



April 12, 2021

Dr. Michael Baumgartner  
Executive Director  
Coordinating Commission for  
Postsecondary Education  
140 N. 8<sup>th</sup> Street, Suite 300  
Lincoln, NE 68509

Dear Michael:

Enclosed is a copy of the proposal to create the Bachelor of Science in Pharmaceutical Sciences in the Department of Chemistry in the College of Arts and Sciences at UNO. The proposal was approved by the Board of Regents at the April 9, 2021 meeting. Also enclosed is the Proposal for New Instructional Program Form 92-40.

Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Susan M. Fritz". The signature is fluid and cursive, with the first name "Susan" being the most prominent.

Susan M. Fritz, PhD  
Executive Vice President and Provost

Enclosures

c: Chancellor Jeffrey Gold  
Senior Vice Chancellor Sacha Kopp  
Dean David Booker, College of Arts and Sciences  
Vice Provost David Jackson

**COORDINATING COMMISSION  
FOR POSTSECONDARY EDUCATION**

140 N. 8<sup>th</sup> Street, Suite 300  
Lincoln, NE 68508

Telephone: (402) 471-2847  
FAX: (402) 471-2886

**PROPOSAL FOR NEW INSTRUCTIONAL PROGRAM**  
Form 92-40

**SECTION I**

Institution Submitting Proposal: University of Nebraska at Omaha

Title of Program: Pharmaceutical Sciences

CIP Code: 51.2010

Organizational Unit in which program will be located:

Department of Chemistry  
College of Arts and Sciences

Name of contact person in the event additional information is needed: Dr. Susan M. Fritz

Telephone: 402-472-5242

Degree, Diploma, or Certificate to be offered (use separate submittal for each level):

Bachelor of Science in Pharmaceutical Sciences

Proposed date to initiate program: When approved by the Coordinating Commission

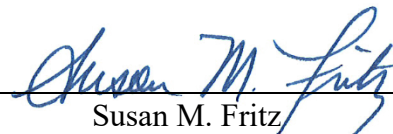
List the location(s) where this program will be offered: UNO

If the program has a projected ending date, please so indicate:

Date approved by Governing Board: April 9, 2021

(Attach all documents related to this proposal upon which the Governing Board made its decision to approve the proposal.)

Chief Executive Officer's or other Authorized Officer's signature: \_\_\_\_\_

  
Susan M. Fritz

TO: The Board of Regents Addendum XI-A-10  
Academic Affairs Committee

MEETING DATE: April 9, 2021

SUBJECT: Creation of the Bachelor of Science in Pharmaceutical Sciences in the Department of Chemistry in the College of Arts and Sciences at the University of Nebraska at Omaha

RECOMMENDED ACTION: Approval to create the Bachelor of Science (BS) in Pharmaceutical Sciences in the Department of Chemistry in the College of Arts and Sciences at the University of Nebraska at Omaha (UNO)

PREVIOUS ACTIONS: The UNO Bachelor of Arts and Bachelor of Science degrees in Chemistry were established prior to modern records of Board approvals.

EXPLANATION: The proposed 120-credit hour BS in Pharmaceutical Sciences is designed for students interested in Doctor of Pharmacy and Pharmaceutical Sciences graduate programs, or for entry-level careers such as sales representatives and pharmaceutical research technicians. The program was created to provide a pipeline of well-qualified candidates for admission to the University of Nebraska Medical Center's (UNMC's) College of Pharmacy (and other pharmacy schools) and to contribute towards building the healthcare provider/biomedical scientists' workforce, a growing employment segment given the increased demand to develop new treatments and medicines. Instructional responsibilities will be shared between UNO and UNMC. UNMC will be reimbursed for coursework taught by their faculty, and College of Pharmacy faculty teaching in this program will have formal courtesy (adjunct) appointments and provide instruction under the auspices of UNO.

This proposal has been reviewed by the Council of Academic Officers; it also has been reviewed by the Academic Affairs Committee.

PROGRAM COST: \$100,000 for Year 1; \$530,914 over five years

SOURCE OF FUNDS: UNO Office of Academic Affairs funds; tuition and fees

SPONSORS: Sacha E. Kopp  
Senior Vice Chancellor for Academic Affairs

Jeffrey P. Gold, Chancellor  
University of Nebraska at Omaha

RECOMMENDED: /s/ Susan M. Fritz  
Executive Vice President and Provost

DATE: March 5, 2021



February 22, 2021

Ted Carter, President  
University of Nebraska  
3835 Holdrege Street  
Lincoln, NE 68583  
president@nebraska.edu

Dear President Carter:

The University of Nebraska at Omaha requests the creation of a BS in Pharmaceutical Sciences and the Samuel Bak Academic Learning Center.

The proposed BS in Pharmaceutical Sciences will be offered by the UNO College of Arts and Sciences, with some coursework delivered in collaboration with the UNMC College of Pharmacy. The BS in Pharmaceutical Sciences is responsive to efforts to increase graduates in high-skilled and high-paying jobs. There are two major pathways for graduates of the proposed BS in Pharmaceutical Sciences. One career pathway includes the pipeline for postgraduate education and prepares students for patient care. The other career pathway prepares graduates for entry-level H3 jobs in the pharmaceutical and medical industry.

The proposed Samuel Bak Academic Learning Center will serve as a campus collaboration hub for scholarship, academic curricula, community engagement, and educational activities dedicated to human rights, genocide studies, the Holocaust, and artistic work. The Samuel Bak Museum, housed within the Academic Learning Center, will be home to over 500 of Samuel Bak's works of art.

I fully support these proposals and request your support as well.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jeffrey P. Gold'.

Jeffrey P. Gold, M.D.  
Chancellor

JPG/kd

cc: Susan Fritz, Ph.D., Executive Vice President and Provost  
Sacha Kopp, Ph.D., Senior Vice Chancellor, Academic Affairs  
Deborah Smith-Howell, Ph.D., Associate Vice Chancellor of Academic Affairs and Dean of Graduate Studies

## **Bachelor of Science in Pharmaceutical Sciences Proposal**

### **Descriptive Information**

- Name of institution proposing the program: The University of Nebraska at Omaha
- Name of the program proposed: Pharmaceutical Sciences
- Degrees/credentials to be awarded graduates of the program: Bachelor of Science.
- Other programs offered in this field by this institution: BA/BS in Chemistry with concentrations in Chemistry Education and Medicinal Chemistry
- CIP code: 51.2010
- List the administrative units for the program: Chemistry, College of Arts and Sciences
- Proposed delivery site(s), and type(s) of delivery, if applicable: In person, University of Nebraska at Omaha and University of Nebraska Medical Center, College of Pharmacy
- Proposed date (term/year) the program will be initiated: Upon approval

### **1) Description and Purpose of the Proposed Program**

As the population of the United States (US) ages, the demand for pharmacists and pharmaceutical scientists is expected to increase for two main reasons: life expectancy is increasing and the incidence of chronic disease is rising (“living longer, but sicker”). The demand for the development and approval of prescription drugs increases and generates a national need for a workforce for the pharmaceutical industry. Future entry-level scientists and PhD-level researchers in drug development and related careers, as well as future pharmacists will benefit from a major with specialization in pharmaceutical sciences that begins at the undergraduate level. The Bachelor of Science in Pharmaceutical Sciences is intended to provide a comprehensive undergraduate education for students interested in Doctor of Pharmacy and Pharmaceutical Sciences graduate programs or for entry-level careers with a Bachelor of Science degree as sales representatives or pharmaceutical research technicians. A purpose of the program is to provide a pipeline of well-qualified candidates for admission to the College of Pharmacy at UNMC to build a workforce for biomedical and biochemical scientists for the development, testing, and FDA-approval of new drugs. The program also will provide a foundational education in step with projections for how the work of pharmacists will change over the next ten years.

The UNO Bachelor of Science in Pharmaceutical Sciences will be comprised of coursework delivered by faculty in Chemistry (CHEM), College of Arts and Sciences at the University of Nebraska at Omaha (UNO) and at the College of Pharmacy (CoP), University of Nebraska Medical Center (UNMC). The program will engage students in introductory pharmacy-related coursework beginning in the first year so that students connect with the faculty in the CoP while pursuing the foundational science, College of Arts and Sciences and university-level degree requirements at UNO. The faculty in both Colleges will collaborate and deliver a faculty

research seminar course (PHSC 691) on the UNO campus to build connections and continuity of the program. The undergraduates in the program will engage with CHEM or CoP faculty for two semesters of required research experience. Graduates will have the prerequisites for entrance into CoP PharmD program.

The rationale for this specific degree program arose from observations and experiences that administrators at UNMC and faculty in College of Pharmacy had with comparable programs at University of Toledo and The Ohio State University. The degree program was shaped by collaboration between faculty in UNO Chemistry and Biology and faculty in the College of Pharmacy. We reviewed leading programs across the nation to inform the design of the proposed degree program and adapted these to the mission and strategic goals of UNO and UNMC. As this program develops, concentrations tailored towards the industry jobs may be created. This could include specific pathways for sales, entry level research, and postgraduate education.

## **2) Program of Study**

The admission requirements to the program of study are the admission requirements to the University of Nebraska at Omaha.

Major topics in this program include chemistry, biology, physics, pharmaceuticals and development of drugs, medicinal chemistry. Unless indicated otherwise, all courses are existing courses.

Curriculum (120 SCH), including 73 STEM credit hours and 51 upper-division credits.

### Chemistry Courses (28 SCH) – all required.

- CHEM 1180/1184 Gen. Chem I and Lab (4 SCH) (Pharm D Admission Requirement)
- CHEM 1190/1194 Gen Chem II and Lab (4 SCH) (Pharm D Admission Requirement)
- CHEM 2250 Org Chem I (3 SCH) (Pharm D Admission Requirement)
- CHEM 2260/2274 Org Chem II and Lab (5 SCH) (Pharm D Admission Requirement)
- CHEM 2400/2404 Quant. Analysis and Lab (4 SCH) (Pharm D Admission Requirement)
- CHEM 4650/4654 Biochemistry I and Lab (4 SCH) (Pharm D Admission Requirement)
- CHEM 4660/4664 Biochemistry II and Lab (4 SCH)

### Pharmacy Courses (21 SCH) – all required

- Intro Pharm Sci Survey (1 SCH) (new course)
- Major Electives (Possible options: PHPR 560 Pharmacy and Health Care; PHPR; PHSC 520 Pharmaceutical Biochemistry; PHSC 570 Pharmaceutical Sci I; PHPR 552 Pharmaceutical Care I; PHSC 626 Medicinal Chemistry I) (6 SCH)
- Foundations Molecules to Medicine 1 (3 SCH) (new course)
- Applied Molecules to Medicine 2 (3 SCH) (new course)
- PHSC 550 Intro to Pharm Sci UNMC (3 SCH)
- Contemp Med Use (2 SCH) (not a science course) (new course)

- PHSC 691 – FacRes (1 SCH)
- Pharm Sci Research (1 SCH) (new course)
- Pharm Sci Research (1 SCH) (new course)

STEM Cognates (23 SCH) – all required.

- Biology 1450 (5 SCH) (Pharm D Admission Requirement)
- Physics I PHYS 1110/1154 (5 SCH) (Pharm D Admission Requirement)
- Biol 2740, 2840 Physiology and Anatomy I,II (with lab) (8 SCH) (Pharm D Admission Requirement)
- MATH 1940 Calculus for Biomed or MATH 1950 (5 SCH) (Pharm D Admission Requirement). This class will also fulfill the quantitative literacy fundamental skill requirement.

Additional University Fundamental skills and General Education<sup>1</sup>

- Statistics (3 SCH) (Pharm D Admission Requirement). This class will be required.
- ENGL I and II (6 SCH) (Pharm D Admission Requirement). This will also fulfill the fundamental skill requirement.
- NSCI 3940 (2 SCH). This class will also fulfil the writing in the discipline requirement.
- Public Speaking (3 SCH). (Pharm D Admission Requirement). This class will also fulfill the fundamental skill requirement.
- Humanities (include Ethics) (9 SCH) (University Gen Ed)
- Social Sciences (9 SCH) (University Gen Ed)
- Diversity (may select Humanities or Social Sciences Gen Eds that also satisfy Diversity GenEd) (9 SCH)
- College of Arts and Sciences Breath Requirements (10 SCH)<sup>2</sup>

### **3) Faculty, Staff, and other Resources**

The Department of Chemistry will need to hire one additional faculty member to support the courses. The position will be fully funded by the Office of Academic Affairs. With the hiring of this faculty member, all UNO classes will have capacity for additional enrollments. There are six new courses that will be developed at UNMC (11 credits total).

Furthermore, the Durham Science Building will be undergoing renovations which are planned to conclude in spring 2022. No additional physical, informational, or instructional resources are needed to support the proposed BS in Pharmaceutical Sciences.

### **4) Evidence of Need and Demand**

The proposed program is responsive to efforts to increase graduates in high-skilled and high-paying jobs. There are two major pathways for graduates of the proposed BS in Pharmaceutical

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<sup>1</sup> Minimum of 9 credit hours in humanities (ethics preferred), social sciences.

<sup>2</sup> Use toward College breadth: minor (option 1) or additional GenEd (option 2); one course will need to fulfill Hum/Soc Sci + Diversity

Sciences. One career pathway includes the pipeline for postgraduate education and prepares students for patient care. The other career pathway prepares graduates for entry-level H3 jobs in the pharmaceutical and medical industry.

The first pathway would provide a pipeline to graduates interested in pursuing further professional education with the goal of providing patient care (PharmD) and to graduates interested in pursuing advanced training to become a medical research scientist. The proposed BS in Pharmaceutical Sciences will contribute to ensuring well-qualified applicants to programs offered by the UNMC College of Pharmacy, including the PharmD program and PhD and MS programs in Pharmaceutical Sciences. Also, the proposed program will provide students who plan to enter health professional schools a major option in addition to the commonly selected majors, such as Biology, Chemistry, Molecular and Biomedical Biology, and Neuroscience.

#### Workforce demand for PharmD graduates.

The proposed degree program will provide a pipeline of well-trained applicants for College of Pharmacy's PharmD. Program. Over the next ten year, more pharmacists will work in hospital, outpatient clinics, and other non-retail positions. These positions will have more patient interaction and more interaction with healthcare professionals. A bachelor of science from the College of Arts and Sciences will emphasize soft skills as well as the foundational sciences courses needed to enter a PharmD. Program at UNMC.

In contrast to the national projections which estimate a 3% decline from 2019-2029 in the demand for pharmacists (due to mail order and online prescription services), the regional growth is projected at +1.9% (<https://www.projectionscentral.com/Projections/LongTerm>) and increases are predicted for the region except for Kansas (CO 14.9%, IA 2.5%, KS, -2.7%, MN 2.7%, MO 2.7%, ND 2.8%, SD 2.6%).

#### Workforce demand for medical scientists.

Prior to the COVID-19 pandemic, the long-term job outlook for medical scientists who contribute to the development of drugs (includes pharmaceutical scientists) is projected to grow at 6% from 2019-2029 compared to 4% for all occupations (<https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm>). An increase of 8.8 % is predicted for Nebraska over 2018-2028 (<https://www.projectionscentral.com/Projections/LongTerm>). A range of 6.5% to 22.8 percent increases are predicted for surrounding states (CO 22.8%, IA 11.4%, KS 6.5%, MN 7.1%, MO 8.7%, ND 20.0%, SD 12.5%). Graduates of the proposed program would also be competitive applicants for graduate programs in biochemistry. Employment growth in the category of Biochemists and Biophysicists is projected at 4%.

The proposed BS in Pharmaceutical Sciences also prepares graduates for a variety of entry-level positions in the pharmaceutical and medical industry. These are often high wage, high demand, and high skill jobs (H3). As the industry is innovating in the areas of drug therapy, medicine production, and drug delivery, pharmaceutical sciences graduates will be in demand. This includes career opportunities in sales and marketing, drug research and development, clinical research, quality assurance, professional services, pharmaceutical manufacturing, chemical manufacturing, food and beverage manufacturing biomedical and bioscience, testing laboratories, and technical consulting services. A search on the Indeed job website for



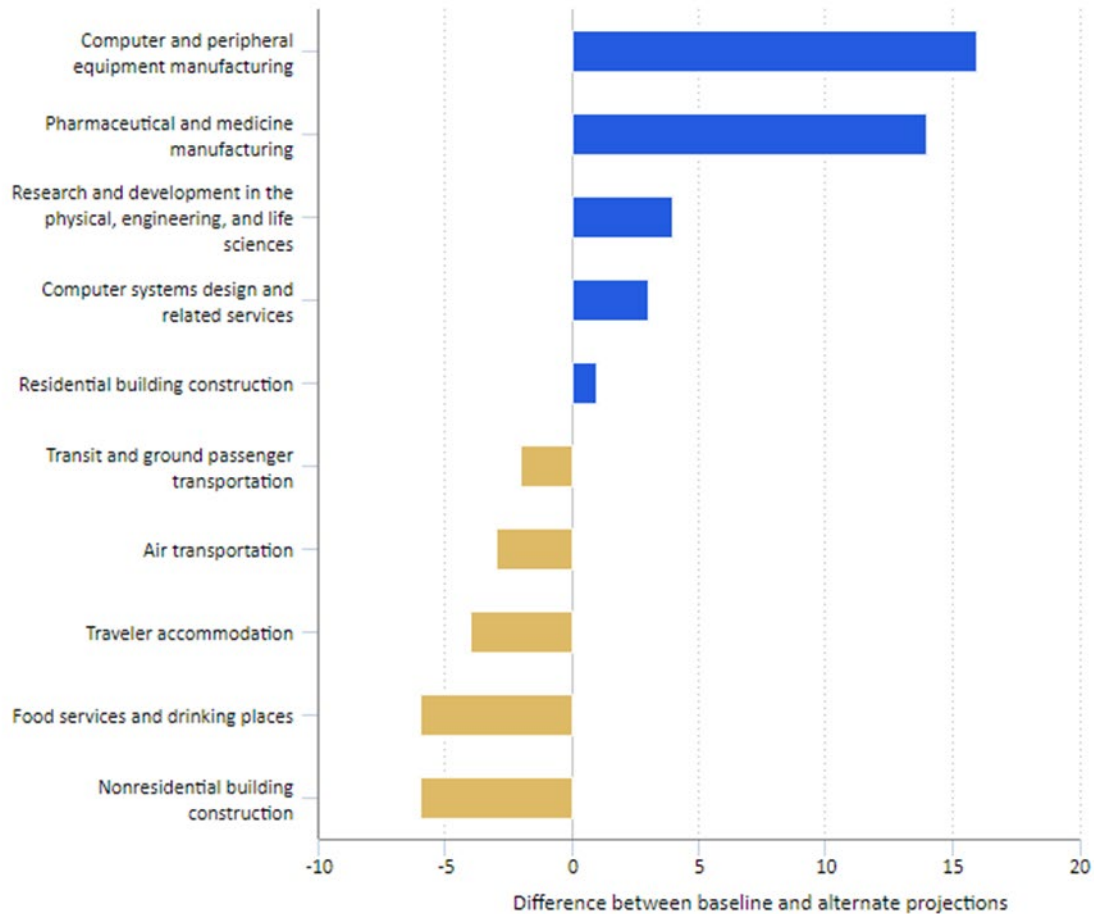
'pharmaceutical and medical sales' shows 46 job openings in Nebraska in the field of pharmaceutical sales with salaries listed up to \$150,000.

In addition, it is important to note that BS degree programs in Pharmaceutical Sciences are not widespread. Nationwide, there are only 20-25 institutions offering such a program. The program offered by UNO would allow us to serve the Nebraska and Midwest region, and is furthermore aligned with the University of Nebraska's strategic efforts of creation a Nebraska Drug Discovery and Development Pipeline (ND3P). The success of the ND3P will depend on a well-trained workforce, like individuals with the proposed BSPS, to discover therapeutic molecules and advance these to FDA approval.

According to the U.S. Bureau of Labor Statistics, the pharmaceutical industry will experience significant growth in the coming years due to the pandemic. Pharmaceutical and medicine manufacturing is projected to experience the second largest increase in any field compared to earlier projections. The chart below shows the potential effects of the pandemic on employment through 2029. The bars representing the difference between the pre-pandemic industry's baseline (avg. of 5% increase) and the post-pandemic projections (<https://www.bls.gov/careeroutlook/2021/data-on-display/alternate-projections.htm>). Based on these more realistic projections by the Bureau of Labor Statistics, the pharmaceutical industry will experience a 19% growth in employment by the year 2029.

### Chart. Selected industries affected by the pandemic

Difference between baseline and alternate percent changes in employment, projected 2019–29 [1]



Furthermore, according to the 2020 Nebraska Manufacturing Facts published by the National Association of Manufacturers (<https://www.nam.org/state-manufacturing-data/2020-nebraska-manufacturing-facts/>), pharmaceutical and medicine manufacturing will be the manufacturing sector with most growth in the state (13.4%).

Enrollment projections are:

- Year 1: 10 new students
- Year 2: 15 new students
- Year 3: 20 new students
- Year 4: 30 new students
- Year 5: 45 new students

These projections are based on observations of the growth of other new programs, the first three years are predicted to have relatively low enrollments. Growth is expected to increase once Year 1 and Year 2 students are visibly advancing in the program and share their experiences with

other students. Because most coursework is existing with capacity for enrollment, the minimum number of students required to make this program viable is 10 graduates per year.

## **5) Partnerships with Business**

Members of the CoP Dean's Advisory Council who are business leaders in the pharmaceutical industry will provide input and oversight to keep curriculum current and to identify connections for internships, guest lectures, and other opportunities for students to build relationships with future employers.

## **6) Collaborations within the University of Nebraska**

UNMC CoP and UNO CAS Chemistry will deliver the curriculum of the BSPS. The BSPS Oversight Committee will coordinate the program and will have representation from Chemistry, from the College of Arts and Sciences and the College of Pharmacy. The faculty in Chemistry and the College of Pharmacy will collaborate on the delivery of at least one course, PHSC 691.

## **7) Centrality to Role and Mission of the Institution**

The BSPS supports UNO's Mission Statement and Strategic Plan in the following ways:

- Goal 1. Student-centered
  - 1.2. Prepare students for academic success, careers, and professional responsibilities in an increasingly complex world.
  - 1.5 Create a supportive, inclusive culture that enhances students' experiences and success.

The proposed program supports UNO's goal of being student-centered by designing a curriculum that will serve as a pipeline to existing UNMC programs in the College of Pharmacy. The students will receive an education that propels them into programs and entry-level positions ready to engage in the complexities of delivering healthcare or of engaging as a medical scientist in a team-oriented work environment. The partnership between UNO and UNMC will provide students with opportunities to interact with a broader base of academic and clinical faculty and staff than is typical for undergraduate students. The program will also build a cohort of students by delivering the College of Pharmacy course, Introductory Pharmaceutical Sciences Survey, in the second semester who will be encouraged to take coursework together as schedules allow.

- Goal 2. Academic Excellence
  - 2.1 Provide a strong core curriculum ensuring every UNO graduate possesses foundational academic skills, experiences the breadth of a liberal education, and develops an appreciation for the diversity that exists in the nation and the world.
  - 2.2 Provide high quality academic programs that are responsive to student and societal needs,
  - recognized nationally and internationally for excellence, and which effectively utilize traditional and distance-education delivery modalities.

- 2.3 Support and enhance faculty, staff, and student research and creative activity.
- 2.4 Identify, develop, and support interdisciplinary/transdisciplinary academic priorities.
- 2.5 Develop and enhance applied and experiential student learning opportunities.

The proposed program at UNO supports UNO's goal of academic excellence by combining the foundational academic skills in public speaking, quantitative literacy and writing composition; general education the across humanities, social sciences, and natural sciences; and a collaborative major with courses and experiential learning in the physical and life sciences. The science courses provide the conceptual basis for upper-level coursework in pharmaceutical sciences that will apply the coursework to clinically-related topics. The degree program fosters collaborations among its students, UNO faculty and UNMC faculty in seminar and research themed courses and experiences.

- Goal 3. Community Engagement
  - 3.1 Build new and strengthen existing connections with a broad range of community partners.

The BSPS will enhance the existing partnership between UNO's College of Arts and Science and UNMC's College of Pharmacy as well as relationships between pharmaceutical-related businesses and the two institutions.

## **8) Consistency with the University of Nebraska Five-Year Strategic Plan**

The BSPS program supports the University of Nebraska Five-Year Strategic Plan in the following ways:

- Nebraska's success is tied to that of its University. The BSPS contributes to a highly trained workforce for healthcare and develops pipeline programs to UNMC Pharmacy and other health professional programs as well as medical scientists.
- Amplifying our impact through partnerships. The BSPS is a partnership between two NU campuses and will also involve industry partners who serve on the CoP Dean's Advisory Boards.

## **9) Avoidance of Unnecessary Duplication**

We are not aware of another standalone four-year BSPS degree program in Nebraska, Colorado, Kansas, Missouri, Iowa, South Dakota, North Dakota, or Minnesota. or upper Midwest. There are three accelerated In the Midwest States of Kansas, Missouri, Iowa, South Dakota, North Dakota and Minnesota, there are three universities which grant BSPS degrees as part of an accelerated PharmD. program: Creighton University, South Dakota State University and North Dakota State University. These accelerated programs are embedded in each university's College of Pharmacy and offer students a shortened timeline from starting their bachelor's degree to completing a PharmD. At Creighton, undergraduates complete two years of college coursework and enter the PharmD. program in their third year. The BSPS is awarded after the second year of the PharmD. coursework and the PharmD. at the conclusion of six year of coursework. Unlike

an accelerated program, a bachelor's degree offers flexibility to refine and choose alternatives as students' progress through their academic program and learn about new career pathways.

## 10) Consistency with the Comprehensive Statewide Plan for Postsecondary Education

Program support for relevant statewide goals for education.

- Nebraska's postsecondary education institutions will be student-centered and will offer learning opportunities that are responsive to students' needs.

The program strongly supports learning opportunities that are student-centered. The program offers built-in opportunities for engagement between students and faculty in coursework and experiential learning opportunities.

- Postsecondary education in Nebraska will be responsive to the workforce development and ongoing training needs of employers and industries to build and sustain a knowledgeable, trained, and skilled workforce in both rural and urban areas of the state.

The Bachelor of Science in Pharmaceutical Sciences will support workforce development by contributing to the **preparedness of graduates** for entering PharmD professional schools and Pharmaceutical Sciences programs and industry as medical scientists and technicians. By being housed in the College of Arts and Sciences at UNO and with the partnerships of the College of Pharmacy at UNMC, graduates of the program will have **workforce readiness skills** including communication, computer competencies, teamwork skills and will receive **targeted skills** in a professional field that is changing as health care practices and drug delivery development evolves.

- Postsecondary education in Nebraska will be effective in meeting the needs of students and the state, will be efficient in its expenditure of the state's resources, and will be accountable for developing, sustaining, and demonstrating exemplary teaching, learning, research, and public service.
- Postsecondary education institutions will work as partners with one another and with other entities, including those in the private sector, whenever appropriate to share resources and deliver programs cooperatively to enhance learning opportunities for Nebraska residents.

The program supports the two goals above. It is a partnership between UNO and UNMC that leverages the expertise on each campus. It is new and distinct from other programs at UNO and UNMC but developed from existing resources at UNO. UNMC is developing new coursework to support the program but is maximizing existing coursework.

February 18, 2021

Deborah Smith-Howell, Ph.D.  
Associate Vice Chancellor for Academic Affairs &  
Dean of Graduate Studies  
The University of Nebraska at Omaha

Dear Dr. Smith-Howell,

I am writing this letter to offer my strongest support for your proposal to develop a UNO undergraduate pharmaceutical science program. As one of the founding directors of the Nebraska Drug Discovery and Development Pipeline (ND<sup>3</sup>P), a University of Nebraska system-wide "Big Idea", I can unequivocally say that this undergraduate program would greatly accelerate the success of our efforts. As a collaborative platform focused on the advancement of molecules from a therapeutic concept to FDA approval, the ND<sup>3</sup>P is heavily reliant on well-trained students to help achieve our goals and objectives. As such, this undergraduate program would not only add value to the ND<sup>3</sup>P, it would provide valuable practical experiences for the pharmaceutical science students. Therefore, I strongly support your efforts to establish this exciting new undergraduate program.

Sincerely,



Kenneth W. Bayles, Ph.D.  
Associate Vice Chancellor for Research

**TABLE 1: PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM  
UNO Bachelor of Science in Pharmaceutical Sciences**

	(FY2021) Year 1		(FY2022) Year 2		(FY2023) Year 3		(FY2024) Year 4		(FY2025) Year 5		Total
	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	Cost
<b>Personnel</b>											
Faculty <sup>1</sup>	1.0	\$100,000	1.0	\$103,000	1.0	\$106,090	1.0	\$109,273	1.0	\$112,551	\$530,914
Professional											
Graduate Assistants											
Support Staff											
Subtotal	1.0	\$100,000	1.0	\$103,000	1.0	\$106,090	1.0	\$109,273	1.0	\$112,551	\$530,914
<b>Operating</b>											
General Operating											
Equipment											
New or renovated space											
Library/Information Resources											
Subtotal		\$0		\$0		\$0		\$0		\$0	\$0
<b>Total Expenses</b>		\$100,000		\$103,000		\$106,090		\$109,273		\$112,551	<b>\$530,914</b>

<sup>1</sup> One faculty line will be required to create the BS in Pharmaceutical Sciences. Expenses account for an annual 3% increase. The funding has been approved by the Office of Academic Affairs.

**TABLE 2: PROJECTED REVENUES - NEW INSTRUCTIONAL PROGRAM  
UNO Bachelor of Science in Pharmaceutical Sciences**

	(FY2021) Year 1	(FY2022) Year 2	(FY2023) Year 3	(FY2024) Year 4	(FY2025) Year 5	Total
	Existing Funds <sup>1</sup>	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551
Required New Public Funds						
1. State Funds						
2. Local Tax Funds (community colleges)						
Tuition and Fees <sup>2</sup>	\$70,500	\$176,250	\$317,250	\$479,400	\$701,475	\$1,744,875
Other Funding						
<b>Total Revenue</b>	\$170,500	\$279,250	\$423,340	\$588,673	\$814,026	\$2,275,789

<sup>1</sup> The Office of Academic Affairs has committed to fund the faculty line needed to support the BS in Pharmaceutical Sciences.

<sup>2</sup> Tuition revenue based on resident tuition of \$235 per credit hour. The calculation below accounts for students taking 30 student credit hours per year. A total of 99 credits will be taken at UNO (with the remainder 21 credits taken at UNMC).

	Credit Hour Production				
	Year 1	Year 2	Year 3	Year 4	Year 5
Year 1: 10 new students	300	300	300	90	
Year 2: 15 new students		450	450	450	135
Year 3: 20 new students			600	600	600
Year 4: 30 new students				900	900
Year 5: 45 new students					1350
<b>Total</b>	300	750	1350	2040	2985