

FERRIS STATE UNIVERSITY

FERRIS FORWARD

FISCAL YEAR 2023 CAPITAL OUTLAY PROJECT REQUEST

October 29, 2021

Institution Name: Ferris State University

Capital Outlay Code:

Project Title: The Center for Interprofessional Health Sciences Education (CIHSE)

*Project Focus: **Academic***

*Type of Project: **Renovation***

Approximate Square Footage: Existing: 67,400 sq. ft.; Proposed: 87,400 sq. ft.

Total Estimated Cost: \$29,500,000

Estimated Duration of Project: 2 years

*Is the Five-Year Plan posted on the institution's public internet site? **Yes***

*Is the requested project the top priority in the Five-Year Capital Outlay Plan? **Yes***

Project purpose:

The Center for Interprofessional Health Sciences Education (CIHSE) will address mission-critical needs for Ferris State University. It will focus on renovating the existing Allied Health Sciences Building with an expansion to create new spaces for interprofessional health sciences education. In close proximity to the University's College of Pharmacy and Michigan College of Optometry, this facility will also be available to their students. This approach will prepare students to graduate into a health-related workforce that demands an increasingly holistic education to address needs that have resulted from the COVID-19 pandemic.

The University's commitment to interprofessional practice and education (IPE) is longstanding, receiving the 2004 Health and Human Services "Secretary's Award" for an innovative,

interprofessional clinic model that provided patients with diabetes access to a broad range of clinical services and practitioners including optometrists, pharmacists, and nurses. Seventeen years later, the interprofessional clinic continues, serving as a model of IPE for graduating students. With this project we seek to expand this successful model. The CIHSE will facilitate the collaboration of a unique and complementary selection of healthcare programs, ranging from an Associate degree in Diagnostic Medical Sonography to a Doctor of Nursing Practice degree.

Scope of the project:

The Allied Health Sciences Building was opened in 1979 and houses the College of Health Professions. The 67,400 sq. ft., four-story building provides instructional space, a Nursing Simulation Laboratory, and a Skills Laboratory. Notably, the College of Health Professions is home to the largest dental hygiene clinic program in the state of Michigan. In addition to the renovation of space in this building, an expansion to this building is planned for new space dedicated to supporting IPE. The renovation and resulting expansion of the Allied Health Sciences Building will incorporate the CIHSE and will be strategically located between the Hagerman College of Pharmacy and The Michigan College of Optometry Buildings.

The proposed Center will support growing collaborative efforts across the colleges to holistically address the healthcare needs of the surrounding community. The recent award of a \$1M HRSA Implementation Grant to address Opioid Use Disorder (OUD) and substance use disorder (SUD) has confirmed the need for collaborative spaces that facilitate engagement of students, faculty, and the community the Colleges serve. Creation of a hub and spoke model, with the CIHSE as the center connecting to outlying clinics will allow for a distributive model of expertise and clinical instruction.

Existing Facilities:

This proposal encompasses renovation and expansion of the existing Allied Health Sciences Building, resulting in approximately 20,000 sq. ft. of additional space. Construction managers and architects believe the State of Michigan and Ferris State University's students in the health sciences will be better served by the proposed renovation and expansion. Expanded instructional and clinical space to intentionally support IPE will provide the facilities necessary to deliver high demand healthcare programs.

This CIHSE will position Ferris State as Michigan's flagship public University in terms of meeting rural healthcare needs and providing educational opportunities to students across the region who return to their communities with expertise in dental health, pharmacy, optometric healthcare, and other allied health fields. This will form an attractive health sciences center for the community and residents across West Michigan.

Furthermore, the CIHSE will provide community access to advanced facilities and services not otherwise available in a rural community. The CIHSE will serve as a campus landmark and demonstrate the university's commitment to healthcare education and delivery. Located on west campus, the renovated and expanded facility will consolidate all healthcare activities and provide students and community residents with a visible *Health Sciences Center*. Additional benefits to the campus include a reduction in pedestrian-vehicular interaction, improved access for patients by limiting traffic congestion, and enhanced overall safety by creating a 'campus within a campus.' The health sciences center approach will expand services while reducing overall

operating costs through enhanced operational efficiencies. Clinics will be used by multiple disciplines, and classrooms shared across professions, which will increase utilization and create additional space for clinical services, and technology-intensive classrooms that will serve multiple programs.

Beyond support of existing programs, the CIHSE will provide a physical location for the Office of Rural Health Studies and Practice (ORHSP). Long recognized as a needed element to enhance students' understanding of practice in a rural community, the ORHSP will enhance the delivery of healthcare beyond the region and into the Upper Peninsula. This will advance the support of cross-college collaborations essential to the delivery of rural healthcare. For example, projects such as the Central Michigan Recovery and Education Network, focused on addressing the opioid epidemic in Mecosta, Newaygo, and Osceola counties, would be expanded, providing additional federal funding support to the region and greatly enhancing the understanding of rural health issues. The ORHSP will further strengthen the University's commitment to enhancing the quality of life for citizens of the region, while increasing the likelihood that students will return to practice in rural areas and provide a focal point for patient care.

The ORHSP will support the following teaching, learning, and healthcare outcomes, including but not limited to:

- Dental Hygiene (AAS, BS Completion)
 - Graduates will communicate effectively to acquire, develop & convey ideas & information to diverse populations
 - Graduates will utilize evidence-based knowledge to provide comprehensive dental hygiene care
 - The Program will continue to meet the standards of the CODA to maintain specialized accreditation
 - Graduates utilize theory and evidence-based practice when engaged in activities toward advancing the profession
- Nursing (RN to BSN; MSN; DNP)
 - Organize the interdisciplinary healthcare needs of diverse populations across the lifespan toward achieving the goal of healthy individuals, families, groups, and communities
 - Advocate for healthcare across the continuum of healthcare environments
 - Demonstrate the ability to navigate and integrate care services across the healthcare system
 - Advance the culture of excellence through lifelong learning and the design of innovative nursing practices
- Healthcare Systems Administration (MHA)
 - Generate an operational analysis of the structure and performance of a healthcare organization, including the distribution of power and circumstances regarding merger, joint venture, and other financial arrangements
 - Evaluate the impact of population health and status in a variety of settings
 - From an economic standpoint, synthesize a strategic plan for evaluation of the distribution of health services based on current health policy, in a community

- o Develop and lead the implementation of a project intended to enhance the quality of healthcare delivery in a real-world situation

Program Focus of Occupants:

Interprofessional health sciences education that prepares graduates to meet the needs of Michigan's allied health care providers.

1. How does the project support Michigan's talent enhancement, job creation and economic growth initiatives on a local, regional and/or statewide basis?

Examples illustrating how programs in the College of Health Professions support initiatives in Michigan include, but are not limited to:

School of Nursing

As one of the largest programs at Ferris, School of Nursing graduates contribute significantly to the healthcare workforce throughout the state of Michigan, practicing in rural, urban, community, and hospital-based settings. With starting salaries for new Bachelor of Science in Nursing graduates ranging from \$28-\$35/hour, and a graduating class of approximately 64 students/year, \$4,160,000 in annual salary generated with each graduating class combined. The fully online Master of Science in Nursing (MSN) degree enrolls approximately 50 students/year. The Bureau of Labor Statistics has reported that on average those with an MSN degree earn about \$86,000. Our graduating class accounts for \$4,300,000 in annual salary generated. The Doctor of Nursing Practice (DNP) degree, the first professional degree program in the college, is a six to eight semester, 100% online program, where postgraduate students build their foundation of system leadership in advanced practice and specialty nursing. Since beginning the program in 2019, the program has enrolled approximately 16 students/year, \$1,940,000 in annual salary generated with each graduating class.

Public Health

The fully online Master of Public Health (MPH) program focuses on career development for leadership positions in public health, from community health departments to global health agencies. The two-year degree builds skills needed to educate and empower communities to achieve better health outcomes. Recently, the College of Health Professions partnered with the College of Pharmacy to offer a joint PharmD/MPH degree. With national annual starting salaries for new graduates ranging from \$50,000 to \$100,000, this also has the potential to generate significant economic impact in Michigan's healthcare sector.

Dental Hygiene

The Associate of Applied Science in Dental Hygiene program graduates students who contribute significantly to the healthcare workforce throughout the state of Michigan. Graduates enter the workforce to serve across the state in dental clinics, government, public health agencies, school systems, and state agencies. With national annual salaries for new graduates starting at \$72,330, and a graduating class of approximately 40 students/year, nearly \$3M in annual salary is generated with each graduating class.

Health Information Technology

The Associate of Applied Science in Health Information Technology (HIT) program at Ferris State University prepares graduates to meet the business and economic challenges of the healthcare industry. Ferris HIT graduates are proficient in common healthcare coding systems, billing, analyzing, managing, and utilizing patient care data. Graduates are eligible to sit for the registered HIT certification exam. The median annual pay for a Healthcare Information Technologist in the United States is \$75,775.

Health Information Management

The Bachelor of Science in Health Information Management (HIM) program at Ferris State University prepares graduates to meet the business and economic challenges of the healthcare industry. Ferris HIM graduates are proficient in common healthcare coding systems, problem solving, critical thinking, supervision and leadership. Graduates are eligible to sit for the registered HIM certification exam. The median annual pay for a Healthcare Information Management professional in the United States is \$90,000.

Healthcare Systems Administration

The Bachelor of Science in Healthcare Systems Administration (HCSA) program provides graduates with a strong background in general management, human resources, supervision, quality improvement, reimbursement, healthcare planning, and finance. There are also opportunities to undertake focused study in the areas of long-term care management, human resources management, medical informatics, and lean healthcare quality practices via several concentration and minor options. Certificates are also available in Long Term Care and Gerontology. HCSA courses are available on the Big Rapids campus and online.

HCSA course work prepares graduates for entry level administrative positions or to pursue graduate studies. There are career opportunities for both healthcare generalists and specialists. Generalists manage or help to manage an entire facility or system, while specialists manage individual departments or services specific to the healthcare industry.

Job opportunities in healthcare management continue to expand according to the United States Bureau of Labor, with an anticipated growth of 32% through 2029. The median annual pay for a Medical and Health Services Manager is \$93,360.

The fully online Master of Healthcare Administration (MHA) program is designed to meet the needs of today's healthcare leadership. Students develop expertise needed to build careers as leaders in the healthcare industry. The Master of Healthcare Administration program is fully accredited through the Commission on Accreditation of Healthcare Management Education (CAHME). The median annual pay for a healthcare administrator in the United States is \$108,740.

Nuclear Medicine Technology

The Bachelor of Science in Nuclear Medicine Technology at Ferris State University represents the only university-based program in the State of Michigan. Nuclear Medicine Technology is an innovative medical specialty that utilizes small doses of radioactive material in order to diagnose and treat disease. Nuclear Medicine technologists administer radiopharmaceuticals to patients and monitor the characteristics and functions of tissues or organs in which they localize. Nuclear

Medicine technologists operate gamma scintillation cameras that detect and map the radioactive material in the patient's body to create an image. The median annual salary for a Nuclear Medicine technologist in the United States is \$79,590.

Respiratory Therapy

The Bachelor of Science in Respiratory Therapy completion program allows working respiratory therapists with associate degrees to further their education. Respiratory care practitioners are licensed professionals who evaluate, treat, and care for patients with breathing or other cardiopulmonary disorders. Practicing under the direction of a physician, respiratory therapists assume primary responsibility for all respiratory care, therapeutic treatments, and diagnostic procedures. They consult with physicians and other healthcare staff to help develop and modify patient care plans. Therapists also provide complex therapy requiring considerable independent judgment, such as caring for patients on life support in intensive-care units of hospitals. The median annual salary for a Registered Respiratory Therapist with a Bachelor degree is \$67,972 - \$71,487.

Medical Laboratory Sciences

The Bachelor of Science in Medical Laboratory Sciences program is one of only two programs graduating medical laboratorians in west Michigan. Ferris State graduates contribute significantly to the healthcare workforce throughout the state of Michigan. Across the United States, there is a shortage of qualified medical laboratorians. Career opportunities exist in clinical laboratories in hospitals and medical centers. Additionally, graduates are often employed in the pharmaceutical industry, government crime labs, accreditation offices, environmental technology, veterinary medicine, and lab information systems.

The median annual base salary of full-time medical laboratory technicians is \$46,000. However, salaries are increasing annually based on higher demand for laboratorians due to the pandemic.

Radiography

The Associate of Applied Science program in Radiography at Ferris State began in 1966 and is one of the largest and best-known programs in the country. The program is accredited by the Joint Review Committee on Education in Radiologic Technology. As a recognized program in the State, Ferris graduates are highly sought-after employees in hospitals, doctors' offices, forensic medicine, and other healthcare organizations.

The program enrolls a class of 50 students annually and the average base salary of new radiologic technologists is \$56,000. However, salaries are increasing annually based on higher demand for imaging procedures due to the pandemic.

Diagnostic Medical Sonography

Graduates of the Associate of Applied Science program in Diagnostic Medical Sonography are eligible to take the American Registry of Diagnostic Medical Sonographers Sonography Principles and Instrumentation Examination as well as the Abdomen, and Obstetrics and Gynecology specialty exams.

With national annual salaries for new graduates starting at \$81,029 and a graduating class of approximately 24 students/year, \$1,944,696 in annual salary is generated with each graduating class.

2. How does the project enhance the core academic and/or research mission of the institution?

The University's Mission Statement ("*Ferris State University prepares students for successful careers, responsible citizenship, and lifelong learning. Through its many partnerships and its career-oriented, broad-based education, Ferris serves our rapidly changing global economy and society*") emphasizes the development of careers and responsible citizenship; the CIHSE will enhance those efforts by producing healthcare professionals, prepared for a rapidly changing interprofessional model delivered in all sectors, with emphasis in rural communities.

Interprofessional Practice and Education (IPE) – The College of Health Professions, the College of Pharmacy, and the Michigan College of Optometry, have received recognition for engaged interprofessional practice for almost 20 years, first receiving recognition for their work in 2004. IPE is built upon students engaging in interprofessional education throughout their professional curriculum. Often described as "students of two or more professions learning with, from, and about each other," IPE prepares healthcare professionals for collaborative practice models that include the patient as a member of the collaboration. The professional barriers that exist in practice are addressed pedagogically during the professionalization of the student. This approach results in the formation of a team of providers focused on achieving the treatment goals of the patient. Each member of the team contributes their specialized knowledge and practice skills in formation of the overall approach. Providing instructional environments that allow for convening of students and faculty from multiple professions is essential to achieve interprofessional skills for all graduates. The wide range of healthcare professions represented at Ferris State University provides a unique opportunity for IPE that will ensure competency upon graduation. Further, graduates with these skills will find enhanced placement opportunities and be able to offer a level of care not commonly seen.

The objectives of IPE in the CIHSE include, but are not limited to:

- Exploring opportunities for curricular integration of IPE between the College of Health Professions, Michigan College of Optometry and College of Pharmacy and making recommendations for development & implementation
- Developing a series of core courses/curriculum that are germane to all the professions in the Colleges
- Re-conceptualizing current core curriculum for health sciences as an IPE core curriculum
- Identifying faculty areas of interest as well as resources needed for IPE course proposals and research
- Exploring opportunities on how the various clinical programs within and outside of the College could work together as a team in the training/education of students and in the practice of the professions
- Exploring opportunities for IPE with other FSU colleges and external constituencies

Lifelong Learning – The CIHSE will serve as a leading resource for Allied Healthcare education programming and practice in the region. Given the geographical positioning of Ferris the CIHSE will expand upon and promote the continuing education of Allied Healthcare professionals across the state. As described above, Ferris produces graduates that address the needs of Allied Healthcare workforce. Then taken together with the proximity of the College of Pharmacy and the Michigan College of Optometry on the Ferris campus, the CIHSE will offer a wide range of opportunities for interprofessional healthcare education and practice.

Partnerships – Partnerships are an essential component of clinical instruction for the University. As the healthcare colleges and programs are not located within an Academic Health Sciences Center, each relies on clinical placements with multiple affiliated healthcare systems. The CIHSE will provide a central point for instructional and meeting facilities and joint use by the colleges and the affiliated healthcare systems.

Research – Building on the vision of its founders, the University is an agile and transformative institution that fosters discovery and supports faculty as teacher-scholars. The CIHSE amplifies these goals by providing collaborative research space for faculty and students.

Program Development/Innovation – The University is recognized for its ability to develop innovative programs and curricula to meet the emerging needs of business, healthcare, and society. Cross-college collaboration has often been the essential element of that innovative process led by faculty in the College of Health Professions. The opportunities for IPE continue to drive the need for the CIHSE.

Facilities proposed within the CIHSE will provide the needed additional physical spaces for instruction and student collaborations in Pharmacy and Optometry. Pharmacists and Optometrists can play a critical role in IPE. For example, through their examinations, Optometrists can detect warning signs for a number of diseases, including, but not limited to: diabetes mellitus, hypertension, hyperlipidemia, brain and pituitary tumors, breast, lung, and colon cancers, idiopathic intercranial hypertension (pseudotumor cerebri), Fabry's disease, Marfan's syndrome, Sjogren's syndrome, lupus; and sarcoidosis.

Office of Rural Health Studies and Practice (ORHSP) – FSU is located approximately 50 miles from the nearest major population center in a community of approximately 10,000 and a county of 40,000. This places the university in an environment that is rural and often underserved. Various outreach efforts from each of the colleges exist, with efforts to coordinate a consistent approach toward serving the needs of the community as a focus of ORHSP's mission.

3. Is the requested project focused on a single, stand-alone facility? If no, please explain.

Yes. This project is a single, stand-alone facility. It will renovate the existing Allied Health Sciences Building and expand this facility to include a newly created Center for Interdisciplinary Health Sciences Education.

4. How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?

This project will focus on renovation of the Allied Health Sciences Building, home of the University's College of Health Professions. The building is placed directly between the College of Pharmacy's Hagerman Pharmacy Building and the Michigan College of Optometry. This unique location will allow the Allied Health Sciences Building to serve as a center for the Health Professions, providing updated instructional and research spaces to support existing programming and the expansion of IPE across the three colleges. Contemporary instructional and clinical labs will provide benefit to both the learner and the patient, accommodate expansion of existing programs and facilitate IPE across the professions. The renovation will focus on modernization of all aspects of the current structure, resulting in a state-of-the-art academic and clinical facility that prepares healthcare students to enter a workforce driven by technological advances and dynamic change escalated by the pandemic and the evolving challenges that have resulted.

5. Does the project address or mitigate any current health/safety deficiencies relative to existing facilities? If yes, please explain.

College of Health Professions - Built 42 years ago, the Allied Health Sciences Building has not undergone any major improvements. Not surprisingly, upgrades are needed in all areas of the building including heating, ventilation, and air conditioning. Outdated laboratory space and dated technology present instructional challenges, especially as today's educational methodology embraces high-fidelity simulation with advanced technology for our healthcare programs.

A major renovation would provide the College of Health Professions with the opportunity to reconfigure existing spaces for better utilization, and efficiency with the latest technology, including simulation equipment. Updated instructional spaces could intentionally support IPE and provide the facilities necessary to deliver high demand healthcare programs.

The Diagnostic, Laboratory, and Therapeutic programs, and School of Nursing would benefit greatly with updated laboratories more conducive for the curricular integration of IPE and simulation. The Dental Hygiene Clinic is in significant need of a comprehensive renovation that would address the need for an improved design and infrastructure to support more fully integrated digital x-ray capabilities, electronic dental records, patient privacy protections, modernized dental units with enhanced chairside technology, and sterilization equipment.

A few of the laboratory spaces have received some minor modifications over the years, but those alterations have not allowed us to expand capacity or enhance instructional delivery due to limited structural changes. These limitations also contribute to enrollment challenges. Currently, due to lack of instructional space, some programs including Nursing, Dental Hygiene, and Sonography have admissions waitlist(s) of several years. For example, students on the waitlist(s) for Nursing and Dental Hygiene currently expect a two-year delay in admissions to the respective programs.

6. How does the institution measure utilization of its existing facilities, and how does it compare relative to established benchmarks for educational facilities? How does the project help to improve the utilization of existing space and infrastructure, or conversely how does current utilization support the need for additional space and infrastructure?

Using standard utilization measures both in terms of weekly hours used (industry standard is 20 to 35 hours per week, depending upon certain lab work) and station occupancy percentage (85 per cent standard), the current facility is fully utilized. The current facility restricts class sizes, while the newly renovated Center for Interdisciplinary Health Sciences Education will allow for larger class sizes, integrated class scheduling, enhanced integrative curriculum planning, and more flexible configuration, which will combine to make the facility more learning-friendly and increased commitment to its utility and efficiency.

The above data makes it clear how the mission and scope of CIHSE will facilitate the need for modern practices that utilize innovation and technology in classroom, laboratory, and simulation settings. By reaching an expanded group of prospective healthcare professionals entering Ferris State University, the CIHSE will continue to build upon the role the university plays in meeting the Allied Healthcare workforce needs in the community, region, and state of Michigan.

7. How does the institution intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

Ferris State University has been committed to sustainable and energy-efficient design for all capital projects since the inception of LEED. We modified our design and construction strategies allowing our design and construction partners to deliver a comprehensive framework for green building design, construction, operations and performance. All of the University's recent capital projects have achieved a minimum of LEED-Silver certification, with multiple projects receiving LEED-Gold certification. All future capital construction projects are expected to meet LEED-Gold certification thresholds.

Additional sustainable design items will include high-efficiency lighting, high-efficiency HVAC units, interior-finish materials (such as Carpets) that feature highly recycled content and low-emitting volatile organic compounds, and toilet rooms that will incorporate low-water consumption features.

8. Are match resources currently available for the project? If yes, what is the source of the match resources? If no, identify the intended source and the estimated timeline for securing said resources?

Yes, the University is prepared to provide its twenty-five percent capital outlay funding match. It will do so through savings in deferred maintenance cost-savings through the building upgrades that will significantly reduce the costly upkeep of outdated and inefficient facilities. Ferris currently has sufficient reserves available as a match for the capital outlay. Additionally, the

University has developed a highly successful fundraising program and will raise the remainder of this match.

9. If authorized for construction, the state typically provides a maximum of 75% of the total cost for university projects and 50% of the total cost for community college projects. Does the institution intend to commit additional resources that would reduce the state share from the amounts indicated? If so, by what amount?

The University is prepared to provide its twenty-five percent match of the capital outlay funding upon project approval. See #8 above.

10. Will the completed project increase operating costs to the institution? If yes, please provide an estimated cost (annually, and over a five-year period) and indicate whether the institution has identified available funds to support the additional cost.

The completed project will reduce operating costs to the institution. The existing Allied Health Sciences Building was originally constructed in 1979 with no major modifications to the existing plumbing, HVAC or electrical and lighting systems since. The completed project will result in new energy-efficient design for plumbing, HVAC and electrical and lighting systems that will consume fewer resources, reduce operating costs by roughly 5 to 10%, and create safer and healthier environments for its occupants while reducing the buildings existing greenhouse gas/carbon emissions.

11. What impact, if any, will the project have on tuition costs?

None. The University continues its strong commitment to affordability and reducing student debt. Tuition is not used to cover construction costs.

12. If this project is not authorized, what are the impacts on the institution and its students?

If this request is not funded, the programs in the College of Health Professions will continue to be taught in their present locations. The current limitations on instructional and applied clinical instruction will remain. The current facilities hinder learning, limit enrollment growth, inhibit student recruitment, create considerable maintenance challenges, and remain expensive to keep open. Currently, Nursing, Dental Hygiene, and Diagnostic Medical Sonography have excessive admissions waits due to limited space capacity in the college and funding to support additional cohorts. For example, in 2020 the School of Nursing received 140 admissions applications; however, only 64 students were accepted. Further, in the 2021 admissions cycle, 134 applications were received and only 64 students were admitted. This equates to an average one-to-two-year wait to enter the Bachelor of Nursing program in the College of Health Professions.

13. What alternatives to this project were considered? Why is the requested project preferable to those alternatives?

An alternative to this proposal considered was to completely replace the current Allied Health Sciences Building. At current construction costs, a new facility similar in size to the current

structure would be in excess \$40 million. These costs do not include the proposed expansion of the building. This proposal is a reasonable, affordable approach to a growing challenge for the university's healthcare programs.