years, which includes
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introductory pharmacy practice experiences and advanced pharmacy practice experiences that must be completed during the summer semesters. A total of 214 hours (66 hours of pre-pharmacy and 148 hours of professional program courses) are required for completion of the PharmD degree. In compliance with (ACPE) professional accreditation standards, the curriculum includes core courses (relevant for all PharmD degrees) and elective courses to enhance the learning experiences for PharmD candidates.

The concentrations (clinical pharmacy practice, industrial pharmacy practice, research, biomedical sciences, toxicology, biomedical chemistry & pharmaceuticals, and outcomes research) currently listed with PharmD on the MUSC campus of the SCCP will no longer be listed. These concentrations relate to electives in the curriculum and research foci of the faculty rather than true concentrations that would be noted on a student's transcript.

List the program objectives. (2000 characters)

Domain 1 – Foundational Knowledge

1.1. *Learner (Learner)* - Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, and solve therapeutic problems, and advance population health and patient-centered care.

Domain 2 – Essentials for Practice and Care

2.1. *Patient-centered care (Caregiver)* - Provide *patient-centered care* as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).

2.2. *Medication use systems management (Manager)* - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.

2.3. *Health and wellness (Promoter)* - Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.

2.4. *Population-based care (Provider)* - Describe how population-based care influences patient-centered care and influences the development of practice guidelines and evidence-based best practices.

Domain 3 - Approach to Practice and Care

3.1. *Problem Solving (Problem Solver)* – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

3.2. *Educator (Educator)* – Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.

3.3. *Patient Advocacy (Advocate)* - Assure that patients' best interests are represented.

3.4. *Interprofessional collaboration (Collaborator)* – Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

3.5. *Cultural sensitivity (Includer)* - Recognize social determinants of health to diminish disparities and inequities in access to quality care.

3.6. *Communication (Communicator)* – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

Domain 4 – Personal and Professional Development

4.1. *Self-awareness (Self-aware)* – Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.

4.2. *Leadership (Leader)* - Demonstrate responsibility for creating and achieving shared goals, regardless of position.

4.3. *Innovation and Entrepreneurship (Innovator)* - Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

4.4. *Professionalism (Professional)* - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.

Assessment of Need

Provide an assessment of the need for the program for the institution, the state, the region, and beyond, if applicable. (1500 characters)

Pharmacists fulfill critical healthcare and economic needs within the state of South Carolina. In 2011, pharmacists in South Carolina dispensed more than fifty-three million prescriptions worth nearly four billion dollars in retail sales. South Carolina expects its number of seniors over 65 to increase by 100% between 2010 and 2030, and this growth will result in increased demand on the pharmacy workforce in our state.

Recent trends show that the role of pharmacists is evolving from compounding and dispensing medications to direct involvement in patient care. Pharmacists are increasingly contributing directly to the management of some of the state's most prevalent chronic health conditions, including diabetes and hypertension. In addition, pharmacists are increasingly fulfilling roles in patient care, such as directly administering immunizations. As these roles evolve, it is critical that South Carolina provide the training future pharmacists will need to assume more complex roles within their profession. Newly licensed pharmacists in South Carolina will be responsible for all the roles of their predecessors, plus many more. The MUSC College of Pharmacy is meeting the need for up-to-date training through our PharmD degree, which is the nationally recognized terminal degree for pharmacists.

Ref:

1. *The Pharmacist Workforce in South Carolina, February 2014* produced by the Office for Healthcare Workforce Analysis and Planning (SC AHEC). Available at: <http://www.officeforhealthcareworkforce.org/docs/Pharmacist%20Report%20final%20web%20version.pdf>

Employment Opportunities

Is specific employment/workforce data available to support the proposed program?

- Yes
 No

If yes, complete the table and the component that follows the table on page 4. If no, complete the single narrative response component on page 5 beginning with “Provide supporting evidence.”

Employment Opportunities			
Occupation	Expected Number of Jobs	Employment Projection	Data Source
Pharmacist – US	9,100 (2014-2024)	N/A	US News & World Report http://money.usnews.com/careers/best-jobs/rankings/best-healthcare-jobs
Pharmacist – South Carolina	745 new jobs (2012-2022)	2012: 5093 2022: 5838 (15% increase)	<i>Employment Forecast for the Pharmacy Workforce in South Carolina, August 2015</i> Produced by the Office for Healthcare Workforce Analysis & Planning (SC AHEC) http://www.officeforhealthcareworkforce.org/docs/Pharmacy%20jobs%202012-2022.pdf

Provide additional information regarding anticipated employment opportunities for graduates.
 (1000 characters)

US News & World Reports projects that the United States will need 9,100 new pharmacists over the next 10 years in order to meet patient/consumer demands. The same report predicts an unemployment rate of only 1.6% over the same period of time. Projections for South Carolina align with national projections. The Office for Healthcare Workforce Analysis & Planning anticipates that South Carolina will add 745 *new* pharmacist jobs between 2012 and 2022. These new positions reflect an industry growth of approximately 15%. The *total* number of pharmacist positions that will open each year is estimated at 200. Thus, MUSC's contribution of approximately 75 - 80 PharmD graduates annually is critical to fulfilling the needs of the state.

Research shows that one quarter of South Carolina pharmacists are approaching or beyond retirement age. Although there were fewer retirements during the economic downturn of 2008–2011 (and thus, slower *new* job creation during those years), the likelihood of larger-than-typical retirement numbers in the near future may require more newly licensed pharmacists than anticipated. Thus, the need for new pharmacists in South Carolina may be even greater than the projections above.

The average salary range for new pharmacists in the United States (those with 0-5 years of experience) is \$106,000 to \$124,000.

Sources:

1. *The Pharmacist Workforce in South Carolina, February 2014* produced by the Office for Healthcare Workforce Analysis and Planning (SC AHEC). Available at: <http://www.officeforhealthcareworkforce.org/docs/Pharmacist%20Report%20final%20web%20version.pdf>
2. *Pharmacy Times* 2016 Pharmacy Salary Guide (based on PayScale.com survey). Available at: <http://www.pharmacytimes.com/contributor/alex-barker-pharmd/2016/04/2016-pharmacist-salary-guide/>
3. Bureau of Labor Statistics for a Pharmacists. Available at (<http://www.bls.gov/ooh/healthcare/pharmacists.htm>)

Provide supporting evidence of anticipated employment opportunities for graduates, including a statement that clearly articulates what the program prepares graduates to do, any documented citations that suggests a correlation between this program and future employment, and other relevant information. Please cite specific resources, as appropriate. (3000 characters)

Note: Only complete this if the Employment Opportunities table and the section that follows the table on page 4 have not previously been completed

Will the proposed program impact any existing degree programs and services at the institution (e.g., course offerings or enrollment)?

Yes

No

If yes, explain. (500 characters)

List of Similar Programs in South Carolina

Program Name	Institution	Similarities	Differences
Doctor of Pharmacy	South University, Columbia, SC	<ul style="list-style-type: none"> • Accredited by Accreditation Council for Pharmacy Education (ACPE) • Utilizes national PharmCAS system for applications • Opportunity for students to pursue a Master of Business Administration degree with the Doctor of Pharmacy degree 	<ul style="list-style-type: none"> • Offers accelerated program consisting of 12 quarter schedule completed in 3 continuous years • 80-90% of education is received via distance education from Savannah, GA Campus Faculty • Approximately only 45 – 55 graduates per year • Lower percentage of graduates employed in the field of pharmacy (90.6% versus 99%) • Lower percentage North American Pharmacist Licensure Examination (NAPLEX) pass rate (87.2% versus 94.97%) • Lower graduation rate in planned years of program (80% versus 90.5%) • Didactic curriculum content differences • Program begins annually in the month of June • National standardized exam, PCAT, is not required for admission • Total estimated tuition costs are ~\$40,000 higher than proposed program
Doctor of Pharmacy	Presbyterian College School of Pharmacy, Clinton, SC	<ul style="list-style-type: none"> • Accredited by Accreditation Council for Pharmacy Education (ACPE) • Utilizes national PharmCAS system for applications • Offers traditional four-year program • Traditional face-to-face curriculum delivery mode • Nine advanced pharmacy practice experiences 	<ul style="list-style-type: none"> • Lower percentage North American Pharmacist Licensure Examination (NAPLEX) pass rate (79.45% versus 94.97%) • Lower SC Multi-state Pharmacy Jurisprudence Exam (MPJE) pass rate (89.86% versus 95.92%) • Lower percentage of graduates employed in the field of pharmacy

			<p>(85.33% versus 99%)</p> <ul style="list-style-type: none">• Lower Post-Graduate Residency Match rate (57.69% versus 75%)• Total estimated tuition costs are ~\$40,000 higher than proposed program• Higher graduation rate (92.1% versus 90.5%)• Graduates 70 – 80 students per year• Didactic curriculum content differences• Does not offer Pharm.D. / MBA or other dual degree options• Partners with schools outside of Presbyterian College for interprofessional opportunities (while the proposed program offers interprofessional activities with other health professions on campus)
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Description of the Program

Projected Enrollment						
Year	Fall		Spring		Summer	
	Headcount	Credit Hours	Headcount	Credit Hours	Headcount	Credit Hours
2016	80	1,440	80	1,360	80	320
2017	160	2,720	160	2,720	160	640
2018	240	4,080	240	4,000	240	960
2019	320	5,360	320	5,280	320	960
2020	320	5,360	320	5,280	320	960

Besides the general institutional admission requirements, are there any separate or additional admission requirements for the proposed program?

- Yes
 No

If yes, explain. (1000 characters)

MUSC's admissions requirements vary by degree program. Admission to the PharmD program at MUSC is based on the applicant's completion of Pre-Pharmacy course requirements, GPA, academic record, letters of recommendation, interview evaluations, Pharmacy College Admissions Test (PCAT) scores, honors/awards, extracurricular activities, pharmacy exposure, student personal statement concerning their goals for a career in pharmacy, and a diversity statement. Applicants must complete the PCAT and have their official PCAT scores reported prior to PharmCas by the end of the application period. Applicants will apply through the PharmCAS system (national pharmacy school application service) and complete the supplemental application for the Medical University of South Carolina College of Pharmacy through CollegeNet.

Applicants must provide an official copy of all college transcripts to PharmCAS at the time of application submission. A second transcript is required to be submitted to PharmCAS upon receipt of final fall semester grades. Subsequent transcripts are required to be submitted directly to MUSC as indicated in the supplemental application upon receipt of final spring and summer grades. As a state-supported institution, preference will be given to in-state applicants. In-state students are defined as South Carolina residents, and any non-resident attending a S.C. college or university. In-state status as defined here only applies to the admission process. The University residency officer will determine residency for the purpose of tuition. All accepted students will be required to submit to a criminal background check prior to matriculation.

Pre-Pharmacy Course Requirements

General Chemistry	8 hours
Organic Chemistry	8 hours
Physics	3 hours
Microbiology	3 hours
Calculus	3 hours

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Statistics	3 hours
Biology	8 hours
English Composition	3 hours
English Lit/Composition	3 hours
Verbal Skills	3 hours
Economics	3 hours
Psychology	3 hours
Liberal Arts Electives	9 hours
Human Anatomy/Physiology	6 hours

Total 66 hours

*All pre-pharmacy course requirements must be successfully completed prior to the Fall semester of professional year one.

Are there any special articulation agreements for the proposed program?

Yes

No

If yes, identify. (1000 characters)

Our top priority is to offer all students the highest quality education and ensure no students will be disadvantaged during this transition. Therefore, students in the SCCP who experience academic issues or non-academic leaves of absence can transition into either the MUSC or USC PharmD programs if needed. The students in the SCCP Class of 2019 are the most likely to fall back into the MUSC or USC programs. By leaving the MUSC and USC curriculum's very similar to the SCCP curriculum, students experiencing academic issues will have a plan to remediate these academic issues. Additionally with the MUSC and USC curriculums are very similar to the SCCP curriculum, student needing a non-academic leave of absence will have a clear path toward their PharmD degree. Academic policies and student services for the SCCP, MUSC, and USC will essentially remain the same. This would allow the faculty, administration, and our scholastic standing committees to work under the same policies and procedures as the SCCP and thereby provide consistency across all professional years. For our current SCCP articulation agreements (e.g. Francis Marion University), we are working with the respective universities to re-sign these agreements for the MUSC PharmD program.

Curriculum

Select one of the following charts to complete: Curriculum by Year **or** Curriculum by Category

Curriculum by Year					
Course Name	Credit Hours	Course Name	Credit Hours	Course Name	Credit Hours
Year 1					
Fall		Spring		Summer	
Foundations of Pathophysiology and Pharmacology I	2	Foundations of Pathophysiology and Pharmacology II	4	Introductory Pharmacy Practice Experience - Community	4
Introduction to Pharmacy Practice	2	Foundations of Pharmaceutical Chemistry and Pharmacogenomics II	3		
Dosage Forms and Drug Delivery Systems	4	Pharmaceutical Biotechnology	2		
Foundations of Pharmaceutical Chemistry and Pharmacogenomics I	3	Self-Care and Complementary Medicines	4		
Pharmaceutical Biochemistry	3	Clinical Applications I	1		
Introduction to Drug Information	1	Pharmacy Skill Lab II: Introduction to Community Pharmacy	1		
Pharmacy Calculations	1	Transforming Healthcare	2		
Medical Terminology	1				
Pharmacy Skills Lab I: Compounding and Applied Pharmaceutics	1				
Total Semester Hours	18	Total Semester Hours	17	Total Semester Hours	4
Year 2					
Fall		Spring		Summer	
Pathophysiology & Pharmacology I	3	Pathophysiology & Pharmacology II	3	Introductory Pharmacy Practice Experience - Hospital	4
Pharmacotherapy I	4	Pharmacotherapy II	4		
Clinical Microbiology	2	Clinical Pharmacokinetics	3		
Biopharmaceutics and Pharmacokinetics	3	Outcomes Design and Assessment	3		
Pharmacy Skills Lab III: Introduction to Health-Systems Pharmacy	1	Pharmacy Skills Lab IV: Applied Health-Systems Pharmacy	1		
Clinical Applications II	1	Clinical Applications III	1		
Elective	1 – 3	Elective	1 - 3		
Total Semester Hours	15 - 17	Total Semester Hours	16 - 18	Total Semester Hours	4
Year 3					
Fall		Spring		Summer	
Health Care Systems and Management	4	Pharmacy Law and Ethics	3	Advanced Pharmacy Practice Experience	4

Curriculum by Year					
Course Name	Credit Hours	Course Name	Credit Hours	Course Name	Credit Hours
Pathophysiology & Pharmacology III	3	Pathophysiology & Pharmacology IV	2		
Pharmacotherapy III	4	Pharmacotherapy IV	5		
Advanced Drug Information	2	Clinical Assessment	3		
Clinical Applications IV	1	Clinical Applications V	1		
Pharmacy Skills Lab V: Applied Community Pharmacy	1	Elective	1 - 3		
Elective	1 - 3				
Total Semester Hours	16 - 18	Total Semester Hours	15 - 17	Total Semester Hours	4
Year 4					
Fall		Spring		Summer	
Advanced Pharmacy Practice Experience	4	Advanced Pharmacy Practice Experience	4		
Advanced Pharmacy Practice Experience	4	Advanced Pharmacy Practice Experience	4		
Advanced Pharmacy Practice Experience	4	Advanced Pharmacy Practice Experience	4		
Advanced Pharmacy Practice Experience	4	Advanced Pharmacy Practice Experience	4		
Grand Rounds	0.5	Grand Rounds	0.5		
Total Semester Hours	16.5	Total Semester Hours	16.5	Total Semester Hours	
Year 5					
Fall		Spring		Summer	
Total Semester Hours		Total Semester Hours		Total Semester Hours	

Total Credit Hours Required: 146

Course Descriptions for New Courses

The below courses will be implemented over the next four years as outlined in the curriculum on pages 14 & 15. These courses were developed in our curriculum revision (completed in 2015) in the SCCP PharmD program; therefore, the faculty will have taught many of these courses in SCCP PharmD curriculum. These are not new (as they were part of the SCCP) but are new to the MUSC catalog. The exception to this is Clinical Microbiology (2 credit hours) that will be taught in the 2nd year of the MUSC PharmD curriculum.

Course Name	Description
Foundations of Pathophysiology and Pharmacology I	This is the first course in a 2-semester sequence providing important physiologic, pathophysiologic and pharmacologic principles and concepts that will be utilized in subsequent courses in which appropriate pharmacotherapeutic approaches towards treating diseases processes will be discussed. Course Credit Hours: 2. <i>Prerequisite: first year professional standing.</i>
Introduction to Pharmacy Practice	Introduction to the professional issues relevant to the practice of pharmacy. Course Credit Hours: 2. <i>Prerequisite: first professional year standing.</i>
Dosage Forms and Drug Delivery Systems	A study of the physiochemical principles of the formulation, preparation, properties, and performance of the pharmaceutical dosage forms including: aqueous and non-aqueous liquids, suspensions, emulsions, solid unit oral dosage forms, sustained and controlled delivery preparations as well as rectal, parenteral, and biological delivery systems. Clinical application of the various dosage forms in patient care will be discussed. Course Credit Hours: 4, <i>Prerequisite: first professional year standing.</i>
Foundations of Pharmaceutical Chemistry and Pharmacogenomics I	This is the first of a 2-course sequence which begins with an introduction to the scientific principles underlying pharmaceutical chemistry and pharmacogenomics. The relationships of molecular structure to drug absorption, distribution, metabolism and excretion are explained. The chemical mechanisms of drug therapeutic actions and adverse events are explored. An emphasis is placed on the pharmacogenomic basis of individualized/optimized drug therapy. Course Credit Hours: 3. <i>Prerequisite: first professional year standing.</i>
Pharmaceutical Biochemistry	The course covers the molecular and biochemical basis of human metabolism, the role it plays in disease and the biochemical basis of drug action. The properties, function and interaction of biological molecules and major biochemical pathways are covered. Emphasis is placed on the molecular basis of human metabolism, causes of human diseases, and how drugs produce biological effects. Course Credit Hours: 3. <i>Prerequisite: first professional year standing.</i>
Introduction to Drug Information	This course is designed to provide students with an overview of drug information practice and to expose them to basic drug information skills and resources that will facilitate learning in other courses and help them provide medication information to individuals. Course Credit Hours: 1. <i>Prerequisite: first professional year standing.</i>
Pharmacy Calculations	This course develops the mathematic skills and knowledge required in various pharmacy practice settings. Students will be introduced to the Apothecary and Avoirdupois systems of measurement and will perform interconversions between these measurement systems and the metric system. Problem solving skills will be developed as students become proficient in basic math skills used to solve pharmacy calculations based word problems which are commonly seen in a variety of practice settings, including community, compounding, hospital, and nuclear pharmacy. Course Credit Hours: 1. <i>Prerequisite: first professional year standing.</i>
Medical Terminology	A thorough knowledge of medical terminology is an essential building block in pharmacy education. This course will aid the student in learning the language and terminology used in other pharmacy courses and all areas of pharmacy practice. Course Credit Hours: 1. <i>Prerequisite: first professional year standing.</i>

Pharmacy Skills Lab I: Compounding and Applied Pharmaceutics	The art, science, and technology of pharmacy compounding. Course Credit Hours: 1. <i>Prerequisite: first professional year standing.</i>
Foundations of Pathophysiology and Pharmacology II	This is the second course in a 2-semester sequence providing important physiologic, pathophysiologic and pharmacologic principles and concepts that will be utilized in subsequent courses in which appropriate pharmacotherapeutic approaches towards treating diseases processes will be discussed. Course Credit Hours: 4. <i>Prerequisites: first professional year standing.</i>
Foundations of Pharmaceutical Chemistry and Pharmacogenomics II	This is the second of the 2-course sequence addressing the pharmaceutical chemistry and pharmacogenomics of drug therapy. Emphasis is now shifted to the molecular basis of pharmacotherapy as organized by drug class. The chemical mechanisms of drug actions are addressed in the context of current advances in personalized medicine, e.g., gene-dose effects, phenocopying, and allelic variants influencing the rational selection of first-line agents for the individual patient. Course Credit Hours: 3. <i>Prerequisites: first professional year standing.</i>
Pharmaceutical Biotechnology	The course focuses on nucleic acids (DNA/RNA) as the core theme. This includes the eukaryotic cell cycle, meiosis, replication, transcription, translation, and repair. Recombinant DNA technology is covered as applied to the study of human health and to the production of biological agents intended for use in disease therapy. Antibodies are covered from the perspective of their use in diagnostic tests, as well as the utilization of antibodies and their conjugates as therapeutics. The concepts and applications of gene therapy and RNA silencing are also taught. Course Credit Hours: 2. <i>Prerequisites: first professional year standing.</i>
Self-Care and Complementary Medicines	Self-Care & Complementary Medicines is a course that will review the indications, contraindications, and cautions involved with the recommendation and dispensing of nonprescription (OTC) drug items and complementary medicines. The course will provide the pharmacy student with a wide range of current information regarding nonprescription therapies, including OTC products, herbals, and alternative medicine therapies, which will allow the student to make appropriate decisions regarding product selection and use by patients for self-care. Course Credit Hours: 4. <i>Prerequisites: first professional year standing.</i>
Clinical Applications I	Case-based discussions that integrate and demonstrate applicability of other course material. Course Credit Hours: 1. <i>Prerequisite: first professional year standing.</i>
Pharmacy Skill Lab II: Introduction to Community Pharmacy	Interactive laboratory session designed to provide students with a thorough understanding of community pharmacy practice skills, to include the knowledge of prescription and drug order processing necessary to function in community pharmacy practice at a basic level. Course Credit Hours: 1. <i>Prerequisite: first professional year standing.</i>
Transforming Healthcare	The course goal is to lay the foundations for beginning (first year) professions students to understand the complexities of the health care system and the role of interprofessional collaboration to improve the system. Through an interprofessional context, students will explore the art and science of teamwork and communication skills, cultural competency, ethical issues, evidence-based practice, healthcare disparities and social determinants of health. Course Credit Hours: 2.
Introductory Pharmacy Practice Experience – Community	Introduction to the practice of the pharmacy in the community pharmacy setting. Forty hours of directed experience per week for four weeks. Course Credit Hours: 4. Practice experience of 4 weeks, 40 hours per week. Pass/Fail. <i>Prerequisite: first professional year standing.</i>
Pathophysiology & Pharmacology I	Building on Foundations of Pathophysiology & Pharmacology I and II, this course is the first in the four-semester course sequence aimed at integrating the discussion of specific disease states and the mechanisms of action of the pharmacologic agents used to treat those disease states. This knowledge will be applied in a parallel sequence of courses in Pharmacotherapy primarily using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 3. <i>Prerequisite: second professional year standing.</i>

Pharmacotherapy I	This course is the first in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours: 4. <i>Prerequisite: second professional year standing.</i>
Clinical Microbiology	This course will build upon the student's existing microbiology knowledge and provide a deeper understanding of etiology, epidemiology, pathogenesis, and symptoms of common pathogens. This course will prepare the student for infectious diseases pharmacotherapy. Course Credit Hours: 2. <i>Prerequisite: second professional year standing.</i>
Biopharmaceutics and Pharmacokinetics	Study of the pharmacokinetics of drug absorption, distribution, and elimination (metabolism and excretion). Introductory application of pharmacokinetics to drug interactions and dosage regimen design and adjustment, selected disease states, and special populations. Course Credit Hours: 3. <i>Prerequisites: second professional year standing.</i>
Pharmacy Skills Lab III: Introduction to Health-Systems Pharmacy	In the laboratory setting, students are introduced to various disciplines of pharmacy in the institutional setting. This laboratory environment focuses on skill sets and base knowledge required of clinical pharmacists in these settings and seeks to lay a foundation of professionalism and critical thinking skills. Course Credit Hours: 1. <i>Prerequisite: second professional year standing.</i>
Clinical Applications II	Case-based discussions that integrate and demonstrate applicability of other course material in patient care. Course Credit Hours: 1. <i>Prerequisite: second professional year standing.</i>
Pathophysiology & Pharmacology II	Building on Foundations in Pathophysiology and Pharmacology I, this will be the second in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in Pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 3. <i>Prerequisites: second professional year standing.</i>
Pharmacotherapy II	This course is the second in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours 4. <i>Prerequisites: second professional year standing.</i>
Clinical Pharmacokinetics	Clinical application of basic pharmacokinetic principles to safe and effective patient management with emphasis on design of dosage regimens, therapeutic monitoring, and adjustment of therapy. Application illustrated and practiced through discussions and case examples. Course Credit Hours: 3. <i>Prerequisites: second professional year standing.</i>
Outcomes Design and Assessment	This course teaches common statistical methods and study designs used in pharmacoepidemiology and outcomes research, as well as to issues related to the measurement, analysis, and interpretation of results of clinical trials and outcomes studies. Course Credit Hours: 3. <i>Prerequisite: second professional year standing.</i>
Pharmacy Skills Lab IV: Applied Health-Systems Pharmacy	In the laboratory setting, students apply basic skills and knowledge acquired in COP 731 through various mechanisms and activities requiring critical thinking and problem solving. The laboratory continues to hone student professionalism. Course Credit Hours: 1. <i>Prerequisites: second professional year standing.</i>
Clinical Applications III	Case-based discussions that integrate and demonstrate applicability of other course material in patient care. Course Credit Hours: 1. <i>Prerequisite: second professional year standing.</i>

Introductory Pharmacy Practice Experience - Hospital	Introduction to the practice of the pharmacy in the institutional setting. Forty hours of directed experience per week for four weeks. Course Credit Hours: 4. Pass/Fail. <i>Prerequisite: second professional year standing.</i>
Health Care Systems and Management	This course provides insight and understanding of the U.S. health care system and pharmacy's role within that system. Managerial skills and concepts are taught to allow pharmacists to maximize their contribution to this health care system and to the patients it serves. Course Credit Hours 4. <i>Prerequisite: third professional year standing.</i>
Pathophysiology & Pharmacology III	Building on Pathophysiology and Pharmacology I and II, this will be the third in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 3. <i>Prerequisites: third year professional standing.</i>
Pharmacotherapy III	This course is the third in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours: 4. <i>Prerequisites: third professional year standing.</i>
Advanced Drug Information	This course is designed to provide students with advanced drug information practice and critical literature evaluation skills. This course provides students with the requisite skills to facilitate life-long learning. Course Credit Hours: 2. <i>Prerequisites: third professional year standing.</i>
Clinical Applications IV	Case-based discussions that integrate and demonstrate applicability of other course material in patient care. Students may also have discussions, presentations, and written assignments that incorporate new and previously learned material. Course Course Credit Hours: 1. <i>Prerequisite: third professional year standing.</i>
Pharmacy Skills Lab V: Applied Community Pharmacy	Provide students with an advanced knowledge of prescription and drug order processing, and assist them in the development of appropriate skills necessary for provision of pharmaceutical care to patients in the community setting, through the use of medication profiles, patient counseling, personal interviews, and appropriate prescription and nonprescription drug information. Course Credit Hours: 1. <i>Prerequisites: third professional year standing.</i>
Pharmacy Law and Ethics	This course teaches federal and state laws and regulations governing the practice of pharmacy and introduction to the professional and ethical issues relevant to the practice of pharmacy. Course Credit Hours: 3. <i>Prerequisite: third professional year standing.</i>
Pathophysiology & Pharmacology IV	This is the fourth in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in Pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 2. <i>Prerequisites: third year professional standing.</i>
Pharmacotherapy IV	This course is the fourth in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours: 5. <i>Prerequisites: third professional year standing.</i>
Clinical Assessment	Development of clinical assessment skills necessary in the provision of pharmaceutical care to patients with a variety of disease states in both inpatient and outpatient settings. Students will combine physical assessment skills, patient counseling skills, and pharmacotherapy knowledge and apply this information to patient care related activities in various clinical settings. Course Credit Hours: 3. <i>Prerequisite: third professional year standing.</i>

Clinical Applications V	A capstone course, where case studies of complex patients will bring together concepts learned throughout the previous semesters in the professional program. Students may also have discussions, presentations, and written assignments that incorporate new and previously learned material. Course Credit Hours: 1. <i>Prerequisite: third professional year standing.</i>
Acute/General Medicine Pharmacy Practice Experience I	This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Acute/General Medicine Pharmacy Practice Experience II	This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Acute/General Medicine Pharmacy Practice Experience III	This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Acute/General Medicine Pharmacy Practice Experience IV	This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Acute/General Medicine Pharmacy Practice Experience V	This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>

906 Acute/General Medicine Pharmacy Practice Experience VI	<p>This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>
Acute/General Medicine Pharmacy Practice Experience VII	<p>This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>
Ambulatory Care Pharmacy Practice Experience I	<p>This required advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>
Ambulatory Care Pharmacy Practice Experience II	<p>This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>
Ambulatory Care Pharmacy Practice Experience III	<p>This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>
Ambulatory Care Pharmacy Practice Experience IV	<p>This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>
Ambulatory Care Pharmacy Practice Experience V	<p>This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i></p>

	supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Ambulatory Care Pharmacy Practice Experience VI	This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Community Pharmacy Practice I	This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Community Pharmacy Practice II	This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Community Pharmacy Practice III	This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Community Pharmacy Practice IV	This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Hospital/Health System Pharmacy Practice Experience I	This required advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Hospital/Health System Pharmacy Practice Experience II	This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This additional APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Hospital/Health System Pharmacy Practice Experience III	This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>

Elective Pharmacy Practice Experience I	Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Elective Pharmacy Practice Experience II	Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Elective Pharmacy Practice Experience III	Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Elective Pharmacy Practice Experience IV	Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Elective Pharmacy Practice Experience V	Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. <i>Prerequisite: fourth professional year standing.</i>
Grand Rounds	Regularly scheduled, formal, oral presentations with audiovisuals on controversial or new areas of pharmacotherapeutics, pharmacoconomics, pharmaceuticals, medicinal chemistry or pharmacy practice. A follow-up question and answer period examines the student's ability to substantiate his/her conclusions. Content and presentation technique will be critiqued. Course Credit Hours: 1; seminar presentations. <i>Prerequisite: fourth professional year standing.</i>
Special Project, Dept. of Drug Discovery & Biomedical Sciences (elective)	An individualized program of study or research arranged by consultation between student and faculty member. Credit is variable and the course may be repeated for credit. Course Credit Hours: 1-4. Independent study format. <i>Prerequisite: second or third professional year standing.</i> Fall or Spring semester.
History of Pharmacy (elective)	This course reviews the history of pharmacy from the pre-historic roots to the present. Special emphasis on South Carolina's pharmacy history, including evolution of education. Students will have access to historical artifacts and equipment. Three field trips to area museums and collections are included. Course Credit Hours: 2. <i>Prerequisite: second or third professional year standing.</i> Spring semester.

Clinical Immunology/Transplant (elective)	The course will build upon principles of immunology covered in microbiology/immunology (SCCP 610) to include monitoring the immune system, hypersensitivity reactions, and the principles of solid organ transplantation and role of a pharmacist in transplantation. Course Credit Hours: 2. <i>Prerequisite: second or third professional year standing.</i>
Special Project, Dept. of Clinical Pharmacy and Outcome Sciences (elective)	An individualized program of study or research arranged by consultation between student and faculty member. Credit is variable and the course may be repeated for credit. Course Credit Hours: 1-4. Independent study format. <i>Prerequisite: second or third professional year standing.</i>
Health Systems Pharmacy: Policy and Practice (elective)	An overview of the provision of pharmacy services in various health systems is provided. Approaches to organizational structure, pharmacy services, pharmacist practice roles are reviewed. Selected concepts of personnel management associated with pharmacists and technical personnel. Course Credit Hours: 2. <i>Prerequisite: second or third professional year standing.</i>
Personal Finance (elective)	This course is designed to provide the health care practitioner with the knowledge and skills to manage their personal finances in an effective manner. After successfully completing this course, the student will be able to understand the process for making personal financial decisions; establish personal financial goals; evaluate the factors that influence personal financial planning; and apply strategies for attaining personal financial goals. Course Credit Hours: 3. <i>Prerequisite: second or third professional year standing.</i>
Pediatric Pharmacotherapy (elective)	This challenging course is designed to provide the student with increased exposure to disease states, medication issues, and clinical decision-making skills specific to the pediatric population. Pediatrics is an integral component to most pharmacy careers, and gaining a greater understanding of the patient population's challenges and nuances is necessary to become a confident and well-rounded practitioner. This elective also seeds to provide exposure to the pediatric pharmacy community, including experts in the subspecialty areas and organizations. Course Credit Hours: 2. <i>Prerequisite: second professional year standing.</i>
Advanced Topics in Pharmacy Compounding I (elective)	This course will build upon the knowledge acquired in the first professional year courses Dosage Forms/Drug Delivery Systems and Compounding/Applied Pharmaceutics lab. The course will provide emphasis on practical application in the evaluation of unique dosage forms, pharmacotherapy, and special pharmaceutical needs of various patient populations. This course is self-paced and delivered in an online format utilizing prerecorded lectures. Course Credit Hours: 1. Pass/Fail. <i>Prerequisite: second professional year standing. Fall semester.</i>
Advanced Topics in Pharmacy Compounding II (elective)	This course is an elective course that provides additional insight and understanding into a variety of pharmacy compounding topics, which include nutrient depletion, drug-induced nutrient depletion, metabolic demands of athletes, men's health, and family medicine. This course is self-paced and delivered in an online format utilizing prerecorded lectures. Course Credit Hours: 1. Self-paced, online format. Pass/Fail. <i>Prerequisite: second professional year standing. Spring semester.</i>
Acute Care Therapeutics (elective)	A disease oriented approach and organ integrated approach to the care of patients with acute illnesses managed in the in-patient hospital setting. Students will learn common disease processes that affect the acutely ill hospitalized patient and the appropriate pharmacotherapy to treat these patients. This course focuses on developing critical thinking and problem solving skills, and integrating material from this course and previous courses in a case-based format. Course Credit Hours: 3. <i>Prerequisite: third professional year standing. Spring semester.</i>
Drug Interactions (elective)	This course is designed to prepare students to appropriately recognize, predict, assess, and manage drug interactions that are encountered in pharmacy practice. Course Credit Hours: 2. <i>Prerequisite: third professional year standing.</i>
Senior Care Pharmacy Practice (elective)	This course will introduce students to various topics related to the care of older patients in any setting. Course content will complement the SCCP curriculum in regard to geriatric pathophysiology, pharmacology, socioeconomics, regulations, and pharmacotherapeutics. In addition, it will expand upon the various practices of senior care pharmacy. Practicing consultants and other topic experts will serve as lecturers. In addition to class discussions and lectures, students will participate in a consultant pharmacist shadowing experience and will conduct an interview with a senior patient. Course Credit Hours: 2. <i>Prerequisite: third professional year standing.</i>

Infectious Diseases on the Adult Ward (elective)	This course will focus on developing a working knowledge of infectious diseases and principles of pharmacotherapy for diseases that are commonly encountered in hospitalized adult patients. In addition, students will explore and critically evaluate relevant literature to answer topical questions regarding patient cases. These cases will be presented to peers in groups of 2 to 4 students. Each group will present approximately 3 cases and participate in a pro/con debate. Additional readings and exercises will be assigned to enhance preparation for class. Course Credit Hours: 2. <i>Prerequisites: third professional year standing; and a passing grade in Pharmacotherapy.</i>
Introduction to Clinical Pharmacy Practice (elective)	This course will build upon the principles of pathophysiology, medication administration, and patient interaction to include: developing advanced skills in patient assessment (SOAP notes), taking accurate medication histories, and providing effective patient counseling. Students will understand the role of the pharmacist in discussing patient issues such as, access to medications, adherence, assessing understanding to improve compliance, and sensitive patient issues. Course Credit Hours: 2. <i>Prerequisite: second professional year standing.</i>

Faculty

Faculty and Administrative Personnel				
Rank	Full- or Part-time	Courses Taught or To be Taught, Including Term, Course Number & Title, Credit Hours	Academic Degrees and Coursework Relevant to Courses Taught, Including Institution and Major	Other Qualifications and Comments (i.e., explain role and/or changes in assignment)
Professor	FT	Clinical Pharmacokinetics Spring P2 year 3 credit hrs. Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)	PharmD University of Buffalo, State University of New York (1973) Pharmacy	Academic Experience - University of Utah College of Pharmacy - Professor of Clinical Pharmacy (with tenure) 1985-1989/ Associate Professor of Clinical Pharmacy (with Tenure), 1979-85/ Assistant Professor of Clinical Pharmacy, 1975-9/ Instructor of Clinical Pharmacy, 1973-5
Professor	FT	Pharmacotherapy I Fall P2 year 4 credit hrs Pediatric Pharmacotherapy (elective) Fall P2 or P3 2 credit hrs. Acute Care Therapeutics (elective) Spring Semester P3 year 3 credit hrs. Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)	PharmD Medical University of South Carolina (1986) Pharmacy	1997- Associate Professor, College of Pharmacy, Department of Pharmacy Practice. 1993-present Residency Coordinator, ASHP-accredited residency in Pediatric Pharmacy Practice. 1992-present Clinical Pharmacy Coordinator, Pediatrics, Department of Pharmacy Services, MUSC 1991-1997 Assistant Professor, COP Department of Pharmacy Practice 1988-1991 Clinical Assistant Professor, COP, Department of Hospital Pharmacy Practice and Administration, MUSC Postdoctoral Pediatric pharmacotherapy residency with emphasis in nutrition, pharmacokinetics, critical care, and research, University of Tennessee 1986-1987
Professor	FT	Pharmacotherapy II Spring Semester P2 year 4 credit hrs Outcomes Design and Assessment Spring Semester P2 year 3 credit hrs. Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)	PharmD University of Texas at Austin, San Antonio (1977) Pharmacy	University of Texas Health Science Center at San Antonio Specialty Practice Residency in Clinical Pharmacy (Internal Medicine) July 1976-June 1977 Academic Appts. - University of Wisconsin School of Pharmacy Clinical Assistant Professor of Pharmacy 1997-1979,/ University of Utah School of Medicine , Adjunct Assistant Professor,1981-1985, also Adjunct Associate Professor 1985-1990, College of Pharmacy University of Utah, Assistant Professor of Clinical Pharmacy 1979-1983, Associate Professor of Clinical Pharmacy with tenure 1983-1989,/ College of Pharmacy, University of Houston Professor of Clinical Pharmacy with tenure 1989-1992,/ College of Medicine, Medical University of South Carolina 2005-present, Professor of Clinical Pharmacy and Outcome Sciences with tenure 1992-present

Faculty and Administrative Personnel				
Professor	FT	<p>Pharmacotherapy III Fall Semester P3 year 4 credit hrs</p> <p>Clinical Assessment Spring Semester P3 year 3 credit hrs.</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	Pharm.D., University of Toledo (1997) Pharmacy	<p>Professor 2011-present (<i>Chair 2013-</i>) Associate Professor 2004-2011 Assistant Professor 2000-2004 Departments of Clinical Pharmacy and Outcomes Sciences/ Family Medicine Medical University of South Carolina</p>
Professor	PT	<p>Drug Interactions (elective) Fall Semester P3 year 2 credit hours</p> <p>Grand Rounds Fall & Spring semesters P4 year 1 credit hr.</p>	Pharm.D., Philadelphia College of Pharmacy and Science (1974) Pharmacy	<p>Medical University of South Carolina Medical University Hospital ASHP Accredited residency in Hospital Pharmacy 1971-1972 Teaching Assistantship Philadelphia College of Pharmacy and Science Assistant in Pharmacy: Professional Practice Lab 1972-1974 Associate Professor of Family Practice/ Associate Professor of Clinical Pharmacy, West Virginia, Medical Center Department of Family Practice and Medical Center School of Pharmacy 1974-1979 Professor of Pharmacy MUSC, College of Pharmacy June 1979 to present</p>
Professor	FT	<p>Foundations of Pathophysiology/Pharmacology II Spring semester P1 year 3 credit hrs</p> <p>Clinical Immunology/Transplant (elective) Fall Semester P2 or P3 year 2 credit hrs.</p>	PharmD, Medical College of Virginia/ Virginia Commonwealth University (1988) Pharmacy	<p>ASHP accredited residency in Oncology Pharmacy Practice, Audie L. Murphy Memorial Veterans Hospital, San Antonio, Texas 1988-1989 Fellowship-ASHP Cancer Immunotherapy 1990-1991 Fellowship- Immunology/Oncology 1989-1990 Clinical Specialist, Oncology, Medical University Hospital and Hollings Cancer Center, Charleston, SC Academic Experience 1991 - present College of Pharmacy- Medical University of South Carolina</p>
Professor	FT	<p>Pharmacotherapy IV Spring Semester P3 year 5 credit hrs.</p> <p>Pediatric Pharmacotherapy (elective) Fall P2 or P3 2 credit hrs.</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	PharmD, Medical University of South Carolina (1989) Pharmacy	<p>Fellowship in Pediatric Pharmacotherapy 1990-1991 Residency ASHP Accredited in Pediatric Pharmacotherapy MUSC 1989 Clinical Specialists, Pediatrics MUSC Children's Hospital 1991- present Medical University of South Carolina College of Medicine Assistant Professor - Pediatrics 1992-present Assistant Professor of Hospital Pharmacy Practice and Administration 1991-1995 Instructor in Clinical Pharmacy 1990-1991 Assistant Professor of Pharmaceutical Sciences 1995-1999- Associate Professor 1999-2001 Associate Professor 2001 – 2016 Professor 2016-present</p>
Professor	FT	<p>Pharmacotherapy III Fall Semester P3 year 4 credit hrs.</p> <p>Advanced Pharmacy Practice</p>	PharmD, Medical University of South Carolina (1995) Pharmacy	<p>Specialty Pharmacy Practice Residency in Critical Care, Medical University of South Carolina 1995-1996 Associate Professor MUSC College of Medicine Neurosciences 2004 Assistant Professor Pharmacy Practice 1998-2001 MUSC 2008 Director - Acute Care Stroke Research, Department of</p>

Faculty and Administrative Personnel				
		Experience P4 year 4 credit hours (multiple offerings)		Neurosciences Stroke Center & Division of Neurological Surgery 2006-2008 Director Translational Research Unit College of Medicine, Neurosciences Department 1998-2006 Clinical Pharmacy Specialist in Critical Care- Neurological Surgery, Department of Pharmacy and Clinical Services
Professor	FT	Clinical Microbiology Fall Semester P2 year 2 credit hrs. Biopharmacuetics/ Pharmacokinetics Fall Semester P2 year 3 credit hrs. Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)	PharmD., MCV/Virginia Commonwealth Univ. (1983) Pharmacy	Clinical Pharmacy Fellowship (Infectious Disease) Hartford Hospital, Hartford Connecticut Academic appointment in the College of Pharmacy Medical University of South Carolina from Assistant Professor to Professor July 1985-present
Professor	FT	Clinical Assessment Spring Semester P3 year 3 credit hrs.	Pharm.D., University of Tennessee, (1994)	
Professor	FT	Foundations of Pharmaceutical Chemistry /Pharmacogenomics II Spring Semester P1 year 3 credit hrs.	Ph.D., UC Irvine (1993) Chemistry	Postdoctoral Scholar, Stanford University 93/96 Assistant Professor University of Washington Chemistry Dept. 6 years Associate Professor, Medical University of South Carolina 12 years
Professor	FT	Foundations of Pharmaceutical Chemistry /Pharmacogenomics I Fall Semester P1 year 3 credit hrs.	Ph.D., University of Hawaii (1992)	
Professor	FT		Ph.D., M.D. Johns Hopkins (1997)	2007 – present Director, Center for Cell Death, Injury and Regeneration 2006 – present South Carolina Center of Economic Excellence Endowed Chair in Advanced Cellular Technologies, Departments of Pharmaceutical Sciences and Biochemistry & Molecular Biology, Medical University of South Carolina 2002 – 2006 Professor of Surgery (joint) 1985 - 2006 Professor 1981-1985 Associate Professor
Professor	FT	Foundations of Pharmaceutical Chemistry/Pharmacogenomics II Spring Semester P1 Year 3 credit hrs. Foundations of Pharmaceutical Chemistry /Pharmacogenomics I Fall Semester P1 year 3 credit hrs.	Ph.D., University of Iowa (1978) Medicinal Chemistry:	Post-doctoral fellowship, Neuropharmacology, Biological Sciences Research Center, School of Medicine, UNC Chapel Hill NC 1979-1982 Teaching experience in Medicinal Chemistry since 1984

Faculty and Administrative Personnel				
Professor	FT	<p>Foundations Pathophysiology/Pharmacology I Fall semester P1 year 2 credit hrs.</p> <p>Foundations of Pathophysiology/Pharmacology II Spring semester P1 year 4 credit hrs.</p> <p>Pathophysiology/Pharmacology I Fall Semester P2 year 3 credit hrs.</p> <p>Pathophysiology/Pharmacology II Spring Semester P2 year 3 credit hrs.</p> <p>Pathophysiology/Pharmacology III Fall Semester P3 year 3 credit hrs.</p> <p>Pathophysiology/Pharmacology IV Spring Semester P3 year 2 credit hrs.</p>	Ph.D., University of Florida, (1984) Pharmaceutical Sciences	<p>1987-88 Assistant Professor, Campbell University Pharmaceutical Sciences</p> <p>Post-doctoral fellowship Department of Physiology, University of Michigan</p> <p>Post-doctoral fellowship Department of Pharmacology, University of Iowa</p> <p>Professor and Vice Chair MUSC College of Medicine, Department of Physiology and Neuroscience</p>
Professor	FT	<p>Pharmaceutical Biochemistry Fall Semester P1 Year 3 credit hrs.</p>	Ph.D. University of Nebraska (1985)	<p>Postdoctoral Associate (Jan. 1987 to Dec. 1987) - Department of Medicinal Chemistry, University of Michigan, Ann Arbor, MI 48109, under the supervision of Prof. James K. Coward.</p> <p>Lecturer (Jan. 1988 to June 1989) - Department of Pharmaceutical Sciences, College of Pharmacy and Health Sciences, Wayne State University, Detroit, MI 48202.</p> <p>Assistant Professor (July 1989 to June 1995) - Department of Pharmaceutical Sciences, College of Pharmacy and Health Sciences, Wayne State University, Detroit, MI 48202.</p> <p>Associate Professor (July 1995 to July, 2001) - Department of Pharmaceutical Sciences, College of Pharmacy and Health Sciences, Wayne State University, Detroit, MI 48202.</p> <p>Professor (August 2001 to February 2011) – Department of Pharmaceutical Sciences, College of Pharmacy and Health Sciences, Wayne State University, Detroit, MI 48202.</p> <p>Professor (Adjunct, February 2008 to present) – Department of Biochemistry and Molecular Biology, School of Medicine, Wayne State University, Detroit, MI 48202</p> <p>Professor and South Carolina SmartState™ Endowed Chair (March</p>

Faculty and Administrative Personnel				
				2011 to present), Department of Drug Discovery and Biomedical Sciences, Medical University of South Carolina, Charleston, SC 29425 Interim Vice-Chair (August 2015 to present), Department of Drug Discovery and Biomedical Sciences, Medical University of South Carolina, Charleston, SC 29425
Associate Professor	FT	Pharmaceutical Biochemistry Fall Semester P1 Year 3 credit hrs. Pharmaceutical Biotechnology Spring Semester P1 year 2 credit hours	Ph.D. University of Western Australia, Australia (2002)	National Institute of Environmental Health Sciences/ National Institutes of Health 06/02- 03/09
Associate Professor	FT	Pharmaceutical Biotechnology Spring Semester P1 year 2 credit hours Dosage Forms and Drug Delivery Systems Fall Semester of P1 year 4 credit hours	Ph.D., University of Washington, Seattle, Washington, (2004) Chemistry	Postdoctoral Scholar, The Scripps Research Institute 2004-09 2009 Assistant Professor, South Carolina College of Pharmacy 2016 Associate Professor
Associate Professor	FT	Pharmacotherapy III Fall Semester P3 year 4 credit hours Clinical Applications IV Fall Semester P3 year 1 credit hr. Clinical Applications V Spring semester P3 year 1credit hr. Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)	Pharm.D., University of South Carolina (2000) Pharmacy	Pharmacy Practice Residency The Johns Hopkins Hospital, Baltimore MD 2001-2002 Psychiatry Specialty Residency The Johns Hopkins Hospital Baltimore , Maryland 2002-2003 Visiting Professor Misr International University Cairo, Egypt March 2012 April - May 2010 Associate Professor 2012 - present Clinical Pharmacy & Outcome Sciences. Assistant Professor Clinical Pharmacy & Outcome Sciences, SCCP 2003-2012
Associate Professor	FT	Clinical Assessment Spring Semester P3 year 3 credit hrs. Clinical Applications II Fall semester P2 year 1 credit hr. Advanced Pharmacy Practice Experience	Pharm.D., University of Nebraska (1993) Pharmacy	Associate Professor, Department of Clinical Pharmacy and Outcomes Sciences South Carolina College of Pharmacy - MUSC Campus, April 2008 to present Associate Professor, Department of Pharmacy Practice College of Pharmacy, MUSC, July 2001 to July 2006 Assistant Professor, Department of Pharmacy Practice College of Pharmacy, MUSC, September 1995 to July 2001 Clinical Pharmacist (part-time), Family Medicine Center, MUSC, May 2008 to present

Faculty and Administrative Personnel				
		P4 year 4 credit hours (multiple offerings)		Consultant Pharmacist, East Cooper Psychiatric Solutions, March 2010 to present Consultant Pharmacist, Fermo Psychiatric Solutions, September 2006 to August 2008
Associate Professor	FT	Introduction to Pharmacy Practice Fall Semester P1 year 2 credit hrs. Pharmacy Skills Lab I Compounding and Applied Pharmaceutics Fall Semester P1 year 1 credit hr. Pharmacy Law/Ethics Spring Semester P3 year 3 credit hrs. History of Pharmacy (elective) Fall Semester P2 or P3 year 2 credit hrs. Senior Care Pharmacy (elective) Spring Semester P3 year 2 credit hrs.	Ph.D., University of Iowa (1984) Pharmacy	Hospital Pharmacy Residency MUSC, Charleston, SC 1965-66 Teaching experience 1971 to current MS Hospital Pharmacy University of Iowa 1966-68 Graduated June 1969
Associate Professor	FT	Pharmacotherapy IV Spring Semester P3 year 5 credit hrs. Clinical Applications I Spring semester P1 year 1 credit hr. Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)	Pharm.D., Medical University of South Carolina (1985) Pharmacy	Residency in Pediatric Pharmacotherapy Medical University of South Carolina 1985-1986 Pediatric Residency Coordinator (ASHP Accredited) 1988-1993 Pediatric Pharmacotherapy Fellowship Coordinator 1988-1992 Academic Appointments MUSC Associate Professor July 2001-present. Assistant Dean for Academic Affairs 2000-2005. Associate Professor of Pharmaceutical Sciences 1995-2001. Tenured 1995. Associate Professor of Clinical Pharmacy 1991-1995. Assistant Professor of Clinical Pharmacy 1986-1991. Instructor in Pediatrics (College of Medicine 1987-Present)
Associate Professor	FT	Advanced Drug Information Fall Semester P3 year 2 credit hrs. Intro to Drug Information Fall Semester P1 year 1 credit hr. Advanced Pharmacy Practice	Pharm.D., University of Sciences in Philadelphia (2004) Pharmacy	Drug Information Specialty Resident (PGY2) University of Pittsburg Medical Center University of Pittsburgh School of Pharmacy Pharmacy Practice Resident (PGY1) 2006-2007 Saint Thomas Hospital Nashville, TN

Faculty and Administrative Personnel				
		Experience P4 year 4 credit hours (multiple offerings)		
Associate Professor	FT	Pharmaceutical Biochemistry Fall Semester P1 Year 3 credit hrs. Pharmaceutical Biotechnology Spring Semester P1 year 2 credit hours	Ph.D., Wayne State University (1983) Chemistry	<ul style="list-style-type: none"> • Post Graduate Pennsylvania State University, 1984-1987 • University Graduate Fellow- 1981-1983 NIH Postdoctoral Fellow, 1985-1987 • Assistant Professor Departments of Chemistry and Biological Chemistry University of California-Irvine 1987-1994 • Associate Professor Department of Pharmaceutical Sciences- MUSC 1994-present • Teaching experience beginning in 1987 - 1994 University of California-Irvine and MUSC beginning 1994 - present
Associate Professor	FT	Pathophysiology/Pharmacology III Fall Semester P3 year 3 credit hrs. Pathophysiology/Pharmacology IV Spring Semester P3 year 2 credit hrs.	Ph.D., University of Kuopio, Finland, (1991) Biochemistry	1993-1994 Research Assistant Professor University of North Carolina, Chapel Hill, Dept. Cell biology & Anatomy 1994-2001 Assistant Professor Case Western University, Cleveland, OH Anatomy department Associate Professor 2003- 2007 Case Western University Oncology Department
Associate Professor	FT	Pathophysiology/Pharmacology I Fall Semester P2 year 3 credit hrs. Pathophysiology/Pharmacology II Spring Semester P2 year 3 credit hrs	M.D., Ph.D., University of North Carolina, Chapel Hill (1996) Nutrition M.S. 1985 Toxicology Sun Yat-Sen University of Medical Sciences, Guangzhou China MD 1982 Medicine and Public Health, Sun Yat-Sen University of Medical Sciences 1982	2010, Oct- Tenured Associate Professor, Department of Drug Discovery and Biomedical Sciences, Medical University of South Carolina at Charleston 2010, Dec- Affiliated Associate Professor with tenure, South Carolina School of Pharmacy, University of South Carolina at Columbia 2010, July- Associate Professor, Department of Pharmaceutical and Biomedical Sciences, Medical University of South Carolina at Charleston 2015-2018 Adjunct Professor, Darlian Medical University, Darlian, China 2011-2014 Adjunct Professor, Guilin Medical College, Guilin, China 2006-2010 Assistant Professor, Department of Pharmaceutical and Biomedical Sciences, Medical University of South Carolina at Charleston 2006-present Graduate Faculty, College of Graduate Studies, Medical University of South Carolina 2007-2010 Affiliated Assistant Professor, School of Pharmacy, University of South Carolina at Columbia

Faculty and Administrative Personnel				
Associate Professor	FT	<p>Pharmacotherapy II Spring P2 year 4 credit hours</p> <p>Infectious Diseases (elective) Fall Semester P3 year 2 credit hrs.</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	<p>Pharm.D., University of Florida (2003) Pharmacy</p>	<p>PGY 1 Residency Pharmacy Practice Duke University Medical Center PGY2 Internal Medicine University of Utah Medical Center Clinical Specialist, Internal Medicine, Residency Program Director PGY2 Internal Medicine, MUSC- SCCP Dec 2006 Internal Medicine Clinical Pharmacist, Clinical Assistant</p>
Associate Professor	FT	<p>Pharmacotherapy I Fall P2 year 4 credit hrs</p> <p>Self Care/Complementary Medicine Spring Semester P1 year 4 credit hrs.</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	<p>Pharm.D., Wilkes University, (2005) Pharmacy</p>	<p>Residency Pharmacy Practice emphasis in Community Care, Campbell University and Kerr Drug 2005-2006 Clinical instructor Campbell University and instructor 1 year in Pharmacy Practice Washington</p>
Assistant Professor	FT	<p>Pharmacotherapy I Fall P2 year 4 credit hrs</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	<p>Pharm.D., West Virginia University School of Pharmacy (2011) Pharmacy</p>	<p>PGY-1 Pharmacy Residency-UPMC St. Margaret 2011-2012 PGY-2 Family Medicine Pharmacy Residency- UPMC St. Margaret 2012-2013 Faculty Development Fellowship- UPMC /St. Margaret & University of Pittsburgh 2011-2013 Assistant Professor – 2013- present</p>
Assistant Professor	FT	<p>Pharmacotherapy IV Spring Semester P3 year 5 credit hrs.</p> <p>Acute Care Therapeutics (elective) Spring Semester P3 year 3 credit hrs.</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	<p>Pharm.D., Medical University of South Carolina (2007) Pharmacy</p>	<p>2006-2007 Advanced Clinical Track Certificate MUSC, Consist of five additional 4-week clinical rotations, a 3-credit hour Acute Care Therapeutics class, 3 1-credit hour Track Conference classes, participation in the ASHP Clinical Skills Competition and completion of a 49-item clinical skills checklist January 2006-May 2007 Academician Preparation Program Certificate MUSC August 2007-June 2008 PGY1 Pharmacy Practice Residency ASHP Accredited MUSC, July 2007-June 2008 PGY2 Critical Care Specialty Residency- ASHP Accredited MUSC, July 2007-2009 Decentralized Clinical Pharmacist MUSC 2009 - Cardiovascular Critical Care Clinical Specialists, The Indiana Heart Hospital, Community Health Network, Indianapolis IN, 2010 Clinical Coordinator, Pharmacy Services 2010 - present Assistant Professor (non-tenure track) SCCP Department</p>

Faculty and Administrative Personnel				
				of Clinical Pharmacy and Outcome Sciences. Medical University of South Carolina Campus
Assistant Professor	FT	<p>Clinical Applications IV Fall Semester P3 year 1 credit hour</p> <p>Clinical Applications V Spring semester P3 year 1 credit hour</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	Pharm.D., Campbell University (2007) Pharmacy	<p>-Tom Jones Drug-- Health and Wellness Center. Garner, NC Geriatric rotation - Wake Forest University Baptist Medical Center. Winston-Salem, NC</p> <p>-Drug Information - Campbell University Drug Information Center. Buies Creek, NC</p> <p>-Hospital - Outer Banks Hospital. Nags Head, NC</p> <p>-Internal Medicine/Psychiatry - Duke University Medical Center. Durham, NC</p> <p>-Ambulatory Care - Duke Community and Family Medicine. Durham, NC</p> <p>-Adult Bone Marrow Transplant - Duke University Medical Center. Durham, NC</p> <p>-Advanced Community - Central Pharmacy. Durham, NC</p> <p>PGY1 - Pharmacy Practice Residency. Ralph H. Johnson VAMC. Charleston, SC 2007-2008</p>
Assistant Professor	FT	<p>Pharmacy Skills Lab V: Applied Community Pharmacy Fall Semester P3 year 1 credit hr.</p> <p>Pharmacy Skills Lab II: Intro to Community Pharmacy Spring semester P1 year 1 credit hr.</p>	Pharm.D., Medical University of South Carolina (1997) Pharmacy	Assistant Professor MUSC Pharmacy Practice 1997-2003 Certified APhA trainer for Immunization Training Program 2005, Certified APhA Trainer for Diabetes Training Program 2006, Board Certified Pharmacotherapy Specialist 2001
Assistant Professor	FT	<p>Pharmacy Skills Lab I: Compounding & Applied Pharmaceutics Fall semester P1 year 1 credit hr.</p> <p>Pharmacy Calculations Fall semester P1 year 1 credit hr.</p> <p>Medical Terminology Fall Semester P1 Year 1 credit hour</p> <p>Pharmacy Skills Lab II: Intro to Community Pharmacy Spring semester P1 year 1 credit hr.</p>	Pharm.D., Medical University of South Carolina (2002) Pharmacy	<p>Pharmacy Manager/Compounding Pharmacists April 2009-present Plantation Pharmacy at Wappoo Road Medication Therapy Management: 10-City Challenge Diabetes Coach 2006-present Pharmacy Manager/Compounding Pharmacists Prescription Center Inc. Chas SC</p>

Faculty and Administrative Personnel				
Assistant Professor	FT	<p>Pharmacy Skills Lab IV: Applied Health System Pharmacy Spring Semester P2 Year 1 credit hr.</p> <p>Pharmacy Skills Lab III: Intro to Health System Pharmacy Fall Semester P2 Year 1 credit hr.</p>	Pharm.D., University of Tennessee Health Science Center (2006) Pharmacy	<p>2015-present Assistant Professor South Carolina College of Pharmacy Medical University of South Carolina,</p> <p>2015-present Clinical Pharmacist (PRN) Department of Pharmacy Ralph H. Johnson Veterans Affairs Medical</p> <p>2008-2015 Critical Care Clinical Pharmacy Specialist Department of Pharmacy Ralph H. Johnson Veterans Affairs Medical</p> <p>2008-2015 Adjunct Assistant Professor South Carolina College of Pharmacy Medical University of South Carolina,</p> <p>2007-2008 Instructor of Clinical Pharmacy Department of Clinical Pharmacy University of Tennessee Health Science Center, Memphis, TN</p> <p>2006-2007 Clinical Pharmacist (PRN) St. Thomas Hospital, Nashville, TN</p> <p>2003-2005 Research Assistant, Department of Clinical Pharmacy University of Tennessee Health Science Center, Memphis, TN</p> <p>Program Director: Lawrence J. Hak, Pharm.D., BCPS, FCCP</p>
Instructor	FT	Personal Finance (elective) Fall Semester P2 or P3 3 credit hrs.	M.B.A. Charleston Southern University (1995) Master of Business Administration	<p>B.S. Degree, Major Accounting 1990, Regents Program University of the State of New York</p> <p>Adjunct Faculty 2003, College of Charleston (Personal Finance) MUSC</p> <p>College of Pharmacy, Charleston Southern University 1998 , and Trident Technical College 2000</p>
Assistant Professor	FT	Foundations of Pharmaceutical Chemistry/Pharmacogenomics II Spring Semester P1 Year 3 credit hrs.	D.V.M., Ph.D. Universidad Central del Central (1986) Universidad Nacional del sur Biology	<p>Post-doctoral Fellow- MUSC 2005-2010</p> <p>1983-1995 Instructor Universidad Nacional del Centro Veterinary Medicine</p> <p>1996-2004 Teaching Assistant Universidad Nacional del sur Biology</p> <p>2010 – 2016 Research Assistant Professor Drug Discovery and Biomedical Sciences MUSC</p> <p>2016 – present Assistant Professor MUSC</p>
Assistant Professor (Clinical)	PT	<p>Health System Pharmacy: Policy & Practice (elective) Fall Semester P2 or P3 year 2 credit hrs.</p> <p>Advanced Pharmacy Practice Experience P4 year 4 credit hours (multiple offerings)</p>	Pharm.D., M.B.A. Medical University of South Carolina (2001)	Director of Pharmacy Services, Medical University Hospital
Research Associate Professor	FT	<p>Pharmaceutical Biochemistry Fall Semester P1 Year 3 credit hrs.</p> <p>Pharmaceutical Biotechnology Spring Semester P1 year 2 credit hours</p>	Ph.D. University of VA Medical School (2001) Cell Biology Fox Chase Cancer Center, Philadelphia, PA 2001-2004 Presidencies/Postdoctoral	<p>2004 Research Asst. Professor Medical University of South Carolina/ /Pharmaceutical Sciences Dept.</p> <p>2007 Research Assistant Professor, Medical University of South Carolina, Pharmaceutical Sciences Dept.</p> <p>2007 Assistant Professor</p> <p>2001 Research Assistant Professor South Carolina College of Pharmacy</p>

Faculty and Administrative Personnel				
Research Associate Professor	FT	Dosage Forms and Drug Delivery Systems Fall Semester of P1 year 4 credit hours Pharmaceutical Biotechnology Spring Semester P1 year 2 credit hours	Ph.D., Pharmacology and Experimental Therapeutics Louisiana State University Health Sciences Center, New Orleans, LA	Post-doctoral Research Associate Department of Pharmacology and Cancer Biology/Center for Chemical Biology, Duke University Medical Center, Durham NC 1996-1998 Research Assistant, Department of Cell and Molecular Pharmacology and Experimental Therapeutics, Medical University of South Carolina, Research Assistant Professor, Department of Pharmaceutical and Biomedical Sciences MUSC, Assistant professor 2008-09 2009-14 Assistant Professor MUSC and Co-Director, Drug Discovery Shared Resource 2014-present Head of Computational Chemistry & Informatics, SC Center for Drug Discovery MUSC
Adjunct Assistant Professor	PT	Pharmacy Law/Ethics Spring Semester P3 year 3 credit hrs.	J.D. University of South Carolina B.S. Pharmacy, University of North Carolina	Practicing attorney in South Carolina with a focus on pharmacy issues
Adjunct Assistant Professor	PT	Health Care Systems & Management Fall Semester P3 year 4 credit hours	Pharm.D. South Carolina College of Pharmacy (2010) MBA The Citadel	2012-present Clinical Pharmacists, Medication Use Policy & Informatics, MUSC, 2010-2012 Clinical Pharmacist, Adult Inpatient Pharmacy Services, , 2013-present Epic Willow super-User, MUSC
Adjunct Assistant Professor	PT	Health Care Systems & Management Fall Semester P3 year 4 credit hours	Pharm.D. Wilkes University (2005)	2014-present Clinical Specialist Medication Policy & Informatics, MUSC, 2010-2014 Clinical Pharmacists Medication Policy & Informatics, MUSC

Note: Individuals should be listed with program supervisor positions listed first. Identify any new faculty with an asterisk next to their name

Total FTE needed to support the proposed program (i.e., the total FTE devoted just to the new program for all faculty, staff, and program administrators):

Faculty 25 Staff 10 Administration 3

Faculty /Administrative Personnel Changes

Provide a brief explanation of any additional institutional changes in faculty and/or administrative assignment that may result from implementing the proposed program. (1000 characters)

The MUSC College of Pharmacy has sufficient number of faculty and staff to teach our PharmD curriculum and support students through their four years on campus. Overall, the teaching responsibilities for the faculty will increase, but they will be distributed such that the faculty will still have sufficient time for research, service, development, and/or practice. One need identified in reviewing the curriculum is for a faculty member to teach Outcomes in the second year. We are working with the MUSC College of Medicine and College of Health Professions to identify existing faculty on campus to cover this second year course.

Library and Learning Resources

Identify current library/learning collections, resources, and services necessary to support the proposed program and any additional library resources needed. (1000 characters)

Current library resources are adequate to support the proposed program. The MUSC Library is a database and knowledge center, academic computing support unit, electronic education center, and leader in information planning. Pertinent online resources include over 21,900 electronic journals, over 305,000 electronic books, over 54,000 bound journals, and nearly 250 biomedical and health-related databases (e.g., UptoDate, DynaMed, Access Pharmacy, Lexicomp, CINAHL, PsycINFO, SciFinder, and PubMed). The library employs over 39 staff, including 13 librarians, all with appropriate credentials to assist students, and each college at MUSC has a specific librarian assigned to serve its students.

Student Support Services

Identify academic support services needed for the proposed program and any additional estimated costs associated with these services. (500 characters)

Students will have access to MUSC-wide services including academic support services (e.g., the Center for Academic Excellence which provides supplemental tutoring services, and the Writing Center). They will have access to health and wellness services, including Counseling & Psychological Services, Student Health Services, and the Wellness Center (MUSC's fitness facility). Additional services include extracurricular student programs, and interprofessional education. At the College of Pharmacy, we have an Assistant Dean for Student Affairs and administrative assistant to help the students as well. There are no additional costs associated with these services as we transition from the SCCP to MUSC Pharm.D. program.

Physical Resources

Identify any new instructional equipment needed for the proposed program. (500 characters)

No new equipment is needed for this proposed program as we will utilize the physical resources in place as we transition from the SCCP to the MUSC PharmD program.

Will any extraordinary physical facilities be needed to support the proposed program?

Yes

No

Identify the physical facilities needed to support the program and the institution's plan for meeting the requirements, including new facilities or modifications to existing facilities. (1000 characters)

The College of Pharmacy primarily occupies approximately 58,000 square feet of two buildings (QF and QE) on the MUSC campus. A variety of other campus buildings are also used for teaching and laboratory space. These buildings are centrally located on the MUSC campus and are in close proximity to the Medical Center. The Drug Discovery Building (DDB) on the MUSC campus is approximately 114,000 square feet with a mix of research space, faculty offices, classrooms, and the 2,000 square foot pharmacy practice laboratory. Five faculty members, their support staff and research labs are located on the 4th and 5th floors of DDB. Adjacent to the DDB is a new Bioengineering Building (96,000 square feet). Along with research space, the Bioengineering Building houses a 90-seat classroom that is available for College use. Additionally, the College of Pharmacy utilizes a 95-seat classroom in the Basic Sciences Building (BSB202). This room includes push-to-talk microphones, individual Ethernet ports, and a control booth.

Financial Support

0						
Category	1st	2nd	3rd	4th	5th	Total
Program Administration (1)	130,700	261,400	392,100	522,800	522,800	1,829,800
Faculty and Staff Salaries (2)	1,840,120	3,897,040	5,937,960	7,937,880	7,937,880	29,380,680
Graduate Assistants	0	0	0	0	0	0
Equipment (3)	20,000	0	0	0	20,000	40,000
Facilities	0	0	0	0	0	0
Supplies and Materials (4)	8,000	16,000	24,000	24,000	24,000	96,000
Library Resources	0	0	0	0	0	0
Other* (5)	124,800	124,800	124,800	124,800	124,800	624,000
Total	2,123,620	4,299,240	6,478,860	8,609,480	8,629,480	30,140,680
Sources of Financing						
Category	1st	2nd	3rd	4th	5th	Total
Tuition Funding (6)	2,183,620	4,367,240	6,550,860	8,734,480	8,734,480	30,570,680
Program-Specific Fees	0	0	0	0	0	0
State Funding (i.e., Special State Appropriation)*	0	0	0	0	0	0
Reallocation of Existing Funds*	0	0	0	0	0	0
Federal Funding*	0	0	0	0	0	0
Other Funding*	0	0	0	0	0	0
Total	2,183,620	4,367,240	6,550,860	8,734,480	8,734,480	30,570,680
Net Total (i.e., Sources of Financing Minus Estimated New Costs)	60,000	68,000	72,000	125,000	105,000	430,000

*Provide an explanation for these costs and sources of financing in the budget justification.

Budget Justification

Provide a brief explanation for the other new costs and any special sources of financing (state funding, reallocation of existing funds, federal funding, or other funding) identified in the Financial Support table. (1000 characters)

Note: Institutions need to complete this budget justification *only* if any other new costs, state funding, reallocation of existing funds, federal funding, or other funding are included in the Financial Support table.

(1) Program administration includes salary support for Dean and two Assistant Deans. The amount of administrator time allotted to the MUSC PharmD program will escalate each year until year four when the entire program is the MUSC PharmD program.

(2) This includes faculty and staff salary and fringes. The amount of faculty and staff time allotted to the MUSC PharmD program will escalate each year until year four when the entire program is MUSC PharmD program. The MUSC College of Pharmacy will partner with other programs at MUSC for faculty to teach outcomes design and assessment as well as the clinical microbiology courses in our new curriculum in the second year of our PharmD program.

(3) This includes updating computers for our community and hospital labs. It is recommended that we update them every 3 – 5 years.

(4) This includes lab supplies for our community, hospital, and assessment labs. Year one only includes our community labs, Year two includes our hospital and community labs, and year three includes our assessment lab and last community lab. There are no practice labs in the fourth year.

(5) The other funding is for our students to be certified by the American Pharmacy Association in Diabetes Management and Immunizations. These certifications are critical for our graduates' employment. This section includes experiential preceptor costs and malpractice insurance. This section also includes fees and dues to the American Association of Colleges of Pharmacy (AACCP) and Accreditation Council for Pharmacy Education (ACPE).

(6) The tuition funding of the PharmD program will escalate as we matriculate more students into the program in years 2 – 4. The full complement of students will be in year 4 (320 students or 80 students per year). Tuition funding is based on tuition received in FY 16. In-state tuition is \$25,290, out-of-state tuition is \$37,775, and out-of-state with scholarship \$32,020. Typically, we enroll 70 - 80% in-state students, 5 – 15% out-of-state students, and 10 -15% at the out-of-state with scholarship rate. This figure is subject to change due to change in enrollment full-time or part-time in our program.

Evaluation and Assessment

Programmatic Assessment: Provide an outline of how the proposed program will be evaluated, including any plans to track employment. Identify assessment tools or software used in the evaluation. Explain how assessment data will be used. (3000 characters)

The MUSC COP faculty approved an assessment plan to address the areas of education, research, and service to ensure the MUSC COP is moving towards its goals and fulfilling its mission. Some of the key assessment pieces for the new PharmD program are outlined below.

While the rate of unemployment among pharmacists is exceedingly low (less than 2%), we will track the employment of our graduates through 6 months post-graduation. We have an administrative assistant who continues to track graduates up to 6 months after graduation. We will also utilize South Carolina License look-up website as it lists current employment.

Outcome	Metric	Target
The program performs well on indices of quality	Percentage of students who complete the program and graduate in 6 years or less.	100%
	Percentage of students who complete the program and graduate in 4 years or less.	95%
	First-time pass rate on MJPE (law) exam	95%
	Percentage of graduating students who agree/strongly agree they are satisfied with the program	95%
	Percentage of residency applicants who are successful in obtaining a residency.	≥ Natl rate
Graduates will have essential foundational knowledge and essential skills for practice and care	Scaled mean score of NAPLEX area 1.	≥ Natl rate
	Scaled mean score of the NAPLEX area 2.	≥ Natl rate
	First time pass rate on OSCE	100%
	Rate of agree/strongly agree to “Pharmacy practice experiences allowed collaboration with other health care professionals.”	95%
Students will learn skills essential for personal and professional development	Number of students involved in MUSC student organizations.	50%
	Rate of agree/strongly agree to “My pharmacy practice experiences allowed me to have direct interaction with diverse patient populations.”	90%
	Rate of agree/strongly agree to “I have had opportunities to develop professional attitudes, ethics and behaviors.”	90%
	Percentage of students whose CV submission to their e-portfolio shows growth by meeting or exceeding expectations in P3 year.	90%

Will the proposed program seek program-specific accreditation?

Yes

No

If yes, provide the institution's plans to seek accreditation, including the expected timeline for accreditation. (500 characters)

The Accreditation Council for Pharmacy Education (ACPE) has approved the MUSC College of Pharmacy to offer the PharmD beginning in August of 2016. We will undergo an accreditation visit by ACPE in the spring semester of 2017.

Will the proposed program lead to licensure or certification?

Yes

No

If yes, explain how the program will prepare students for licensure or certification. (500 characters)

Our PharmD curriculum meets the standards outlined in the ACPE Standards 2007 and will be reviewed in the Spring of 2017 to ensure it meets the new ACPE Standards. We are utilizing the same curriculum for the MUSC PharmD that we used for the SCCP PharmD, and our pass rates for the NAPLEX and MJPE exams were > 93% for the past five years. At completion of our program, we offer, at no-charge to the students, a review course for the NAPLEX and MJPE exams.

Teacher or School Professional Preparation Programs

Is the proposed program a teacher or school professional preparation program?

Yes

No

If yes, complete the following components.

Area of Certification

Please attach a document addressing the South Carolina Department of Education Requirements and SPA or Other National Specialized and/or Professional Association Standards.