



October 9, 2020

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

Dear Michael:

Enclosed is a copy of the proposal to create a Master of Science in Health Sciences in the Department of Biology in the College of Arts and Sciences at UNK. The proposal was approved by the Board of Regents at the October 8, 2020 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".

Susan M. Fritz, PhD
Executive Vice President and Provost

Enclosures

c: Chancellor Douglas Kristensen
Senior Vice Chancellor Charles Bicak
Dean Ryan Teten, College of Arts and Sciences
Vice Provost David Jackson

**COORDINATING COMMISSION
FOR POSTSECONDARY EDUCATION**

140 N. 8th Street, Suite 300
Lincoln, NE 68508

Telephone: (402) 471-2847
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PROPOSAL FOR NEW INSTRUCTIONAL PROGRAM
Form 92-40

SECTION I

Institution Submitting Proposal: University of Nebraska at Kearney

Title of Program: Health Sciences

CIP Code: 26.0101

Organizational Unit in which program will be located:

Department of Biology
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):

Master of Science in Health Sciences

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

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

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

Date approved by Governing Board: October 8, 2020

(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-2
Academic Affairs

MEETING DATE: October 8, 2020

SUBJECT: Creation of a Master of Science (MS) in Health Sciences in the Department of Biology in collaboration with the Office of Health Sciences in the College of Arts and Sciences at the University of Nebraska at Kearney (UNK)

RECOMMENDED ACTION: Approval to create a Master of Science in Health Sciences in the Department of Biology in the College of Arts and Sciences at UNK

PREVIOUS ACTION: June 28, 2018 – The Board approved the merger of the College of Fine Arts and Humanities and the College of Natural and Social Sciences to form the College of Arts and Sciences at UNK.
March 31, 2017 – The Board approved the Bachelor of Science in Health Sciences to be administered by the Office of Health Sciences Programs in the College of Natural and Social Sciences at UNK.
December 9, 1995 – The Board approved the Master of Science in Biology at UNK.

EXPLANATION: UNK’s Department of Biology, in collaboration with Health Sciences, is proposing a new online, one-year, 30-credit hour, non-thesis Master of Science in Health Sciences. The program is designed for bachelor degree-holding health science students needing additional academic preparation prior to entering a professional school and for students who have been out of school and need to update their academic credentials. Primarily, it will serve as an academic preparedness tool for those who apply to a health science program, such as medical school, and are not accepted as a first-time applicant. The curriculum also is designed to strengthen the disciplinary expertise of students seeking various health-related occupations not requiring a professional degree.
No additional courses will need to be added as UNK already offers the curriculum in on-campus and online formats.
This proposal has been approved by the Council of Academic Officers and the Executive Graduate Council. This proposal also has been reviewed by the Academic Affairs Committee.

PROGRAM COST: \$10,030 for Year 1; \$50,150 over five years

SOURCE OF FUNDS: Tuition

SPONSORS: Charles Bicak
Senior Vice Chancellor for Academic and Student Affairs
Douglas Kristensen, Chancellor
University of Nebraska at Kearney

RECOMMENDED:

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

DATE:

September 4, 2020

UNK

OFFICE OF THE CHANCELLOR

February 3, 2020

President Ted Carter
University of Nebraska
3835 Holdrege Street – Varner Hall
Lincoln, NE 68583

Dear President Carter:

The Department of Biology, in collaboration with the Health Sciences Program, has submitted a proposal to create a new Master of Science in Health Sciences at the University of Nebraska at Kearney. The new degree will be a 30-credit-hour, non-thesis program that can be completed entirely online, although students wanting a classroom experience will have the option to take many of the courses on campus. It will primarily serve pre-professional health science students as they prepare for professional programs in health sciences and, therefore, will contain a heavy emphasis of biology courses related to health science professional programs. At the same time, it is interdisciplinary in nature in that students will be able choose electives from other departments that will enhance their portfolios depending upon the type of professional school they will attend. The curriculum was developed based on professional school requirements, and with a foundation that will ensure meaningful preparation for many different health disciplines. It is comprised entirely of existing coursework; no additional courses will need to be added.

The need for and benefits of this new degree are many, among them: increasing academic preparedness; enhancing professional school applications; preparing for the unique demands of professional school; and serving as a tangible tool for students who are not accepted to a professional school as first-time applicants.

With ever-increasing demands for health professionals, this new degree proposal is strong, timely and of benefit to the citizens of Nebraska and beyond. I concur with the recommendation of the Senior Vice Chancellor for Academic and Student Affairs and the Dean of the College of Arts and Sciences that this proposal be approved. I request your approval as well. Thank you for your consideration.

Sincerely,



Douglas A. Kristensen, J.D.
Chancellor

bjm

Health Sciences
Master of Science Degree
University of Nebraska at Kearney

Descriptive Information:

Name of institution proposing the program: University of Nebraska at Kearney

Name of the master's degree proposed: Health Sciences

Degree to be awarded graduates of the program: Master of Science Degree

Other programs offered in this field by this institution: Bachelor of Science in Health Sciences and Master of Science in Biology

Administrative unit for the program: Department of Biology

CIP Code: 26.0101

Proposed delivery site: University of Nebraska at Kearney campus

Date approved by governing board: Pending

Proposed date the program will be initiated: Upon final approval by CCPE

Additional faculty/resources necessary to initiate program: None

New coursework needed to initiate program: None – all existing

Description and Purpose of Proposed Program:

The Department of Biology, in collaboration with Health Sciences, is proposing a new Master of Science (MS) in Health Sciences at the University of Nebraska at Kearney (UNK). The MS in Health Sciences at UNK primarily will serve pre-professional health science students preparing for a professional program in health sciences. The program is designed to enhance students' professional school applications, increase their knowledge base, and demonstrate they are capable of handling the rigor of a professional school successfully. No additional courses will need to be added as UNK already offers the curriculum in both an on-campus and online format.

The new degree will be a 30-credit hour, non-thesis program that can be completed in one year. The program will accept 20 students per year who will progress through the program design as described below. The curriculum will contain a heavy emphasis of biology courses related to health science professional programs, but also will contain electives from various UNK departments, making it interdisciplinary in nature. The core classes are essential for all students attending professional school, but the students can select electives that will enhance their portfolio depending upon the type of professional school they will be attending. The program can meet the needs of students interested in medical school, dentistry, physical therapy, physician assistant, pharmacy, and occupational therapy.

The health science emphasis will make this program an excellent choice for pre-health science students needing additional academic preparation prior to entering a professional school, students who perhaps have been out of school for some time and need a refresher, as well as serve as a platform for various health-related occupations if students decide not to enroll into professional programs. It will serve as an academic preparedness tool for those that apply to a health science program, such as medical school, and are not accepted as a first-time applicant. These students are commonly advised to enhance their academic record before re-applying, and this program would provide students with a meaningful and tangible way to accomplish those recommendations. The proposed degree will be the only program of its kind in Nebraska. It is designed so that it can be completed entirely online, but students wanting a classroom experience will be able to take many of the courses on campus. While similar programs exist at private institutions and medical schools in other states, this degree will be attractive given its affordability, accessibility, timeliness, and strong overall foundation in health science preparation. Other

similar programs are much more expensive, span two years for completion, or have a required on-campus component. These potential limitations make this program uniquely different from competitors and an attractive option for Nebraska students. This program is supported by the University of Nebraska Medical Center (UNMC) professional program leadership and letters of support have been included with the proposal.

Proposed Curriculum:

As stated above, educational opportunities in health science-related fields are increasing nationwide. The curriculum for this master's degree (including the prerequisites) was chosen based upon professional school requirements with the broadest curriculum to ensure it will be useful for preparation to many different professional schools. The curriculum is comprised entirely of existing coursework at UNK.

The curriculum for the MS in Health Sciences can be found below. Students will begin the program having been admitted with a bachelor's degree and required prerequisite coursework completed. The degree includes 30 credit hours and was designed to ensure that students have the necessary academic background by requiring a list of prerequisites that could be completed during their undergraduate career. Students enrolled in this master's degree program will take a common core of coursework (**12 credit hours**) that provides them with a background in management and health-science related subject matter. The last **18 credit hours** are electives from a variety of different departments and the interdisciplinary approach ensures the student can select courses that will meet the needs of many different professions. Courses in the electives come from eight different departments, including Biology, Chemistry, Counseling and School Psychology, Management, Kinesiology and Sports Science, Political Science, Psychology, and Social Work. The program is designed to be rigorous to demonstrate to professional schools that the student will be successful in an intensive professional school curriculum. The program is designed to be completed in one year. Students will take six credit hours during the summer, 12 hours during the fall, and 12 hours during the spring.

This is a rigorous curriculum with an aggressive timeline. In order for this degree to provide students with the opportunity to be successful in gaining admission to professional schools, students need to be prepared to perform well academically. Students in this program could potentially be coming from academic backgrounds that need enhancement or have been out of the academic setting for some time. In order to prepare students to be successful, students will be required to participate in an **online Master of Health Science Orientation** prior to summer enrollment. The online orientation will include modules designed to provide students with study skills, academic success coaching, and professional development. The orientation will include various resources and provide an interactive environment centered around key components of education including tutoring, library services, and professional development workshops offered by UNK's Office of Graduate Studies. The orientation and support pieces all will be offered in an online format that can be utilized by students from all corners of the world.

Summary of Hours Required for the MS in Health Sciences Degree

Degree Requirements (30 hours)

Students will be required to take all of the *Core* (12 credits) courses including:

Core: (12 credits)

BIOL 801 – Principles of Immunology – 3 credits

BIOL 838 - Essential Human Anatomy – 3 credits

BIOL 839 - Human Physiological Systems – 3 credits

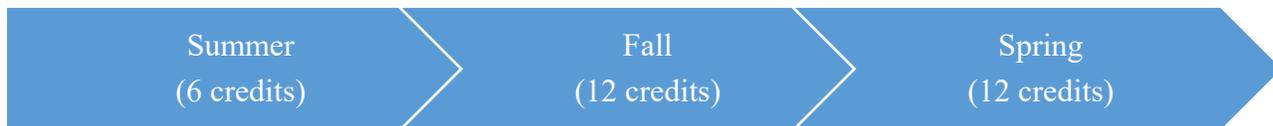
BIOL 861P - Human Genetics – 3 credits

Students will choose *Elective* courses (18 credits) including:

Electives: (18 credits)

- BIOL 812 - Microbial Diversity – 3 credits
- BIOL 813 – Issues in Bioethics 3 credits
- BIOL 830P – Special Topics – 3 credits
- BIOL 840 - Infectious Disease – 3 credits
- BIOL 841 – Virology – 3 credits
- BIOL 846 - Cancer Biology - 3 credits
- BIOL 858 - Physiology of Stress – 3 credits
- BIOL 859 - Biology of the Brain – 3 credits
- BIOL 857 – Human Histology – 3 credits
- BIOL 875 – Internship in Biology – 1-9 hours
- CHEM 855 – Biochemistry – 3 credits
- CSP 801P – Counseling Skills – 3 credits
- MGT 850P – Health Care Delivery – Systems and Policies - 3 credits
- PE 860P – Gross Anatomy of Movement – 3 credits *available on-campus only
- PE 861 – Physiology of Exercise -3 credits *available on-campus only
- PSCI 833 – Politics and Policy of Healthcare – 3 credits
- PSY 804 – Healthcare Ethics – 3 credits
- PSY 840P – Health Psychology – 3 credits
- PSY 862 – Adult Development and Aging – 3 credits
- SOWK 871 – Aging Services – 3 credits

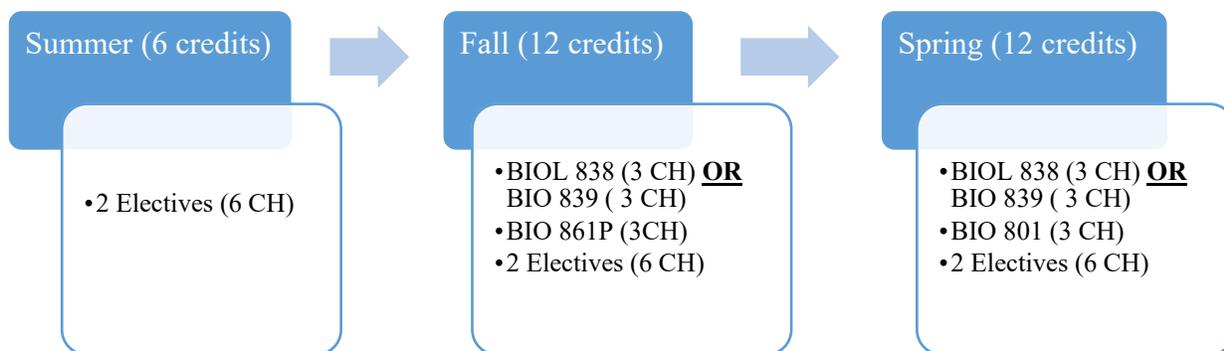
Program Completion Outline



This will be a challenging load for any student, but the program can be completed in one year, which is critical to the timing of the professional school application process. Students then will be prepared for professional school the next fall. Students will not be required to complete the program in one year, and additional students who are taking classes to be able to teach at community colleges or are interested in careers in biomedical research may also apply for this program. It is unlikely that these students will complete in one year.

Plan for Degree Completion: All required core classes will be available online. Elective classes will be available online and/or on-campus. The entire degree can be completed online if the student chooses. Students will be able to complete the required classes in one year. Please see the template below for an example of how students may progress through this major.

Suggested Sequence of Key Courses: The following suggested sequence of courses is for the MS in Health Sciences degree.



MS in Health Sciences Admission Criteria

Admission to the MS in Health Sciences program is based on the completed undergraduate degree and GPA, academic preparation, and letter of intent. Screening of applicants will include an assessment of the student's ability to be successful, given the rigorous nature of this program and their career goals.

Applications will be reviewed by a committee comprised of the Program Director and a minimum of three faculty members that teach in the program. An applicant interested in pursuing an MS in Health Sciences should meet the following criteria:

1. Meet the requirements for admission set forth by the Office of Graduate Studies.
2. Have prerequisites to include one introductory course in each of the following areas:
 - General Biology (2 semesters)
 - General Chemistry (2 semesters)
 - Anatomy and Physiology (2 semesters)
 - Organic Chemistry
 - Physics
 - Statistics or Biostatistics
 - Microbiology

A course in medical terminology is recommended.
3. Have a 3.0 undergraduate GPA in the prerequisite courses. In lieu of meeting GPA requirements, GRE or GMAT scores may be submitted for consideration by the admissions committee.
4. Submit to the Program Director a letter of intent that describes the applicant's interests, goals, and plan for obtaining an MS in Health Sciences degree. The letter of intent should address any deficiencies that may hinder the student's success in the program and explain how this is to be or has been rectified. The letter of intent will be evaluated to determine (a) if the candidate has realistic professional school goals for which the program will improve competitiveness, and (b) high probability for the student's potential success in this program.

Student Advising and Support

Students accepted into the program will be assigned both a Biology and Health Sciences advisor. The student will be strongly encouraged to meet with both advisors every term to discuss academic progress and issues relating to professional school applications. The Health Science advisor will be able to recommend and facilitate shadowing programs, volunteer opportunities, and internship experiences to further enhance the student's professional school application. Advice and assistance with the application process and interview for professional school also will be provided by the Health Science advisor. The Biology advisor will discuss specific course choices based on the student's undergraduate course history and professional school goals. Following these meetings, the Program Director will release the hold on the student's account so the student may register for classes for the upcoming term.

Students in this program also will have access to additional support through their individualized advising sessions, the Writing Center, Academic Success Coaching, and other student support services. The Biology Department has 16 years of extensive experience working with and mentoring online graduate students. Students will be encouraged to work directly with their faculty to enhance their academic success in this program.

Assessment and Outcomes

Both the Biology Department and Health Sciences have extensive assessment procedures already in place that will be utilized to track the success of these students. These include tracking academic performance, performance on standardized entrance exams (examples – MCAT, DAT, PCAT, etc.), and acceptance rates into professional schools in the Health Sciences. Students in this program will be almost exclusively applying to medical school, dental school, physician assistant programs and other health science programs. Therefore, the most important outcome that will be tracked will be acceptance rates. Health Sciences has procedures in place to track this data annually.

Review Criteria:

A. Centrality to Role and Mission of the Institution

UNK Mission: The University of Nebraska at Kearney is a public, residential university committed to be one of the nation’s premier undergraduate institutions with excellent graduate education, scholarship, and public service.

UNK Vision: UNK will achieve national distinction for a high quality, multidimensional learning environment, engagement with community and public interests, and preparation of students to lead responsible and productive lives in an increasingly diverse, interconnected, interdependent, and technological society.

The MS in Health Sciences meets the mission and vision statements of the University of Nebraska at Kearney by offering the only MS in Health Sciences in the state that specifically prepares students for a professional program in Health Sciences and is available online. This furthers the University’s mission by offering additional opportunities for excellent graduate education that prepares students to gain needed training prior to admission to professional school, enter into the workforce, and meet the healthcare needs of our community and state. The mission and vision statements drive the UNK Strategic Plan and the MS in Health Sciences degree meets several of those goals. *Goal 1* states that each unit will continuously review and improve the curriculum. This major is the result of such a review as we strive to meet the needs and interests of the students, as well as the needs of the healthcare workforce in Nebraska. *Goal 2* of the Strategic Plan is to increase recruitment and support student success. This new master’s degree program will recruit students into a program that allows them to obtain the foundation and knowledge necessary to successfully gain admission into a health science professional program. Finally, *Goal 4* states that each academic unit will be good stewards of the resources available to carry out the mission of the institution. The MS in Health Sciences degree creatively uses existing courses and collaborations with other departments to create a new educational opportunity to better serve the needs of the students.

B. Evidence of Need and Demand

Job Outlook and Demand: The increasing need for healthcare workers across the state of Nebraska, and throughout the nation, is significant and continues to rise. According to the U.S. Bureau of Labor Statistics, employment in healthcare occupations across the United States is

expected to grow by 18% from 2016 to 2026. The need to train a competent and passionate healthcare workforce is vital to our communities. Many dedicated and committed students apply to professional programs in the health sciences every year and are denied admission due to previous issues with their academic record that may exist for a variety of reasons. These students, from across the state and nation, are searching for academic programs that will allow them the opportunity to prove their academic abilities, strengthen their science foundation, and improve their competitiveness in the application process. At UNK alone, approximately 15 students per year may be interested in this program. Given its unique nature and purpose, it will most certainly be attractive to students from other colleges and universities in our state and across the nation. For example, according to the Assistant Dean of Admissions for the UNMC College of Dentistry, Dr. Meryln Vogt, on average there could be as many as 40 potential students that have been denied admission to dental school for whom this program would be appropriate. The medical schools and allied health programs have even larger applicant pools. The program will initially be capped at 20 students per year and it is anticipated that the demand will be significantly higher than available seats. The letters of support from the students clearly demonstrate their interest and desire for such a program. The leadership at the colleges at UNMC have also expressed strong support for the program and will likely suggest it to rejected student applicants as a potential means to bolster their application. The online accessibility of the program, coupled with its affordability, will make the MS in Health Sciences attractive to students. The timeline for degree completion is also a critical component of the design of this program that will increase demand. The application cycle for a professional program in health sciences is typically one year. Therefore, students are reluctant to commit to a two-year master's degree program. The curriculum for this degree has been designed so that students may complete the program in one year and be eligible to apply or re-apply to their desired professional program.

Completion of the MS in Health Sciences degree does not guarantee admission to professional school. Students that complete this degree and are not accepted to the professional school of their choice will be able to use this education to advance their careers in a variety of ways. The academic training in this degree prepares students to pursue professional programs in health sciences, and therefore, students will be able to consider other health careers. According to Employment Projections by the U.S. Bureau of Labor Statistics in September of 2019, occupational employment is projected to grow by 5.2 percent from 2018 to 2028, an increase of 8.4 million jobs. Some of these jobs include laboratory technician, quality assurance, community college instructor, and health educator. Many of the fastest growing occupations are in healthcare and related services. Students may also advance their education further through doctoral training in areas such as biology, public health, and health sciences. Completion of the MS in Health Sciences degree also would provide students with the knowledge to work in medical sales, pharmaceutical sales, research, and other non-clinical professions.

C. Required Resources

1. Faculty and Staff Resources

This graduate program is comprised entirely of existing online coursework. UNK eCampus has online trainings and tutorials available for new online student seeking guidance for success in online education and help navigating all of the software used at UNK. UNK also provides 24-hour assistance with technical issues. The Calvin T. Ryan library has training services for online students, a huge number of electronic resources, and dedicated library staff for digital databases which are utilized by both campus and online students. All of these resources have been created specifically to support online education at UNK.

2. Physical Facilities

This program would be housed within existing facilities. All of the coursework would be offered online using existing online teaching resources or in existing classrooms. There is no need to add facilities to support this proposed program.

3. Instructional Equipment and Informational Resources

No new instructional equipment or informational resources would be necessary for the implementation of this program.

4. Budget Projections

The MS in Health Sciences is comprised of existing coursework. The budget projections for revenues and expenses are attached. The program will initially be capped at 20 students to guarantee sufficient capacity and the students' ability to complete the program in one year.

D. Avoidance of Unnecessary Duplication and Impact on Other Programs

Across the state, there are no other one-year MS in Health Sciences for this purpose that can be completed entirely online. UNMC does offer a one-year Master in Medical Anatomy that is often used by students seeking additional academic preparation to apply to a health science professional program. However, this degree is very limited in size and many talented students are denied each year. Given the small class size of the UNMC Master of Medical Anatomy, the significant number of students denied to that program, and the key differences in content, accessibility and affordability, this program will not negatively impact the master's degree at UNMC.

There are a limited number of other master's degree programs across the nation specifically designed to prepare students for professional school. In the Midwest, there is a program at Rocky Vista University in Denver, Colorado that is one year in length and is designed to prepare students for professional schools in health care. However, it has a limited enrollment, is significantly more expensive, and is not available online. Des Moines University offers a Master's in Medical Anatomy and another one in Biomedical Sciences. Again, both programs have limited enrollment, are more expensive, and not available online. Online master's degrees are available from other universities including Florida Gulf Coast, Johns Hopkins, Antioch, Western Michigan, Arkansas, Boise State, Duke, and Utah. However, most of these programs are not specifically designed to prepare students for professional school. They also are primarily two years in length, and many are at private institutions making them less affordable and accessible for Nebraska students. The proposed program is uniquely different from these programs because it is an intensive one-year program offered online and will provide more opportunities for Nebraskans and beyond.

In summary, this MS in Health Sciences is unique and different in the following ways: 1) the curriculum for this program, while it includes anatomy, provides the students with a broader biology and science foundation, as well as opportunities to explore other health-related electives; 2) it is available completely online and therefore, accessible to all students; 3). other such programs in the nation are primarily at medical schools or private universities, making this program more affordable and accessible; and 4). the curriculum also contains a list of electives that provides a unique opportunity for students to gain an interdisciplinary foundation in management, health policies, health systems, psychology, aging services, healthcare ethics, and adult development and aging, health psychology. Contributing departments include: Biology, Chemistry, Counseling and School Psychology, Management, Physical Education, Political Science, Psychology, and Social Work.

E. Consistency with the Comprehensive Statewide Plan for Postsecondary Education

The proposed MS in Health Sciences is consistent with the Statewide Comprehensive Plan for Postsecondary Education. It aligns with the main goals of the plan by proposing a program that addresses an educational need of the State of Nebraska by fulfilling the need to provide students with the opportunity to acquire the education necessary to enter in the healthcare workforce. This program also proposes to efficiently utilize the available resources and to avoid unnecessary duplication of other programs offering similar educational opportunities. It has been designed to meet the defined needs of, not only existing University of Nebraska at Kearney students, but also students from across the state. Following are specific ways in which the proposed program is consistent with the statewide plan for postsecondary education:

- **Meet the Educational Needs of Students:** This MS in Health Sciences meets the educational needs of students by providing a fully-online program that will provide flexibility and full access for students across the state. This degree program honors the commitment to the use of information technology to expand educational opportunities across the state and remove geographic barriers. The program also meets the needs of students by being designed in a way that allows students to complete the degree in a timely manner that will facilitate their career path. In addition, this program will produce graduates with the knowledge and skills to be successful in a health science professional program and ultimately become health care practitioners.
- **Meet the Needs of the State:** The need for healthcare professionals in Nebraska mirrors or exceeds the shortages for the nationwide workforce projections for this field. Through the development of this program, the University of Nebraska is being responsive to a workforce need in our state by creating an educational program that will enable and encourage Nebraska students to pursue their goals of working in the healthcare industry.
- **Meeting Educational Needs through Partnerships and Collaborations:** The MS in Health Sciences at UNK will be a collaborative program. The curriculum for the program is interdisciplinary and encourages students to pursue coursework beyond the sciences. The UNK departments involved in this program will span across colleges and all are fully committed to this collaborative effort. The program was also developed with input and feedback from partners at UNMC. UNK will continue to partner with UNMC programs to identify potential students that may benefit from this program. UNK is also willing to partner with other institutions of higher education by accepting graduate transfer courses as electives when appropriate. In addition, students in this program will have the option to complete a Health Sciences Internship as part of this program which will require collaborations with health care facilities and practitioners across the state.
- **Statewide Facilities Plan:** This program is offered entirely online and therefore, will not require additional facilities.

MS in Health Sciences Curriculum

Prerequisite Requirements:

Introductory biology
Anatomy and physiology
Microbiology
Introductory chemistry
Organic chemistry
Introductory physics
Introductory statistics
A course in medical terminology is recommended

Curriculum: Masters – 30 hours

--BIOL 801 – Principles of Immunology 3 credit hours

An in-depth discussion of the principles of modern immunology. Major topics of discussion will include: cellular components of the immune system; antibody structure, function, and synthesis; function of cytokines and complement; MHC structure and function; and the immune system and disease. A competent background in cell biology and/or biochemistry and microbiology is strongly recommended.

--BIOL 812 – Microbial Diversity 3 credit hours

New techniques in molecular biology have revealed three distinct cell lineages: bacteria, archaea, and eukaryae. When considering microorganisms, this information has created major changes in our understanding of phylogeny and our use of taxonomy. This course consists of two parts. In one part, current taxonomic groupings of microorganisms and their basic characteristics are discussed. The second part of the course focuses on how these groupings were created and weaknesses in our current understanding. This is discussed in theory and also applied by students to sample data sets.

--BIOL 813 – Issues in Bioethics 3 credit hours

Bioethics is the study of ethical controversies in both biology and medicine. Science has progressed significantly in the last century and with this progress has come ethical questions. The intent of this course is to focus on a variety of issues that have arisen, including, but not limited to, assisted reproductive technologies, sex selection, cloning, and stem cell research to name a few.

--BIOL 830P – Special Topics in Biology 1-3 credit hours

Topics are studied which are not assigned or covered in other courses in the department. The format of this course will vary depending on the topic of instruction and the needs of students. Topics such as Cell Signaling Pathways, Chronic Pain, and Allergic Response are offered online.

--BIOL 838 – Essential Human Anatomy 3 credit hours

Human anatomy including essential aspects of functional morphology will be covered. Topics covered may include the integumentary, skeletal, muscular, nervous, endocrine, circulatory, lymphatic, respiratory, urinary, digestive, and reproductive systems. Detailed discussion of specific anatomical regions will be required.

--BIOL 839 – Human Physiological Systems 3 credit hours

General human physiology will be studied with an emphasis on systems. The integumentary, skeletal, muscular, nervous, endocrine, circulatory, lymphatic, respiratory, urinary, digestive, immune and reproductive systems will be discussed. Salient mechanical, physical, and biochemical processes of

organs, tissues and cells will be covered. Anatomy will be included at a level necessary to make sense of the system's function.

--BIOL 840 – Infectious Diseases 3 credit hours

This course is an introduction to medical microbiology with coverage of viral, bacterial, fungal, and protozoan disease causing microorganisms. It will cover the basic mechanisms of infection, disease progression, and immune response. It is strongly suggested that students have taken an introductory microbiology course before taking this class.

--BIOL 841 – Virology 3 credit hours

An in-depth discussion of the principles of modern virology. Major topics of discussion will include: virus replication strategies, virus structure, virus infection and disease, and host resistance to disease. A course in genetics and a course in cell biology or biochemistry is strongly recommended.

--BIOL 861P – Human Genetics 3 credit hours

The course focuses on contemporary human genetics with emphasis on genetic diseases. A study of the genetic basis and frequency of genetic defects in man and genetic counseling.

--BIOL 846 – Cancer Biology 3 credit hours

This course is designed as a survey of the current state of knowledge in the cellular and molecular biology of cancer processes. The students will also review current literature in cancer biology by analyzing and critiquing current articles.

--BIOL 857 – Human Histology 3 credit hours

Histology is also called micro-anatomy. This course examines animal bodies on the tissue and cellular level. Most examples will be from the human anatomy. Basic tissue types will be studied as well as organ structure and function. As a distance class, micropictographs will be used (not glass slides) from the web, as well as from an assigned textbook. No prior experience with histology is expected.

--BIOL 858 – Physiology of Stress 3 credit hours

An examination of how living organisms cope with short- and long-term exposure to extreme environmental conditions related to nutrient and water availability, temperature, and pressure. A basic understanding of organismal physiology is required. Offered online, Summer only.

--BIOL 859 – Biology of the Brain 3 credit hours

This course will focus on the central nervous system (brain and spinal cord) and will include gross anatomical features and landmarks of the cerebral hemispheres, diencephalons, brainstem, cerebellum, and spinal cord. Physiological aspects will include the generation and modification of action potentials as well as normal functions of the specific regions of the central nervous system. Selected abnormal functions will also be studied. The interdependency of the central nervous system to itself (various pathways between the spinal cord and within the brain) as well as to the peripheral nervous system and select organ systems will complete the focus of the course. It is recommended that students have taken anatomy and physiology before enrolling in this course.

--BIOL 875 – Internship in Biology 1-9 credit hours

Taken as part of the professional semester. Emphasizes the professional development of the individual.

--CHEM 855 – Principles of Biochemistry 3 credit hours

Chemistry of fats, protein, carbohydrates, hormones, vitamins, and other biologically important compounds. A solid background in organic chemistry is needed for success in this course.

--CSP 801P – Counseling Skills 3 credit hours

This class is for those entering or already in one of the helping professions. It focuses on understanding and applying a broad range of listening and communication skills in one-to-one interactions as well as in small group settings. Students actively practice building skills in class and out of class.

--MGT 850P: Health Care Delivery: Systems and Policies - (3 credits)

This course is for health sciences students and students interested in health care management. Topics include: 1) the organization, delivery, and financing of health care; 2) the business side of health care including workforce issues, payment systems, and cost control; 3) issues in the health care industry including the effect of government policies; and 4) the opportunity for students to critically evaluate current changes in health care policies in the United States and other countries and the effect of such changes on the quality of patient care.

--PE 860P – Gross Anatomy of Movement 3 credit hours

Designed for in-depth understanding of anatomy as it relates to movement or work. Students will utilize human cadavers and assist with undergraduate laboratories.

--PE 861 – Physiology of Exercise 3 credit hours

Physiological processes of body as pertain to physical activity. How trained and untrained individuals differ, and importance of training.

--PSCI 833: The Politics and Policy of Health Care - (3 credits)

An examination of current government policies, policy alternatives, and political interests that complicate the development and implementation of health policies in the United States.

--PSY 862 – Adult Development and Aging – (3 credits)

The changes that come with age are addressed. Topics include physical decline, attitudes toward death and dying, and theories of biological psychological and social aging.

--PSY 804 - Healthcare Ethics - (2 credits)

This course will cover common issues encountered by healthcare practitioners in various research and applied paths. The goal of the course is to introduce students to pertinent ethical issues they are likely to face. The course includes lectures, discussions, journals, and case studies complementing the learning process.

--PSY 840P – Health Psychology – (3 credits)

Examines how thoughts, emotions, behaviors, physiology, and culture influence health and well-being. Topics include: physical systems of the body, stress and illness, health-related behaviors, health services, and end-of-life care.

--PSY 862P – Adult Development and Aging 3 credit hours

The changes that come with age are addressed. Topics include physical decline, attitudes toward death and dying, and theories of biological, psychological, and social aging.

--SOWK 871 - Aging Services - (3 credits)

The common problems of the aged and their families are studied, knowledge of existing services is provided, and student are exposed to the initial theory and practice of delivering services to the aged in both the outpatient and inpatient setting.



August 28, 2019

Dr. Julie Shaffer, Chair of the Department of Biology
Peggy Abels, Director of Health Sciences
University of Nebraska at Kearney
Bruner Hall of Science
2401 11th Avenue
Kearney, NE 68849

Dear Dr. Shaffer and Mrs. Abels,

As the Dean of the College of Arts & Sciences at the University of Nebraska at Kearney, I am writing in full support of the Master's Degree in Health Sciences currently being proposed by Health Sciences and the Department of Biology. I believe the proposed degree program meets an increasing need across the state for an affordable, accessible, and timely graduate degree option for students interested in health science and health-related professions. This program will be the first of its kind in our state and will serve to fulfill a significant need for health science students.

The University of Nebraska at Kearney provides excellent preparation for pre-health professions students at the undergraduate level. However, there are many students at our institution, and across the state, who choose to pursue additional graduate-level preparation prior to application to a health professions education program. These students are often in search of a graduate program that provides additional preparation in the sciences that will allow them to create a competitive application for professional school. The proposed Master's in Health Sciences would offer these students an opportunity to bolster their academic record in a timely, one-year program that is both affordable and accessible.

The curriculum proposed by Health Sciences and the Department of Biology has been designed to provide students with a solid foundation in the sciences, while also allowing them the flexibility to engage in interdisciplinary electives that will enhance their application to professional school and their professional development as future healthcare providers. The interdisciplinary nature of the degree and the variety of courses proposed will also enable students to tailor a program of study that is appropriate for a wide range of health related career options. The program was also designed in such a way that it can be completed online if the student chooses, opening it up to students across our state and beyond.

The College of Arts & Sciences is looking forward to the development of the Master's Degree in Health Sciences and excited about the possibilities it offers our students.

Sincerely,

Ryan Teten, PhD
Dean, College of Arts and Sciences
The University of Nebraska at Kearney



College of Arts and Sciences
2507 11th Avenue, Copeland 240 | Kearney, NE 68849 | 308.865.8518
unk.edu

July 2, 2019

Dear Dr. Shaffer and Mrs. Abels,

I am writing this letter in support of your proposal to create a Master's Degree in Health Sciences at the University of Nebraska at Kearney. This would be an excellent opportunity for students across our state to help prepare them for a professional school in the health sciences.

During my undergraduate career, I was a Pre-Physician Assistant student with the hope of becoming a rural healthcare provider. Unfortunately, my academic record was not strong enough for me to be accepted the first time I applied. I was told during a few exit interviews I needed to improve my science GPA and strengthen my overall academic record. I needed to be able to prove myself academically to the admissions committees. I quickly explored my options and realized there were very limited choices in Nebraska for students in my situation. It was important to find a program that could be completed as soon as possible, expand my knowledge within the healthcare field and showcase my abilities to the admissions committee. I could have opted to take more science classes but felt pursuing my Master's would be more valuable to my future. There are other programs across the country but most of them are at private schools and were not viable options due to both location and cost.

After receiving my B.S. in Biology from UNK, I went on to complete a M.S. in Nutrition and Health Sciences from UNL. I felt there were few options left for me at UNK after receiving my B.S., but I would have strongly considered a Master's Degree in Health Sciences from UNK had that been an option. The quality of the faculty and staff in the science departments and affordable tuition and living would have made this a top choice for me.

I strongly support your efforts in creating such a program and believe it will help students succeed and keep future providers in rural Nebraska.

Sincerely,

Taylor Stowater

June 28, 2019

Dear Dr. Shaffer and Mrs. Abels,

I am writing in support of your proposal for a one-year master's degree in Health Science Program at UNK. This can be a tremendous program capable of preparing students from UNK and across the state for the extreme competitiveness of professional schools including Physical Therapy, Physician Assistant, and Allopathic Medical Schools.

During my undergraduate career I majored in Biology with a Health Science emphasis, I aspired to attend Medical school after I graduated. Unfortunately, my academic record wasn't strong enough to compete with other applicants for medical school. I needed some post-graduate classes to improve my academic standing and to prove I could handle the academic rigor of medical school. I searched for programs that would help me and found that UNMC possessed a Master's in Medical Anatomy (MMA) Program that was one year long. This appealed to me because I wouldn't be side tracked too long from my goal of becoming a physician. I didn't know of any other one-year programs, so I threw all my eggs in one basket and applied to UNMC. I was initially rejected which left me scrambling halfway through the summer without a means to improve my application for the next application cycle. Fortunately, a student in the MMA program was accepted into medical school and opened a spot which I filled at the beginning of August. I completed the program successfully. I was fortunate to be one of 16 students in the program, however there were over 100 applicants who weren't accepted. The competition for professional schools is so intense that it is becoming the norm for applicants to complete post-graduate education to improve their applications. Without the program I would have had to complete a 2-year program in Biology which wouldn't have related to the health sciences nor would it have prepared me as completely for medical school.

If I had the option, a program at UNK would have been much more convenient for me staying in Kearney, rather than moving to Omaha for 9 months. I also think it is important that UNMC, being the main professional school for our students, be a part of the decision making for the classes and that it is up to their standards as well. I wholeheartedly support your proposal and believe it will make a difference for students that complete it and help them reach their career goals.

Sincerely,

Luke Fennessy

June 25, 2019

Peggy Abels, Director of Health Sciences
University of Nebraska at Kearney
Bruner Hall of Science 170
2401 11th Avenue
Kearney, NE 68845

Dear Ms. Abels,

On behalf of the University of Nebraska College of Allied Health Professions (CAHP), I am writing to offer support for the development of a Master's Degree in Health Science at the University of Nebraska at Kearney. We believe the proposal meets an emerging need across the state for an affordable and accessible graduate degree option for students interested in health and health-related professions.

UNMC benefits from the excellent preparation UNK provides for pre-health professions students at the undergraduate level. That said, we know there are a number of students who for a variety of reasons choose to pursue additional graduate-level preparation prior to application to a health professions education program, whether at UNMC or another university. One alternative at UNMC for example, is the Master's degree in Medical Anatomy. We appreciate your acknowledgement of the value of this program, as it affords students a degree option similar to the one you are proposing. That said, applications to that program, like the allied health profession education programs, generally exceed available positions.

The proposed Master's in Health Sciences would afford both resident and non-resident students an excellent degree option, particularly as the number of students interested in health related careers, and the workforce demand in the health sector continues to increase. The proposed curriculum would provide pre-health professions students important knowledge and competencies in preparation for application to a health profession education program. In addition, the variety of courses proposed for the degree will afford students the opportunity to tailor a program of study for a variety of other health related career options. In summary, we believe the degree program would be strongly value-added, either as an end in itself, or as preparation for the pursuit of a health professions degree.

June 25, 2019
Letter to Peggy Abels
Page 2

Our capacity to offer health professions education programs on the UNK campus has greatly advanced the mission of the CAHP. We look forward to our ongoing partnership with UNK and offer our full support for the proposal to develop the Master's in Health Science degree at UNK.

Sincerely,



Kyle P. Meyer Ph.D., M.S., PT, FASAHP
Dean



Betsy J. Becker, PT, DPT, PhD, CLT-LANA
Director, Physical Therapy Education



Teresa Cochran, PT, DPT, MA, FNAP
Assistant Dean HSEC



Annie Wildermuth, MMS, PA-C, RD
Director of Admissions,
Physician Assistant Education

cc: Dele Davies, MD, MS, MHCM, Senior Vice Chancellor for Academic Affairs, UNMC
Karen Gould, PhD, Vice Chair of Graduate Education, Genetics, Cell Biology &
Anatomy, UNMC
Charles Bick, PhD, Senior Vice Chancellor for Academic and Student Affairs, UNK

June 24, 2019

Dear Dr. Shaffer and Mrs. Abels,

I am writing this letter in support of your proposal to create a Master's Degree in Health Sciences at the University of Nebraska at Kearney. This would be an excellent opportunity for students across our state to help prepare them for a professional school in the health sciences.

During my undergraduate career, I was a Pre-Med student with the hope of becoming a surgeon. My path through undergrad was complicated and I had times that I was unsure of continuing as a Pre-Med student and in turn my GPA suffered. Towards the end of my college career I was sure that I wanted to become a surgeon. However, due to the amount of credits I had already earned, my GPA could not be improved in just a few semesters to be competitive for a professional school. I needed to be able to prove myself academically to the admissions committees and improve my science foundation. I explored my options and realized that there were very limited choices in Nebraska for students in my situation. It was important for me to find a program that could be completed in one year, help me strengthen my science background and prove my abilities. Taking more science classes at UNK or other colleges would not have provide the end result that many admission committees are looking for and I would have also been lost on what I should take for courses. There are other programs across the country but most of them are at private schools and were not viable options due to both location and cost.

If UNK would have had this program previously, I definitely would have pursued it. The quality of the science departments at UNK is what aided in my full commitment to perusing a career in the medical field. The location and affordability of UNK would have made this program a top choice for me and helped make me feel that my long-term goal was obtainable. I strongly support your efforts to create such a program for future students to help them stay in Nebraska and reach their career goals.

Sincerely,

Dustin Bell

June 23, 2019

Dear Dr. Shaffer and Mrs. Abels,

I am writing this letter in support of your proposal to create a Master's Degree in Health Sciences at the University of Nebraska at Kearney. This is an excellent opportunity for students to prepare them for a professional school in the field of health sciences.

During my undergraduate career at UNK, I was a Pre-Physical Therapy student with the goal of becoming a physical therapist. Unfortunately, my academic resume was not competitive enough to be granted acceptance into various Doctorate of Physical Therapy programs. I was told I needed a higher science GPA and to improve my overall academic record. I had the option to retake courses or enroll in higher level science classes. However, this route would not have led me to anything tangible, such as a Master's Degree or additional Bachelor's Degree. While there were other Master's programs offered in Nebraska, none directly related to health sciences. A one year program would be ideal because it would be completed during lengthy admission cycles for professional school. Additionally, I would've been able to prove myself academically in high level courses.

If UNK offered a Master's Degree in Health Sciences, I would not hesitate to apply. Not only would this help improve my Science GPA, but it would also expand my knowledge in various areas of health science and strengthen my application for professional school. Receiving my Bachelor's Degree from UNK, I know first-hand the high quality of science courses offered. This type of program would be a top choice for me because of the quality of instructors, location, and affordability. I strongly support your efforts to create such a program for future students to help them achieve their career goals.

Sincerely,

Stephanie Sander

June 18, 2019

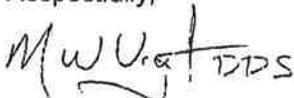
To whom it may concern:

As the Assistant Dean for Student Affairs and Director of Admissions at the College of Dentistry, I am excited to learn of discussions taking place at UNK regarding the development of the Masters in Health Sciences degree.

I have referred students to UNMC's Masters of Medical Anatomy Program but I see this as an entirely different program of study. What catches my eye immediately is the depth and breadth of the science curriculum. The design, the core courses and the electives will be an excellent pathway for preparing students for a professional healthcare program. The state of Nebraska desperately needs a program of this type. I will fully support the UNK's Master of Science in Health Sciences degree and I anticipate referring students to the program. Not all applicants desire the intense focus and the deep dive into the anatomical sciences, nor do all students want to spend a year in Omaha! I am certain there are many students that would not mind spending some time at UNK.

I am very excited and willing to support the proposed Master of Science in Health Sciences. Again, students will greatly benefit from such a program. I certainly hope that the proposed program will soon become reality!

Respectfully,



M. W. Vogt, D.D.S.
Assistant Dean for Student Affairs
Director of Admissions
mvogt@unmc.edu
402.472.1479

April 24, 2019

Peggy Abels
Director of Health Sciences
University of Nebraska at Kearney
Bruner Hall of Science 170
2401 11th Avenue
Kearney, NE 68845

Dear Ms. Abels:

I am writing in enthusiastic support of the University of Nebraska at Kearney's proposed Master's degree program in Health Sciences. During the College of Medicines annual admission cycle, we frequently see applicants that would greatly benefit from such a program. This includes those students not well prepared for the rigors of college sciences that encountered early struggles as well as those who came to a health science career option later in the educational process.

Currently, there are limited opportunities in the state for those students needing a directed program that will prepare them to be successfully accepted into graduate health career programs. While there are several Masters of Anatomy programs available, they often fill, leaving applicants without a position and they do not necessarily meet the needs of every student. This proposed program clearly would help to fill an unmet need in the state.

The outlined curriculum is very appropriate for the majority of pre-health students. I appreciate the built in flexibility in course work as well as the potential of offering a Certificate program. Your office has a long history of offering outstanding career advisement to students; this coupled with UNK's strong record of preparing their students to academically succeed in graduate health programs makes this a very easy proposal to endorse. I fully support your efforts and look forward to our future collaboration in training Nebraska's next generation of healthcare professionals.

Sincerely,



Jeffrey D. Harrison, MD
Professor, Family Medicine
Associate Dean for Admissions
College of Medicine
UNMC

Chad Michael Hastings
1704 E 59th Street
Kearney, NE 68847

Dear Dr. Shafer and Mrs. Abels,

I have been informed of a potential new Master's degree in Health Science at UNK directed toward students who are looking to elevate their applications for acceptance into their preferred professional programs. I am in full support of offering this program on campus at UNK. I was searching for a program such as the one proposed, and am taking classes out of the University of Florida. I can tell you with definite certainty that if this program would have been offered at UNK, prior to me enrolling at the University of Florida, I would have taken it.

I am considered a non-traditional student who went out into the workforce directly after obtaining my Bachelor's degree in Biology at UNK. After a few years, I quickly realized I could no longer ignore my desire to become a physical therapist. With graduate schools being extremely competitive I was encouraged to pursue a graduate level program to help boost my application credentials. I am confident that completing the Medical Anatomy program at UF will make me a stronger applicant for this next cycle of PT school admissions. Had a program like this been offered at UNK, I would not have had to search out of state. I hope you will consider my experiences and opinion on this matter. I look forward to seeing the Master of Science in Health Science program at UNK as it will be a useful avenue for many students in Nebraska looking to be accepted into their desired program.

**TABLE 1: PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM
UNK MS in Health Sciences**

	(FY2021) Year 1		(FY2022) Year 2		(FY2023) Year 3		(FY2024) Year 4		(FY2025) Year 5		Total
	FTE	Cost	Cost								
Personnel											
Faculty											
Professional											
Graduate Assistants											
Support Staff											
Subtotal											\$0
Operating											
General Operating ¹		\$5,000		\$5,000		\$5,000		\$5,000		\$5,000	\$25,000
Equipment											
New or Renovated Space											
Library/Information Resources											
Other ²		\$5,030		\$5,030		\$5,030		\$5,030		\$5,030	\$25,150
Subtotal		\$10,030		\$10,030		\$10,030		\$10,030		\$10,030	\$50,150
Total Expenses		\$10,030		\$10,030		\$10,030		\$10,030		\$10,030	\$50,150

¹ General operating funds will come from Tuition Differential generated.

² Director stipend plus benefits; these funds will come from Tuition Differential generated.

**TABLE 2: PROJECTED REVENUES - NEW INSTRUCTIONAL PROGRAM
UNK MS in Health Sciences**

	(FY2021) Year 1	(FY2022) Year 2	(FY2023) Year 3	(FY2024) Year 4	(FY2025) Year 5	Total
	Reallocation of Existing Funds					
Required New Public Funds						
1. State Funds						
2. Local Tax Funds (community colleges)						
Tuition and Fees ¹	\$219,150	\$226,410	\$240,930	\$255,450	\$269,970	\$1,211,910
Other Funding						
Total Revenue	\$219,150	\$226,410	\$240,930	\$255,450	\$269,970	\$1,211,910

¹ Tuition and fees estimated with \$309.00 in-state tuition and \$551.00 out-of-state tuition.

	out-of-state	in-state	Fees	Total
Year 1: No out-of-state	\$0	\$185,400	\$33,750	\$219,150
Year 2: 5% est. out-of-state	\$16,530	\$176,130	\$33,750	\$226,410
Year 3: 15% est. out-of-state	\$49,590	\$157,590	\$33,750	\$240,930
Year 4: 25% est. out-of-state	\$82,650	\$139,050	\$33,750	\$255,450
Year 5: 35% est. out-of-state	\$115,710	\$120,510	\$33,750	\$269,970