

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO: AAC 15-21

COMMITTEE DATE: December 2, 2014

BOARD DATE: December 9, 2014

**APPLICATION OF UNIVERSITY OF MASSACHUSETTS LOWELL TO AWARD THE
DOCTOR OF PHARMACY**

MOVED: The Board of Higher Education hereby approves the application of **University of Massachusetts Lowell** to award the **Doctor of Pharmacy**.

Upon graduating the first class for this program, the University shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty resources, and program effectiveness.

Authority: Massachusetts General Laws Chapter 15A, Section 9(b)

Contact: Winifred M. Hagan, Ed.D.,
Assistant Commissioner for Academic and Educator Policy

BOARD OF HIGHER EDUCATION

**December 2014
University of Massachusetts Lowell
Doctor of Pharmacy**

INTENT AND MISSION

The proposed Doctor of Pharmacy (PharmD) is consistent with the University of Massachusetts Lowell (UML) mission of providing an affordable and accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation, and the world.¹ The purpose of the proposed PharmD is to provide the only public graduate pharmacy program for Massachusetts residents, and to develop highly skilled pharmacy specialists who can contribute to the health care of the population, higher education in pharmacy practice, and the pharmacy industry.

The proposed program has obtained all necessary governance approvals on campus and was approved by the University of Massachusetts, Board of Trustees on September 17, 2014. The required letter of intent was circulated on July 11, 2014. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

The Bureau of Labor Statistics (BLS) forecasts that the employment of pharmacist is projected to grow 14 percent from 2012 to 2022, faster than the average for all occupations.² The BLS attributes this growth to an aging population; increased rates of chronic diseases; new types of drugs; more complex interactions of drugs; and health insurance reforms. The BLS also predicts an increase in demand for the employment of pharmacists in hospitals and clinics where they have more direct involvement in patient care.

The State Projections Consortium predicts that between 2010 and 2020, the number of pharmacist jobs will grow by 19.1% in Massachusetts, 15.9% in New England, and 25.4% nationally.³

Student Demand

UML reports an increase in the number phone calls and inquiries from potential applicants requesting information regarding a PharmD program. UML expects that with no public institutions in Massachusetts that offer such a program, it will fill a significant gap. UML expects that the PharmD program will attract 60-90% Massachusetts residents.⁴

OVERVIEW OF PROPOSED PROGRAM

¹ <http://www.massachusetts.edu/system/about.html>.

² <http://www.bls.gov/ooh/healthcare/pharmacists.htm>

³ <http://www.projectionscentral.com/Projections/LongTerm>

⁴ UMass Lowell web site, "University Quick Facts." <http://www.uml.edu/About/quick-facts.aspx>

The proposed PharmD program is designed to prepare students to become practicing pharmacists with the skills to provide patient-centered care and serve diverse populations in cooperation with patients, prescribers, other members of health care teams, and the community. The proposed PharmD is expected to provide students with knowledge and skills in the areas of patient assessment, medication therapy management, medication dispensing, general pharmacy management, drug information retrieval, critical thinking, communication, and professionalism. It is anticipated that graduates of the proposed PharmD will be prepared to sit for the professional pharmacist licensing exam (NAPLEX) in all U.S. states.

Duplication

UML reported that review of private and public universities in Massachusetts indicated that three institutions are currently offering programs similar to the proposed PharmD. Western New England University offers a PharmD. Northeastern University and Massachusetts College of Pharmacy and Health Sciences both offer six-year PharmD programs, designed for students entering directly from high school. UML would be the fourth public university in the nation, and the only public university in Massachusetts, to offer a six-year direct-entry PharmD degree.

ACADEMIC AND RELATED MATTERS

Admission

Applicants to the proposed program will be required to submit an application, a personal essay, three letters of recommendation, a high school transcript, and a TOEFL/ELPT test score if English was not the applicant's first language. All first-year undergraduate students seeking admission to the PharmD will be required to have fulfilled secondary credits including four years of English, three years of mathematics, three years of science, two years of social science, two years of a foreign language, and two electives. A minimum high school GPA of 3.25 and a minimum SAT score of 1100 will be required.

Prospective transfer students will required to meet the same general admission requirements as first-year undergraduate students. Additionally, applicants must submit official college transcripts. A minimum college GPA of 3.25 is required. Only courses in which the student earned a minimum grade of a C or better will be eligible for transfer credit. All transfer students will be interviewed before being accepted into the program. It is expected that as the PharmD program grows, the PharmCAS (Pharmacy College Application Process) and/or PCAT (Pharmacy College Admissions Test) will be required.

In addition to the general admission requirements, admitted students must undergo criminal background checks and drug screenings, and must provide proof of immunizations. Students are also required to sign a technical standards document, attesting that they are capable of achieving certain cognitive, professional, and behavioral standards necessary to the practice of Pharmacy.

PROGRAM ENROLLMENT PROJECTION

	2017-18	2018-19	2019-20	2020-21	2021-22
New Full-Time Students	75	75	75	75	75
Continuing Full-Time Students		75	150	225	225
New Part-Time Students					
Continuing Part-Time Students					
Totals	75	150	225	300	300

UML expects to recruit students the first year the Accreditation Council for Pharmacy Education (ACPE) provides pre-candidate approval of the program. Students will be reviewed and accepted, and class work will begin in the following fall semester. The enrollment projection represents the professional phase of the program (year 3-6).

Curriculum (Attachment A)

The proposed six-year PharmD program will require a minimum of 178 credits, including 36 experiential credits. The curriculum includes two years of pre-professional courses and four years of professional pharmacy specific courses. The professional phase of the curriculum will meet the degree standards required by ACPE. The program is designed with two entry points. Students who do not have an earned Bachelor of Science degree will enter at semester one. Students who have earned a Bachelor of Science degree and have completed all courses in the first four semesters can apply for entry in the fifth semester. After the completion of the pre-professional phase, all students will be interviewed before being allowed to proceed into the professional phase of the curriculum. At that time, any student who wishes to leave the program may apply for transfer to another baccalaureate major at UML. Students must achieve a 3.0 GPA in the sciences and a 3.0 overall GPA to proceed to the professional phase of the curriculum.

Internships or Field Studies

PharmD students perform clinical placements under the supervision of licensed pharmacist preceptors, in collaboration with UML faculty advisors. It is expected that preceptors will receive training from UML about their role as a preceptor and will be provided with resources and materials to assist them with educating and evaluating students. It is planned that UML faculty member will be responsible for ensuring consistency in quality of education across various preceptors. Students will have specific faculty advisors maintaining academic oversight of their clinical activities.

CHS has established relationships with several hospitals and clinics in the Merrimack Valley, and will establish new relationships with additional pharmacies. The pharmacy clinical is planned to include 12 credits of Introduction to Pharmacy Practice Experience and 24 credits of Advanced Pharmacy Practice Experience. During the introductory phase, students will shadow professional pharmacists in community or hospital pharmacies or other practice settings, then participate in discussions, prepare papers or case studies, submit presentations to faculty mentors, or work with other students to aid in learning and leadership development. During the advanced phase, students will complete rotations in ambulatory care, acute care, hospital pharmacy, and community pharmaceutical care settings.

RESOURCES AND BUDGET

Fiscal (Attachment B)

UML anticipates that the PharmD will be entirely self supporting after the first year of implementation. Revenue projections are based on an enrollment of 75 students per year. UML expects that attrition in the first two years will be compensated for with an increase in the number of transfer students accepted into the program. It is expected that fees for the PharmD program will be commensurate with program expenses. UML expects to budget 10% of program fees to fund need based scholarships.

Expenditure projections include salary allocations for a Dean, Associate Dean, and department chair, as well as five new full-time faculty per year and two new part-time faculty per year through the fourth year of the program. Salary allocations also include three support staff in the first year, one additional staff in year two, and two additional staff in year three, as well as a stipend for student workers. UML expects to provide financial resources for clinical preceptors starting in year three of the program. UML also anticipates additional expenses for accreditation and teaching assistantships.

Faculty and Administration (Attachment C)

In accordance with ACPE requirements, the PharmD program will be offered by a new department, which is planned to include leadership by a department chair and located in the School of Pharmacy in the College of Health Sciences (CHS). It is expected that PhD students in Pharmaceutical Sciences will serve as teaching assistants in the early foundation courses of the PharmD program. Two of the faculty members already teaching in CHS have a PhD in Pharmacology and a PharmD. Administrative staff currently assigned CHS will support the PharmD program through the preliminary accreditation process and during the pre-professional phase of classes. CHS is currently actively recruiting a chair person.

Facilities, Library and Information Technologies

UML plans to add laboratory space dedicated to pharmacy practice once the PharmD program is approved. For the first several years of the program, it is expected that the Science Teaching/Research Laboratories, Pharmaceutical Sciences Research Laboratories, Human Assessment Laboratory, OEH/Industrial Hygiene Laboratory, Aerosol Science Laboratory, and TURI Exposure Biology Laboratory will be used for the PharmD program. UML reports that library resources are strong in bioscience, chemistry, clinical lab sciences, pharmaceutical science, engineering and health science topics. In medicine and bioscience, UML subscribes to multiple databases, journals and a myriad of electronic resources. UML is a full member in the Boston Library Consortium as well as the WorldCat network, providing guaranteed interlibrary loan access to virtually any book or journal article that can be identified.

All dedicated teaching spaces at UML are technologically-enhanced classrooms. A recent upgrade added lecture-capture devices to the 80 most heavily utilized classrooms. In addition, 90 conference rooms on campus are outfitted with audiovisual equipment. UML has wireless Internet access in all academic buildings and residence halls as well as high-traffic common areas. IT staff currently maintain 190 virtual data servers and 5,200 e-mail accounts, and

provide support for 6,600 computers used by faculty, students, and staff. UML subscribes to Atomic Learning, available to the campus population, which provides online tutorials for over 200 software and technology applications. Additionally, UML provides faculty development workshops annually on web-enhanced teaching, technology-enhanced classrooms, lecture-capture technologies, and using the SMART Podium.

Affiliations and Partnerships

It is planned that an external advisory committee will provide feedback on practice placements as well as curricular modifications, facilities and resources needs, fundraising and grant writing opportunities. It is planned that the committee will consist of professional pharmacists, researchers, academicians, and other health professionals who work in the area of pharmacy practice and who have ties to the College of Health Sciences. It is anticipated that PharmD students will perform clinical placements under the supervision of licensed pharmacist preceptors. CHS maintains working relationships with several hospitals and clinics in the Merrimack Valley, and expects to establish new relationships with additional pharmacies for student clinical placements.

PROGRAM EFFECTIVENESS

Goal	Measurable Objective	Strategy for Achievement	Timetable	Assessment
1. Earn program accreditation.				
	Achieve accreditation from the Accreditation Council for Pharmacy Education (ACPE).	Continue to follow the guidelines for pre-candidate and candidate status for new PharmD programs. Continue communications with the Director of Professional Degree Program Accreditation and the accreditation team at ACPE.	First 5-6 years of program. Follow ACPE timeline.	ACPE will assess via on-site evaluation visits and reports.

Goal	Measurable Objective	Strategy for Achievement	Timetable	Assessment
1. Produce high quality graduates.				
	Recruit high quality applicants from a regional, national and international pool consistent with target timeline.	<p>Market PharmD, via posters and flyers, to high schools, colleges, and baccalaureate prepared pharmacists.</p> <p>Announce PharmD in academic and professional organization newsletters and professional meetings.</p> <p>Include PharmD announcement in alumni publications and at alumni events.</p> <p>Recruit through international partner institutions.</p> <p>Develop a strong web presence.</p>	Market 3-9 months before program launch, then ongoing.	Annual class profile; perform trend analysis.
	Retain and graduate high quality students at projected rates within projected timelines.	<p>Continually monitor student progress.</p> <p>Manage course offerings.</p> <p>Manage faculty/staff support.</p>	Ongoing.	Track time to graduation and perform trend analysis.
	Facilitate employment of graduates in quality positions.	<p>Develop campus recruiting fair.</p> <p>Support industry networking.</p> <p>Support professional conference participation.</p>	Ongoing.	Track salaries, placements, and time to employment of graduates; perform trend analysis.
	Produce competitive graduates.	<p>Ensure curriculum and clinical experiences exceed minimum ACPE standards.</p> <p>Obtain feedback from employers about readiness of graduates and revise curriculum as needed.</p>	Ongoing.	Track graduates' employment and scholarly productivity; perform trend analysis.
	Promote success on licensing examination.	Ensure that curriculum meets licensing requirements.	Ongoing.	Track graduates' licensing scores and modify curriculum as indicated.

Goal	Measurable Objective	Strategy for Achievement	Timetable	Assessment
	Place 100% of graduates in the workforce.	<p>Produce high-quality graduates with superior skill sets.</p> <p>Create and/or leverage formal partnerships with potential employers to enhance student success with job placement.</p> <p>Develop practice and collaborative connections with pharmacies in order to create bridges between UMass Lowell and potential places of employment.</p> <p>Organize conferences and programs at UMass Lowell and off-site at institutions and centers to stimulate interactions with potential employers.</p>	Ongoing.	Track graduates' employment; perform trend analysis.
2. Elevate research productivity of faculty.				
	Increase refereed journal publications.	<p>Support scholarly and clinical activity of faculty.</p> <p>Recruit faculty who have pharmacy practice experience and a record of scholarly activity and publication in pharmacy practice.</p>	Ongoing.	Track quality and quantity of faculty publications; perform trend analysis.
	Increase grant generation.	<p>Identify and support grant writing opportunities.</p> <p>Develop collaborative proposals for research and training of pharmacists.</p>	Ongoing.	Track annual grant proposals, acceptances, and expenditures; perform trend analysis.
	Increase faculty participation in professional conferences.	<p>Support professional travel.</p> <p>Encourage collaborative research, publication and other scholarly activities.</p>	Ongoing.	Track quantity and quality of annual professional presentations/ proceedings; perform trend analysis.
3. Recruit strong faculty.				

Goal	Measurable Objective	Strategy for Achievement	Timetable	Assessment
	Recruit faculty with high scholarly/applied research productivity with strong clinical experience.	Recruit faculty to participate in pharmacy program. Recruit faculty at high ranks and with established scholarly records. Recruit faculty with strong educational and clinical experience profiles.	Ongoing.	Evaluate scholarly output of faculty candidates, new faculty research records, clinical experience, and educational profiles.
	Generate a wide and strong pool of faculty applicants.	Advertise widely including information about the Pharmacy program.	Ongoing.	Track applicant pool quantity and quality, including academic, clinical and research profiles.
4. Maintain high visibility of the program.				
	Generate high Pharmacy faculty representation in the local press.	Publicize faculty representation in press. Proactively advertise faculty strengths to local press.	Ongoing.	Track local publications involving faculty.
	Increase and elevate faculty participation at professional conferences.	Fund professional travel to conferences.	Ongoing.	Track faculty activities at conferences, including keynote invitations and presentations.
	Increase fundraising.	Publicize faculty/student scholarly activities/research to pharmacy companies, at alumni events and in the press. Publicize innovative collaborative clinical models for pharmacy practice.	Ongoing.	Track donations and corporate grants; perform trend analysis.
	Host professional conferences in pharmacy and pharmaceutical sciences at UMass Lowell.	Advertise venues and resources widely.	Ongoing.	Track number, quality and participation of conferences hosted.

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

Dr. Mark Decerbo, PharmD., Associate Professor of Pharmacy Practice and Clinical Associate Professor of Medicine at the University of Nevada School of Medicine and Dr. Jingyang Fan, PharmD., Clinical Associate Professor of Pharmacy Practice at Southern Illinois University Edwardsville's School of Pharmacy, reviewed the PharmD proposal. Dr. Decerbo and Dr. Fan each submitted a report on August 4, 2014.

The reviewers found the proposal to be well constructed and the offerings to be thoroughly researched. They found evidence in the proposal for an existing demand for the PharmD program, sufficient faculty expertise and an adequate curriculum to prepare students to become practicing pharmacists. The reviewers recommended curricular changes, including adjustments to course sequence and increasing credit hours for pharmacotherapy courses. The review team also found the admission requirements to differ for transfer students than for first year students and suggested these be better aligned by adding an interview to the first year admissions process, as proposed for transfer applicants, and omitting the B grade minimum requirement from the transfer admissions process and replace it with the C grade minimum required of first year admission candidates. The review team's comments included the recommendation that a coordinator should be hired for the experiential learning component to better supervise, organize and track the quality and availability of student placements.

UML responded that suggestions for curricular adjustments would be reviewed and agreed that the experiential component of the program requires further definition, noting that these elements will be required for accreditation as the program is developed. UML noted that they will change the admissions criteria such that first-year and transfer admission requirements are the same. UML was also in agreement with the suggestion that an experiential learning coordinator will be needed.

STAFF ANALYSIS AND RECOMMENDATION

Staff thoroughly reviewed all documentation submitted by the **University of Massachusetts Lowell** and external reviewers. Staff recommendation is for approval of the proposed **Doctor of Pharmacy**.

ATTACHMENT A: CURRICULUM

Major Required (Core) Courses (Total courses required = 27)		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
36.709	Pharmacogenomics Principles and Applications	3
PHRM.470	Pharmacokinetics	3
PHSC.612	Pharmacoepidemiology	3
PHRM.101	Freshman Pharmacy Seminar	1
PHRM.103	Pharmacy Law and Ethics	3
PHRM.201	Introduction to Pharmacy	3
PHRM.205	Principles of Economics and Pharmacoeconomics	3
PHRM.301	Pharmaceutics I	3
PHRM.302	Pharmaceutics II	3
PHRM.303	Alternative and Complementary Therapies	3
PHRM.311	Health Assessment and Diagnostic Reasoning	4
PHRM.312	Medication Safety	3
PHRM.402	Pharmacotherapy I	3
PHRM.403	Pharmacotherapy II	3
PHRM.410	Introduction to Pharmacy Practice Experience (IPPE) I	4
PHRM.420	Drug Dispensing and Distribution	3
PHRM.421	Pharmacy Management	3
PHRM.471	Introduction to Pharmacy Practice	3
PHRM.501	Pharmacotherapy III	3
PHRM.502	Pharmacotherapy IV	3
PHRM.510	IPPE II	4
PHRM.520	IPPE III	4
PHRM.555	Advanced Practice Management	3
PHRM.560	Introduction to Advanced Pharmacy Practice	3
PHRM.566	Care of Special Populations	3
PHRM.601	Advanced Pharmacy Practice Experience (APPE)	12
PHRM.602	Advanced Pharmacy Practice Experience (APPE)	12
	Subtotal Core Credits	101
Other Required Courses in Related Subject Areas (Total courses required = 17)		
19.503	Toxicology and Health	3
31.305	Introduction to Epidemiology	3
31.321	Health Care Systems	3
33.319	Pathophysiology	3

35.211	Basic Clinical Microbiology and Pathology	3
35.213	Basic Clinical Microbiology and Pathology Lab	1
35.251	Physiological Chemistry I	3
35.252	Physiological Chemistry II	3
35.253	Physiological Chemistry I Lab	1
35.254	Physiological Chemistry II Lab	1
35.435	Medical and Clinical Genetics	3
36.331	Clinical Immunology	3
36.351	Human Biochemistry	3
81.567	Molecular Biology	3
PHRM.472	Medicinal Chemistry	3
92.283	Introduction to Statistics	3
PHRM.306	Research Methods	3
	Subtotal Related Credits	45
Elective Course Choices (Total courses required = 0)		
	Subtotal Elective Credits	0
Distribution of General Education Requirements (Total courses required = 10) (Course Numbers, Titles, and Credits)		
Arts and Humanities, including Literature and Foreign Languages (1 course): XX.XXX - Arts and Humanities Elective (3 credits)		
Mathematics (1 course): 92.131 - Calculus I (3 credits)		
Science and Technology (3 courses): 35.101/103 - Human Anatomy and Physiology I with lab (4 credits) 35.102/104 - Human Anatomy and Physiology II with lab (4 credits) 35.210 - Nutrition and Health (3 credits)		
Social Sciences (3 courses): 47.101 - General Psychology (3 credits) 48.101 - Introduction to Sociology (3 credits) 30.306 - Introduction to Gerontology (3 credits)		
Writing (2 courses): 42.101 - College Writing I (3 credits) 42.102 - College Writing II (3 credits)		
	Subtotal General Education Credits	32
Curriculum Summary		
Total number of courses required for the degree	54	
Total credit hours required for degree	178	
Prerequisite or Other Additional Requirements:		

ATTACHMENT B: BUDGET

REVENUE ESTIMATES											
	Year 1		Year 2		Year 3		Year 4		Year 5		
	2017		2018		2019		2020		2021		
<i>Full-Time Tuition Rate: In-State</i>	\$1,637		\$1,637		\$1,637		\$1,637		\$1,637		
<i>Full-Time Tuition Rate: Out-State</i>	\$6,425		\$6,425		\$6,425		\$6,425		\$6,425		
<i>Mandatory Fees per Student (In-state)</i>	\$23,500		\$23,500		\$23,500		\$23,500		\$23,500		
<i>Mandatory Fees per Student (out-state)</i>	\$33,000		\$33,000		\$33,000		\$33,000		\$33,000		
<i>FTE # of New Students: In-State</i>	50		50		50		50		50		
<i>FTE # of New Students: Out-State</i>	25		25		25		25		25		
<i># of In-State FTE Students transferring in from the institution's existing programs</i>	0										
<i># of Out-State FTE Students transferring in from the institution's existing programs</i>	0										
Tuition and Fees											
First Year Students	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	
Tuition											
In-State	\$81,850	\$0	\$81,850	\$0	\$81,850	\$0	\$81,850	\$0	\$81,850	\$0	
Out-of-State	\$160,625	\$0	\$160,625	\$0	\$160,625	\$0	\$160,625	\$0	\$160,625	\$0	

Mandatory Fees	\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000	\$0
<u>Second Year Students</u>										
Tuition										
In-State			\$81,850	\$0	\$81,850	\$0	\$81,850	\$0	\$81,850	\$0
Out-of-State			\$160,625	\$0	\$160,625	\$0	\$160,625	\$0	\$160,625	\$0
Mandatory Fees			\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000	\$0
<u>Third Year Students</u>										
Tuition										
In-State					\$81,850	\$0	\$81,850	\$0	\$81,850	\$0
Out-of-State					\$160,625	\$0	\$160,625	\$0	\$160,625	\$0
Mandatory Fees					\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000	\$0
<u>Fourth Year Students</u>										
Tuition										
In-State							\$81,850	\$0	\$81,850	\$0
Out-of-State							\$160,625	\$0	\$160,625	\$0
Mandatory Fees							\$2,000,000	\$0	\$2,000,000	\$0
Gross Tuition and Fees	\$2,242,475	\$0	\$4,484,950	\$0	\$6,727,425	\$0	\$8,969,900	\$0	\$8,969,900	\$0
Grants	\$0	\$0								
Contracts	\$0	\$0								
Campus budget allocation	\$0	\$0								
Other Revenues (specify)	\$0	\$0								

Total	\$2,242,475	\$0	\$4,484,950	\$0	\$6,727,425	\$0	\$8,969,900	\$0	\$8,969,900	\$0
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EXPENDITURE ESTIMATES											
	Year 1 2017		Year 2 2018		Year 3 2019		Year 4 2020		Year 5 2021		
	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	New Expenditures required for Program	Expenditures from current resources	
Personnel Services											
Faculty	\$600,000		\$1,200,000		\$1,800,000		\$2,400,000		\$2,400,000		
Administrators: Dean, Associate Dean, Department Chair	\$480,000		\$480,000		\$480,000		\$480,000		\$480,000		
Support Staff	\$210,000		\$265,000		\$325,000		\$380,000		\$380,000		
Others	\$0		\$0		\$0		\$0		\$0		
Fringe Benefits 35%	\$451,500		\$680,750		\$911,750		\$1,141,000		\$1,141,000		
Total Personnel	\$1,741,500		\$0 \$2,625,750		\$0 \$3,516,750		\$0 \$4,401,000		\$0 \$4,401,000		
Part-time Personnel Services											
Part-time Faculty	\$100,000		\$150,000		\$200,000		\$250,000		\$300,000		
Clinical Preceptors					\$75,000		\$150,000		\$150,000		
Student Workers: hourly	\$15,000		\$20,000		\$25,000		\$30,000		\$35,000		
Fringe Benefits 0.031%	\$3,565		\$5,270		\$9,300		\$13,330		\$15,035		

Total Part-time Personnel	\$118,565	\$0	\$175,270	\$0	\$309,300	\$0	\$443,330	\$0	\$500,035	\$0
Operating Expenses										
Supplies	\$20,000		\$50,000		\$50,000		\$50,000		\$50,000	
Library Resources: see resource discussion in narrative	\$10,000		\$10,000		\$10,000		\$10,000		\$10,000	
Marketing/Promotional Expenses	\$25,000		\$25,000		\$25,000		\$25,000		\$25,000	
Laboratory Expenses	\$25,000		\$50,000		\$75,000		\$75,000		\$75,000	
Accreditation Expenses	\$35,000		\$35,000		\$35,000		\$35,000		\$35,000	
Other (specify): Recruiting faculty and students	\$25,000		\$25,000		\$25,000		\$25,000		\$25,000	
Total Operating Expenses	\$140,000	\$0	\$195,000	\$0	\$220,000	\$0	\$220,000	\$0	\$220,000	\$0
Student Assistance										
Teaching Assistantship Stipends	\$50,000		\$100,000		\$150,000		\$200,000		\$250,000	
TA Tuition Remission	\$29,098		\$58,196		\$87,294		\$116,392		\$145,490	
Scholarships: 10% of Fees	\$224,248		\$448,495		\$672,743		\$896,990		\$896,990	
Total Student Assistance	\$303,346	\$0	\$606,691	\$0	\$910,037	\$0	\$1,213,382	\$0	\$1,292,480	\$0
Capital										
Facilities / Campus recharges							\$0		\$0	
Equipment	\$250,000		\$150,000		\$150,000		\$150,000		\$150,000	
Other: Faculty start-up	\$250,000		\$250,000		\$250,000		\$250,000		\$250,000	
Total Capital	\$500,000	\$0	\$400,000	\$0	\$400,000	\$0	\$400,000	\$0	\$400,000	\$0

Total Expenditures	\$2,684,846	\$0	\$3,827,441	\$0	\$5,046,787	\$0	\$6,234,382	\$0	\$6,313,480	\$0
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BUDGET SUMMARY OF NEW PROGRAM ONLY

	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021
Total of newly generated revenue	\$2,242,475	\$4,484,950	\$6,727,425	\$8,969,900	\$8,969,900
Total of additional resources required for program	\$2,684,846	\$3,827,441	\$5,046,787	\$6,234,382	\$6,313,480
Excess/ (Deficiency)	(\$442,371)	\$657,509	\$1,680,639	\$2,735,518	\$2,656,420

Pharmacy Practice Budget Justification

Revenue:

Tuition and Fees:

The revenue for tuition and fees varies for students in the professional phase of the PharmD program. Residents will pay \$25K and Non-residents will pay \$39.5K; these rates are in line with regional competitors. We anticipate that the majority of students will be in state residents with 25% non-residents or international students. The total number of students admitted per year is planned as 50 residents and 25 non-residents. By year 4, we expect a total of 300 students across the four professional years.

Expenditures:

Administration: Leadership will be key to successful planning and implementation of the pharmacy program. The Leadership team will consist of the Dean, Associate Dean and Chair of Pharmacy Practice. The Dean will be hired to serve as the primary voice of the PharmD program and provide guidance for the accreditation process and overall management of the School of Pharmacy as well as financial guidance of the program.

The Associate Dean will provide oversight of marketing and recruiting of graduate students and will also support accreditation efforts.

The Chair of Pharmacy Practice will be essential to hiring the founding faculty of the program as well as designing and planning teaching labs will be hired.

Support Staff:

Three types of staff will be hired: administrative, student support and laboratory support. A total of 7 staff members are anticipated.

Faculty:

20 faculty with unique skills in pharmacy practice and specialized clinical teaching will be hired; 5 each for the first 4 years as the curriculum is implemented.

Part-time Personnel:

- **Part-time Faculty:** Additional faculty will be needed to provide supervision and teaching in the clinical venues as well as to teach specialized courses.
- **Clinical Preceptors:** Clinical pharmacists who supervise students on site will receive a stipend for their education of the students.
- **Student Workers:** Hourly student workers will assist with administrative and laboratory tasks.

Operating Budget:

The operating budget will cover customary operating expenses such as office supplies, small equipment, laboratory expenses, travel and events and accreditation expenses.

Marketing/Promotional Expenses:

As a new program, marketing will be important to promote awareness of the program regionally and nationally. Marketing activities will be essential to recruit talented students.

Student Support:

- Three types of student support are envisioned: teaching assistantship stipends, tuition remission and scholarships.
- Teaching Assistantships will support the laboratory classes. Graduate assistant funding will be used to recruit students in the Pharmaceutical Sciences PhD program. These students will receive a stipend.
- Tuition Remission: All students on an assistantship will have their tuition covered.
- Scholarships: To facilitate the ability of financially disadvantaged students to attend pharmacy school, scholarships and other forms of student aid will be provided. Scholarships are estimated at 10% of total fees.

Equipment/Lab Supplies:

The PharmD program will need various types of equipment, ranging from small counter top equipment for the lab to large scale high-fidelity human simulators. Equipment in all health fields is routinely becoming more advanced and student training programs have a responsibility of keeping abreast of equipment used in practice.

Faculty and Student Recruitment:**Recruitment Expenses:**

Identifying and attracting the best faculty and students will be an essential element of success of the program. The budget incorporates

funds for advertising and travel for recruiting. This will remain as an annual budget item to ensure a strong ongoing recruitment process. Student recruiting will be an annual process. For faculty, a 10% turnover rate for faculty is anticipated after the first 5 years.

Start-up Packages:

Faculty in Pharmacy Practice will need start-up as appropriate for a non-lab intensive research agenda in clinical practice and education. \$50K per faculty member is planned.

Budget Balance:

It is not unusual for a new program to need additional funds from the university in the initial years before a critical mass of faculty and students is achieved. The program shows a deficit of approximately \$440K in Year 1. By Year 2, the program will generate a surplus of \$657K. In year 5, the program has a surplus of \$2.5M.

ATTACHMENT C: FACULTY

Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	# of sections	Division or College of Employment	Full- or Part-time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Ackerson, Leland ScD, Social Epidemiology Associate Professor	✓	<ul style="list-style-type: none"> • Intro to Epidemiology • Service Learning in Comm Health • Community Health & Environment • Research Methods/ Public Health • Socio-Eco Health Assessment 	(1) (1) (1) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Community Health and Sustainability	• Main campus
Barile, Renee PhD, Nutrition Biochemistry Lecturer		<ul style="list-style-type: none"> • Human Nutrition • Nutrition and Health • Obesity & Weight Control • Life Cycle Nutrition 	(1) (7) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Bello, Dhimiter ScD, Occupational Hygiene Associate Professor	✓	<ul style="list-style-type: none"> • Toxicology & Health • Eval of Work Environment Haz 	(1) (1)	College of Health Sciences	Part-Time	Part-Time, Work Environment	• Main campus
Bruce, Alease PhD, Biomedical Physiology Professor	✓	<ul style="list-style-type: none"> • Anatomy & Physiology I, with lab • Anatomy & Physiology II, with lab • Clinical Immunology • Human Dev & Pathophysiology • Advanced Pathophysiology • Intro Public Health & PH Lab • Advanced Clinical Chemistry • Human Nutrition 	(2) (2) (1) (3) (1) (1) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus

Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	# of sections	Division or College of Employment	Full- or Part-time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Dulak, Arlee PhD, Cellular & Molecular Pathology Lecturer		<ul style="list-style-type: none"> • Anatomy & Physiology 1, with lab • Anatomy & Physiology 2, with lab • Basic Clinical Microbiology & Pathology, with lab • Advanced Pathophysiology • Infectious Disease 	(2) (3) (1) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Garelnabi, Mahdi PhD, Clinical Biochemistry Assistant Professor		<ul style="list-style-type: none"> • Physiological Chem I • Physiological Chem II • Clin Lab Instrumentation • Biochemistry of Lipids 	(1) (1) (1) (2)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Gautam, Ramraj PhD, Health Sciences and Nursing Lecturer		<ul style="list-style-type: none"> • Intro to Gerontology • Strat for Acad Success 	(6) (8)	College of Health Sciences	Part-Time	Part-Time, Nursing	• Main campus
Geiger, Brenda PhD, Pharmacology and Experimental Therapeutics Lecturer		<ul style="list-style-type: none"> • Physiol Chemistry Lab II 	(3)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
He, Guixin PhD, Microbiology Associate Professor	✓	<ul style="list-style-type: none"> • Basic Clinical Microbiology & Pathology • Infectious Disease 	(3) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Horta, Javier PhD, Organic Chemistry Lecturer		<ul style="list-style-type: none"> • Physiological Chem I, with lab • Physiological Chem II, with lab • Organic Reactions & Structure, with lab 	(2) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus

Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	# of sections	Division or College of Employment	Full- or Part-time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Keyes, Mary Kate MS, Nutrition Communication Visiting Professor		<ul style="list-style-type: none"> • Human Nutrition • Nutrition and Health • Human A&P Lab II 	(1) (6) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Namm, Theodore PhD, Genetics Professor	✓	<ul style="list-style-type: none"> • Anatomy & Physiology I, with lab • Anatomy & Physiology II, with lab 	(2) (2)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Palladino, Kristin MS, Clinical Laboratory Science Lecturer		<ul style="list-style-type: none"> • Basic Clinical Micro & Path Lab • Clinical Lab Instrumentation Lab • Medical Bacteriology Lab • Molecular Diagnostics Lab 	(1) (1) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Poikonen, John PharmD Visiting Lecturer		<ul style="list-style-type: none"> • Health Care Systems • Health Informatics • Healthcare Information Systems • Technology in Public Health 	(1) (2) (3) (1)	College of Health Sciences	Part-Time	Part-Time, Community Health and Sustainability	• Main campus
Williams, Michelle MS, Physical Therapy Lecturer		<ul style="list-style-type: none"> • Anatomy & Physiology I, with lab • Anatomy & Physiology II, with lab 	(3) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus
Wilson, Thomas PhD, Biological Sciences Associate Professor	✓	<ul style="list-style-type: none"> • Human Nutrition • Physiological Chem I • Human Biochemistry • Physiological Chem II • Nutrition and Metabolism 	(1) (1) (2) (1) (1)	College of Health Sciences	Part-Time	Part-Time, Clinical Laboratory & Nutritional Sciences	• Main campus