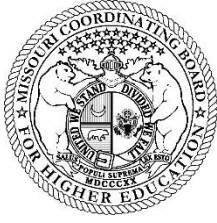


Coordinating Board for Higher Education
September 13, 2023

Tab 14, Attachment E
FY 2025 MoExcels Proposal Summaries



Harris-Stowe State University Accelerated Certification Track (ACT) Project

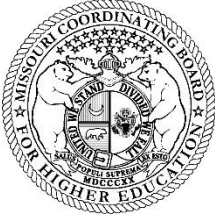
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

One of the many challenges facing schools today is hiring and retaining qualified, experienced, effective, and diverse educators. Due in part to the unprecedented challenges brought on by the COVID-19 pandemic, teachers are leaving the profession at a higher rate than usual. Pre-existing teacher shortages have been exacerbated by the pandemic and historically these teacher shortages have had a disproportionate effect on students of color and students from low-income backgrounds. Even before the pandemic, students of color and students from low-income backgrounds were more likely to experience inequities in access to qualified and experienced teachers. In addition to the ongoing overall shortage, efforts to diversify the educator workforce can be a challenge. The rates of African American teachers who plan to leave the teaching field are even higher than teachers overall. We are addressing the problem of a shortage of teachers and specifically teachers of color.

PROPOSED SOLUTION

Our proposed solution is based on a previously proven approach of "Grow Your Own". We will provide an accelerated pathway for certification to current school staff such as paraprofessionals, substitute teachers, and those from the community who meet the criteria so they can obtain certification in the critical shortage area of Elementary Education. This program will provide them with opportunities to learn and grow into the profession and will be particularly effective in recruiting educators who reflect the diversity and understand the specific needs of underserved students. Creating these type of teacher apprenticeships allows teacher apprentices to earn a good wage while learning the skills on-the-job and a higher education partner we will integrate coursework into their experiences. We will be supporting paraeducators, high-quality substitute teachers, and others in the community who are interested in expanding their roles as educators by supporting their training and path to certification. As a result of the expanded effort to identify and recruit potential teachers there will be a desperate need to renovate our existing college of education to accommodate the increased student and staff population. Thus, the proposed solution is two folded: identify and recruit additional teachers and renovate our facility to meet the new demand of additional staff and students.



Jefferson College Workforce & Employment Space Renovation

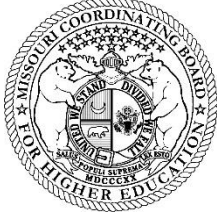
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Workforce and Employment Services (WES) supports local businesses with training and development, writes and administers grants, manages all non-credit programming focused primarily on manufacturing and healthcare, and oversees career and employment services at Jefferson College (JC). Currently, WES shares classroom space with the Precision Machining Technology program, Health Services program, or wherever space is available; there is no WES dedicated classroom space on campus. This creates problems finding space for our training, classes, and workshops and prevents the department from serving the students and community of Jefferson County as effectively as possible. Our space issues limit our ability to provide customized training on campus when our employer partners request it as well as limit our training options. Our staff also lacks a central office space. One of our team members is located down the hall from the other offices and the layout does not allow staff to easily connect and communicate as a team. Due to these constraints, WES has been limited in growing and expanding programs, such as supporting small businesses and entrepreneurs with resources and space.

PROPOSED SOLUTION

JC has recognized the need for dedicated space for WES. The renovation of the former Veterinary Technology program space will provide classrooms, a conference room, a small business resource center, and dedicated office space for the WES team. The classroom space will allow us to support and expand workforce training, non-credit programs, career services workshops, and individual appointments. Last year WES non-credit programs served 236 individuals. With additional space, the new programs being explored include automation training, introduction to electricity, utility pole climbing, and geospatial support, among others. Additional education will come from providing career and employment workshops. It is a goal to have all students have a career development checklist to help them transition to work or to their transfer institution. The conference room will provide a professional space to conduct WES and business meetings. The business center will provide resources to small businesses as well as guest office space for visiting partners. The Career Closet provides job seekers with gently used business attire for students to find appropriate clothing for interviews or jobs. Finally, dedicated office space will allow effective collaboration and communication among the WES team.



Metropolitan Community College High-Tech (HT) Automotive Institute

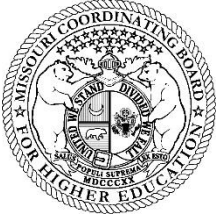
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Metropolitan Community College (MCC) currently lacks sufficient space to house training labs that are both large enough and equipped to accommodate the volume of students necessary to meet automotive industry needs in the Kansas City region. According to the Missouri Economic Research and Information Center (MERIC), the state has a projected need of more than 6,000 automotive repair professionals in the areas of service technicians and mechanics, auto body repairers, and diesel engine specialists over the next two years. In addition, many auto industry experts, corporate partners, and program advisory board members have advised MCC automotive program staff about the demand for auto technicians. The Bureau of Labor Statistics (BLS) 10-year outlook for vehicle repair occupational categories predicts average to faster than average growth. MCC has recently re-launched its collision repair program and requires additional space and resources to expand its footprint and accommodate additional students. In addition, MCC does not currently have the facility space to accommodate its proposed program in Diesel Technology, which it is in the process of developing in response to industry need as demonstrated by the above data and at the urging of its program advisory board.

PROPOSED SOLUTION

The MCC High-tech (HT) Automotive Institute expansion will enhance existing automotive campus programs and allow development of new programs in high demand training areas, including automotive technology, electric vehicle repair, diesel, collision, large vehicle, and agriculture technology. This expansion includes lab spaces, equipment, and general instruction facilities to support these programs. The project also involves major infrastructure changes, including new construction and renovations. Renovation of the current space will accommodate new programs in Collision and Diesel Technology, and expansion of the facility will provide state-of-the-art training labs for students in the general automotive programs and related high technology fields. The program and building are located at the MCC-Longview campus in Lee's Summit. Expanding the physical facilities will allow MCC to enroll multiple cohorts of students, resulting in meeting more of the industry needs for our region and for the State of Missouri. This project will contribute significantly to the regional economy by helping to address critical shortages in high priority occupations.



Mineral Area College Farm Management

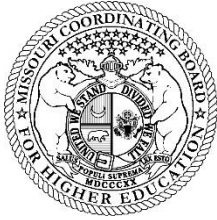
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Demand for animal science and farm management training and degree programs. This region of Missouri deals heavily in livestock and farm management related to animals. Multiple high schools and reps from organizations like the cattleman's association have said horticulture (previous focus) is not needed; Animal Science should be the focus.

PROPOSED SOLUTION

MAC Proposes a 100 acre working farm that will be a co-op with local high schools and FFA programs in the area. MAC students and High School students will manage the livestock, maintenance, and other aspects of running a farm. Students will have the opportunity to earn a credential and certificate. They will learn the business side of raising and maintaining livestock from purchase, reproduction, veterinary relations, and other aspects of farm management.



Missouri Southern State University Public Safety and Forensics Institute

Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

This MOExcels grant application seeks to improve training and employment for two careers: Law Enforcement officers, which are Protective Service Occupations, and Forensic Science Technicians, which are Life, Physical, and Social Science Occupations. In today's changing employment environment, employers are increasingly challenged to attract and retain qualified applicants in both the public safety and forensics sector. Dwindling applicant pools negatively impact department recruiting and ultimately reduces the number of qualified applicants resulting in an inability to fill current openings. This training area within the Missouri Southern State University Department of Justice Studies will address two components of the need. First, students who participate in the training for this program will be skilled on the most current technology available to industry partners, thus enhancing this workforce. Second, this training center is likely to attract new students to the program and therefore increase the qualified applicant pool for regional employers.

PROPOSED SOLUTION

Missouri Southern State University proposes to create the Public Safety and Forensics Institute by renovating space in the Mills Anderson Justice Center. This facility will utilize a combination of current technology upgrades as well as new equipment purchases to enhance student certificate and degree completion while preparing students for immediate employment by training on the most up-to-date technology in collaboration with area and regional industry partners. This proposal will utilize funding to update such technology as the firearms decision-making software along with updating the forensic camera workstations. New purchases will expand the training to include fingerprint analysis, drug-impaired driver training, and enhanced forensic evidence collection. Data suggests a great employer need in public safety and forensics with job opening outpacing qualified applicants. Students learning outcomes and curriculum will be determined by the current and future needs of potential employers. Requested support from industry partners will include potential internships and projects for students, as well as to provide research opportunities for current and future students.



Missouri State University

Interdisciplinary Clinical Training Facilities: Health Care Workforce Development

Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

The health care industry is suffering from documented workforce challenges related to both recruitment and retention. Factors impacting these challenges include changing demographics, burnout, limited talent pipeline, and lack of instructors to train and educate. The Missouri Hospital Association recently reported that vacancy and turnover rates are significantly higher than those reported pre-pandemic. Therefore, it is imperative that higher education recruit the next workforce and train them in state-of-the-art facilities that allow clinical experiences and rotations during onsite training. Simultaneously, through active and clinical learning experiences the ever-increasing mental and physical health needs of local communities can be targeted. To address the growing community needs and the workforce challenges of the future, it is critically important that new and more diverse segments of the population understand the career options available within health care. This proposal aims to create a balanced approach to outreach activities and expanded space for clinical skill development for multiple mental and physical health care professions housed at MSU.

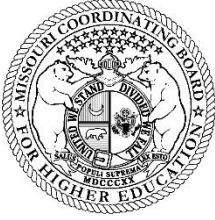
PROPOSED SOLUTION

This proposal will support the creation of a multi- and interdisciplinary educational training facility for mental health/health care programs at MSU. Funds will be used to consolidate existing clinics and renovate space in MSU's Kampeter Hall, and to recruit more students into programs that lead to work in mental health/health care. Occupations impacted by this proposal include mental health professionals (psychology and counseling), speech-language pathologists, audiologists, occupational therapists, and physical therapists.

The new space will include clinics that will allow the university to:

- (1) Expand enrollment in existing programs;
- (2) Increase the quality of the educational experience by creating spaces that will increase opportunities for hands-on skills development and interdisciplinary interaction, which reflects the multidisciplinary nature of working in a modern mental health/health care setting; and
- (3) Serve more community members who receive treatment in our clinics.

Renovation of the clinical space will be complete in Fall 2025. That will allow the impacted programs to accommodate larger cohorts of students beginning that fall. MSU plans to grow enrollment in each program by 3-5%. Higher numbers of completers will appear 2-5 years after Fall 2025, depending on the time it takes to complete each program.



Missouri State University - West Plains Veterinary Technician and Veterinary Assistant Program

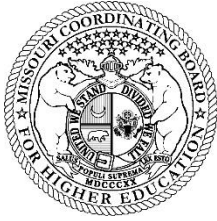
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Missouri has a shortage of individuals working in veterinary clinics as technicians and assistants as well as a shortage of programs to train them. MERIC data projects that Missouri will have 346 veterinary assistant openings and 156 veterinary technician openings annually between 2020 and 2030 (<https://meric.mo.gov/data/occupation/occupational-projections>). Currently, there are only four programs at public two-year colleges in the state of Missouri to train individuals to fill these openings. Of these programs, all are a three-hour drive from the West Plains area, leaving a large population who would have to relocate or drive a great distance if they were interested in entering the field. A survey of 20 veterinary clinics in south central Missouri revealed a large need for trained veterinary technicians and assistants. The majority indicated that they see a need for trained individuals in the next three to five years and all would be willing to pay more.

PROPOSED SOLUTION

Missouri State University-West Plains will address the need for veterinary technicians and veterinary assistants in the region by beginning the first program in south central Missouri designed to train individuals to work in a veterinary setting. Currently, Missouri State University-West Plains does not have the space or equipment to begin such a program. However, a gift of a 7 acre farm to the university will provide the space and the funds through MoExcels will provide the monies to purchase equipment and add renovate existing space to create classroom and lab facilities.



Missouri University of Science & Technology, East Central College, & St. Charles Community College Bridging the Missouri Manufacturing Critical Skills Gap

Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

At the 2023 Missouri Association of Manufacturers Conference, there was an outcry from the Missouri manufacturing companies about the shortage of manufacturing engineers and tradespeople available for hire. The shortage of manufacturing workers is much more severe in Missouri than the rest of the nation, with only 47 qualified workers for every 100 manufacturing jobs, and is acute in rural counties that are home to major manufacturers. Missouri employers noted their concern that the Missouri colleges and universities are not adequately preparing graduates with the critical skills needed to produce today's advanced technology products (e.g., advanced manufacturing, solar, and battery manufacturing, and others). Employers shared that the curricula of current manufacturing programs is not aligned with their needs, that students lack experience with advanced manufacturing machines, and that there is insufficient K-12 outreach specifically targeted toward manufacturing professions. These factors contribute to low recruitment, education, and graduation of modern manufacturing engineers and technicians needed by today's manufacturers. To address these issues, Missouri S&T, East Central College, and St. Charles Community College have teamed to submit a cooperative request that will allow engagement with a much greater number of students than what could occur through separate isolated efforts.

PROPOSED SOLUTION

S&T, ECC, and SCC will team up to mitigate the manufacturing workforce shortage.

S&T

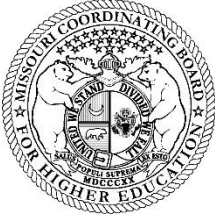
- 1) Curriculum Development: S&T will comprehensively modernize its undergraduate manufacturing curriculum to incorporate new in-demand technologies, workforce-aligned coursework, and hands-on experience with production-scale equipment.
- 2) Equipment: S&T will purchase production-scale advanced manufacturing machines, similar to that used by Missouri manufacturers, to support the modernized manufacturing curriculum.

SCC

- 3) Collaborative Outreach: SCC and S&T will develop and expand joint K-12 outreach efforts to focus on rural students to create awareness of manufacturing professions and engage students in community college and university manufacturing career pathway programs. The collaborative outreach activities will impact over 6,000 youth.
- 4) SCC and S&T will develop a joint strategy to streamline student progression from K-12 to community college and university to industry employment.
- 5) SCC will develop a new curriculum in the emerging energy technologies.

ECC

6) ECC Rolla Campus: ECC has received approval from DHEWD to request MoExcels funding to construct a Center for Advanced Manufacturing with start-of-the-art equipment, classroom, and lab spaces as part of its planned new campus in Rolla, MO. The center will provide S&T engineering students with short-term workforce training programs that they will participate in during summers



Missouri Western State University Digital Solutions for a Modern Missouri

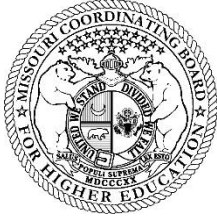
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Modern digital communications represent the lifeblood of business, industry, and healthcare, education, as well as nonprofit and government entities connecting with citizens. Videos, 3D models, animations, and infographics have rapidly become ubiquitous precisely because of their incredible power to quickly and efficiently communicate important information and complex concepts. Expertise creating this critical digital content has diverse workforce utility in marketing and sales for business and industry, training and professional development, K-12 education, and developing healthcare interfaces for patients in both urban and rural settings. Ensuring Missouri can serve the needs of its population and position businesses to effectively compete in the modern marketplace entails producing enough well-trained digital content specialists to meet workforce demand. The US Bureau of Labor Statistics expects the need for web developers and digital designers to grow by nearly 25% in just eight years with almost 22,000 openings projected over the next decade. Missouri is already falling behind, with design and media professions comprising its 9th largest employment deficit, and Specialized Design Services representing the single largest category of employment (8%) in Missouri's JobsEQ data. These weaknesses leave students – especially rural, first-generation, and underrepresented populations - at a disadvantage in northwest Missouri workforce markets.

PROPOSED SOLUTION

Through the Digital Solutions for a Modern Missouri program, Missouri Western State University (MWSU) will implement cutting-edge training of Digital Content Specialists for the state's commercial and industrial workforce. We will create dynamic learning spaces—classrooms, computer labs, collaborative spaces—and acquire state-of-the-profession technologies that reflect current industry innovations, prepare workforce-ready graduates, and ensure long-term academic program stability and growth. A Digital Content Advisory Board, composed of industry professionals, employers, faculty, administrators, and community partners will advise on program content and curriculum, provide applied-learning opportunities such as internships, and will work with Missouri Western State University's four existing academic programs, each designed to meet the state's digital content workforce demands: Digital Animation, Graphic Design, Interactive Design, and Performing & Cinematic Arts. As the creation of digital content becomes more critical to the state's growth and economic development, the ability to train students using modern equipment in a professionalized environment is imperative. Given the high proportion of rural, first-generation, and underrepresented students at MWSU, training in these enhanced learning environments will have an even greater impact on student success and career placement.



North Central Missouri College Agriculture Training Facility

Coordinating Board for Higher Education
September 13, 2023

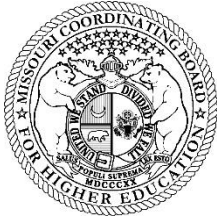
BACKGROUND

The economy of northern Missouri is heavily dependent on production agriculture, which increasingly relies on advanced technologies. North Central Missouri College has excellent training programs available in production agriculture, but suffers from some facility constraints. In particular, there are several specialty spaces required to give students the best learning opportunities. NCMC does not currently have good indoor space for hands-on demonstrations with livestock evaluation and work with larger farm implements. For example, the program has had to cancel classroom activities due to weather when they involve equipment that is too large to fit current buildings. The college also currently offers its equine program off-site at a privately owned ranch, and may soon lose that access.

PROPOSED SOLUTION

NCMC proposes to construct an agriculture training facility with approximately 9600 sf of finished space, giving the college more suitable learning environments to offer key classes in its agriculture programs including AAS degrees in Agriculture and Applied Technology, as well as Livestock Management, Equine Management, Ag Operations, and Crop Production certificates. It will have a major impact on our agriculture program courses in several ways:

1. A livestock accessible classroom allows indoor study and evaluation of livestock, combining hands-on learning with classroom technology available year-round.
2. A precision agriculture lab space will allow all-weather instruction activities involving farm implements. There will also be instructional and storage space for an expanded precision agriculture emphasis, as well as an office for a precision agronomy specialist the college is adding to its full-time faculty.
3. A 4800 sf covered riding area and stalls to allow continuation of the Equine Management program. This covered area would also be useful during rainy weather for outdoor activities like drone piloting.



Northwest Missouri State University Growing Missouri's Healthcare Workforce, Phase II

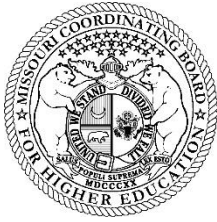
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Workforce gaps in healthcare and related fields are an ongoing challenge in Missouri. To address this issue, Northwest Missouri State University is engaged in an eight-year process of healthcare-related program development and realignment activities. As a result, academic programs are better aligned with the needs of our region and state, providing professional preparation for those pursuing careers in areas such as Dietetics, Nursing, Physical Therapy, Occupational Therapy, Recreation Therapy, Athletic Training, Social Work and Counseling, Cardiac Rehabilitation and health sciences in general. Overall enrollment within health science-related majors increased 30% during this strategic realignment. Enrollments and program completers are expected to continue to trend upward in our health science majors despite declining college-aged population. One challenge to this continued growth and quality educational experience is the lagging facilities (laboratories and equipment) that are necessary to support these specialized academic programs. In particular, the academic programs associated with these fields require academic lab space that can meet the diverse needs of our growing student population, as well as state-of-the-art laboratory equipment necessary for providing training that reflects current best practices.

PROPOSED SOLUTION

This project will enhance program capacity and quality of training available to students in healthcare and wellness-related programs at Northwest Missouri State University. Capacity and quality of training will be enhanced through the renovation and modernization of four academic laboratories in the Garrett Strong science building and acquisition of leading-edge, industry-standard equipment and learning tools associated with the field of health science. These four labs - physiology, anatomy, immunology, biochemistry (and associated support rooms) - are heavily used by multiple healthcare-related undergraduate programs. The labs, however, have not been updated in nearly 30 years and lack the equipment and industry-standard fixtures and furnishings graduates will use in their post-graduation careers. The modernized labs and equipment will significantly enhance teaching and learning within Northwest's healthcare programs, having a positive impact on anatomy and physiology, medical nutrition, exercise prescription, health and wellness, biology, biochemistry, and biomechanics that are critical to the fields of nutrition, nursing, public health, physical therapy, occupational therapy, biology, biochemistry, and other professional areas in health and physical medicine.



St. Charles Community College **GROWING Missouri - By Advancing the Health Sciences,** **Agriculture, and Bioscience Workforce**

Coordinating Board for Higher Education
September 13, 2023

Missouri agriculture, biosciences, and healthcare industries combine to represent over 25% of the state's workforce. Agriculture as a driver in Missouri's economy contributes \$93.7 billion and supports 456,618 jobs, while healthcare and bioscience industries represent over 362,436 jobs in Missouri (MERIC April 2022 Career Pathway report). In addition, the Missouri Hospital Association, in its 2023 Workforce Report, predicts a need in the next eight years for more than 2.6 million qualified workers nationally. Therefore, to sustain and GROW Missouri we must engage current residents and attract more to the state. With a workforce participation rate just now reaching 63.40% (as of May 2023); we must create and reimagine workforce programs which not only attract new and emerging workers but engage, support, and retain incumbent workers.

Missouri must become one of the best places to live and to work. This will be accomplished by developing educational and workforce opportunities that advance quality of life and quality of place; thereby attracting and retaining new talent and advancing our current talent pipeline. To support this SCC intends to build and expand partnerships which support health sciences, agriculture and bioscience industries and their workforce.

PROPOSED SOLUTION

Focusing on the critical workforce in demand areas of Health Sciences, Agriculture, and Bioscience; this proposal seeks to create a visionary infrastructure that strengthens the connections with business and industry, education, and the future workforce by:

- Developing and expanding pathway alignment and advancement with industry integration - credentials, certificates, and degrees (earn and learn).
- Creating and leveraging programmatic structures which include competency-based learning (earn and learn), emerging technologies and dual enrollment (K-12, CC and University) in order to support attraction, promote retention, and reduce barriers.
- Creating an immersive learning environment which includes development and remodeling of specialized spaces to support hands-on learning, acquisition of simulation and industry specific technology/equipment.

Focus areas:

Health Sciences

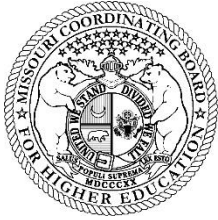
Entry Level and Career Progression Health Sciences Programs (i.e. programs of interest include - Patient Care Technician/Certified Nurse Aide, Pharmacy Technician and Medical Billing & Coding/Information Technology & Security Certifications, Telehealth; Nursing; Medical Assisting; Surgical Technician, Sterile Processing; Sonography/CT; and Physical Therapy Technician).

Agriculture/Bioscience

Emerging and innovative growing and farming strategies (i.e. controlled environment agriculture – aquaponics, hydroponics, aquaculture, and produce cultivation).

Application of technology in production and processing (i.e. automation, systems/analytics, drone/autonomous controls, alternative energy, laboratory/analytical techniques, equipment/technology).

Coordinating Board for Higher Education
September 13, 2023
Tab 14, Attachment E



St. Louis Community College Expanding Nursing Training in North St. Louis

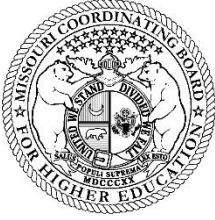
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

The U.S. is experiencing a widespread nursing shortage, creating a crisis in providing essential services that meet increasing patient demand. Widely reported, the situation was in crisis before the pandemic and is worse in 2023. According to the U.S. Bureau of Labor Statistics, the national healthcare delivery system will need 2.6 million additional workers in the next eight years to accommodate demand. In the St. Louis region, nursing training programs will neither keep pace with the hospital turnover rates nor fill the existing vacancies. In the St. Louis region, hospitals alone ended 2022 with 826 Patient Care Technicians vacancies, 134 Licensed Practical Nurses vacancies, and 3,116 Registered Nurse vacancies (Missouri Hospital Association, 2023 St. Louis Region Survey). Moreover, high-quality, supportive, affordable, and accelerated opportunities for students to receive nursing training in St. Louis are limited. Two-year nursing programs in the St. Louis area average approximately \$65,000, excluding the costs for equipment, uniforms, books, transportation, childcare, and other expenses. Additionally, traditional nursing programs often take a minimum of one year to complete, require students to defer earning income until completion, and lack robust student support services. These factors create a burden too significant for many.

PROPOSED SOLUTION

St. Louis Community College proposes the expansion of accredited, hands-on, and affordable nursing programs at the STLCC campus in Florissant Valley, the heart of the nation's largest federally-designated Promise Zone. This project will (1) update and modernize the curriculum for the Associate of Applied Science (AAS) in nursing, (2) commence a Licensed Practical Nurse (LPN) program, (3) commence a Patient Care Technician (PCT) program, (4) create a lab and instructor manual for the PCT program, and (5) market the new nursing programs to prospective students, specifically targeting populations traditionally underserved by institutions of higher education. Program completers will fill "now," "next," and "later" jobs in the St. Louis metropolitan region. Specifically, PCT students will be selected in collaboration with BJC HealthCare and SSM Health and begin working in hospital jobs that do not require experience while completing the nine to eleven-week program. The accelerated, nine-month LPN and the two-year AAS in Nursing prepare students for immediate healthcare work and serve as a bridge program to the AAS or a Bachelor of Science at a four-year university. All programs immediately fill essential healthcare positions in hospitals, nursing homes, and home healthcare settings, meet patient demand, and contribute to overall community health.



State Fair Community College Advanced Health Science Expansion

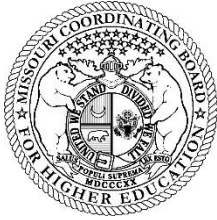
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

State and national data indicate unmet workforce needs in areas of Dental Hygiene (DH), Occupational Therapy Assistant (OTA), Medical Assisting (MEA), and Emergency Medical Services (Emergency Medical Technicians and Paramedics). Healthcare industry reports high levels of stress and frustration surrounding lack of staff and qualified workforce to enter the professions. State Fair Community College (SFCC) seeks to be responsive to this problem by expanding programming to increase the number of qualified workers entering the healthcare fields. SFCC's current DH program accepts 12 students out of an average of 40 qualified applicants each year, which translates to turning away 70% of qualified students. The current OTA program has ability for expansion at SFCC campus, but the lab space is too small to meet accreditation requirements for increased students. An expansion could significantly increase enrollment at Sedalia campus. There is currently no equipped lab space on Sedalia campus for MEA. Having a designated space will increase enrollment capacity by 25%. Through the Mo Excels funding, SFCC plans to address student access to high-quality health sciences education and the healthcare industry needs for skilled and credentialed Dental Hygienists, Occupational Therapy Assistants, Medical Assistants, Emergency Medical Technicians, and Paramedics.

PROPOSED SOLUTION

SFCC currently offers Dental Hygiene, OTA, and MEA programs. The proposed solution is to renovate existing campus facilities to enable all three programs to expand and support high-quality health science education access and increases in student enrollment all in one Sedalia campus facility. In addition, the solution to purchase educational technologies and training resources to support EMT and paramedic programs, thereby properly preparing students for a career and addressing the workforce gap in emergency services. The dental hygiene clinic will allow for more than double the enrollment of students and number of community patients able to be served in the on-campus clinic, thereby increasing dental services provided to the underserved population of the SFCC service area. The current OTA consortium (MHPC) model improves accessibility to OTA education across Missouri. This project will allow for increased OTA enrollment at SFCC and for all students enrolled in MHPC OTA program to meet on the SFCC campus for centralized labs and student learning activities. The MEA program is hybrid with in-person labs held at three campuses. The addition of an MEA lab on Sedalia campus will allow for increased program enrollment and promote program accessibility through the addition of another lab site.



State Technical College of Missouri Agriculture Demonstration Center

Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Agriculture-related industries make a significant contribution to Missouri's economy. Of all manufacturing organizations, food manufacturing establishments are the second largest employer in Missouri (MERIC, 2021).

The shortage of trained agriculture production workers is particularly acute in Missouri, with a decrease of 25,000 persons employed in this industry between 2015 and 2020. That is despite the fact that there was an 18.3% increase in the average annual wage of those employed by the agribusiness industry in the same timeframe (MERIC, 2022). Market disruptions such as lower production values (meat, dairy, crop) and increased costs caused by COVID further exacerbated production (USDA, 2022). All of this has had a negative impact on Missouri's economy and economic growth.

In spite of this demand, the State Technical College of Missouri (State Tech) does not offer agriculture degree programs and has limited capacity in agriculture-related programs.

REFERENCES:

Missouri Economic Research and Information Center (MERIC). (2022, February). Agribusiness Industry: Missouri Target Industry. Retrieved from <https://meric.mo.gov/media/pdf/agribusiness-target-industry>

MERIC. (2021, October). 2020 Manufacturing Industries. Retrieved from <https://meric.mo.gov/media/pdf/2020-manufacturing-brief>

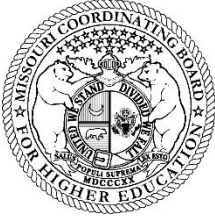
US Department of Agriculture. (2022, February). Farms and Farm Households During the COVID-19 Pandemic. Retrieved from <https://www.ers.usda.gov/covid-19/farms-and-farm-households/>

PROPOSED SOLUTION

Recognizing the need for a technically-literate agriculture workforce, State Tech created an Agriculture Operations AAS degree program, with options in Business and Production, launching August 2024. State Tech is also offering the agriculture-related Facilities Operations and Management AAS degree program in August 2023 and expanding capacity in the agriculture-related Diesel Technology programs.

With funding from a \$2 million FY23 Agriculture Innovation Grant, State Tech purchased approximately 350 acres for Phase A of the Agriculture Demonstration Farm facility. Continuing that vision, Phase B, being proposed as the FY25 MoExcels project, is construction of the Agriculture Demonstration Center. Students will receive real-world experience that will translate to the workforce opportunities available in Missouri farms and food production facilities.

An instructional building, with food production laboratories, will be constructed. The plant-based lab will provide for controlled plant growth and genetic analysis, in addition to preparation for consumption. The animal-based lab will expose students to modern meat processing. Both labs will also include the creation and distribution of end products. In addition, a livestock arena, greenhouse, and classrooms will be included. The application of technologically advanced equipment and processes will prepare future technicians for high-demand careers in agriculture.



University of Central Missouri Capacity Building Through XR and Simulation

Coordinating Board for Higher Education
September 13, 2023

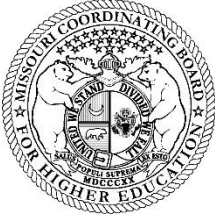
BACKGROUND

Technology is fundamentally and rapidly changing the educational and workforce experience. According to The Industry Report, in 2022 over \$100 billion was spent for employee training with a third (\$29B) spent on logistics. To reduce costs and save time, organizations are investing in extended reality (XR) technology (virtual reality (VR), augmented reality (AR), and mixed reality (MR)). Anticipated industry training expenditures for this year include an increase of 16% in augmented and virtual reality equipment.

Businesses are incorporating XR within their operations. Precedence Research suggests the XR market size was \$35B last year and is projected to hit \$345B by 2030. Organizations recognize XR technology can help improve operational efficiencies by making training more accessible and delivered at higher standards. XR technology aids employees hired into fast-paced organizations and who are often expected to manage multiple, time sensitive situations in a rapidly changing environment. Higher Education can bridge the gap between traditional education and the demands of a rapidly changing workforce. XR presents an opportunity to enhance and foster deeper learning experiences for a variety of industries. Through the design and implementation of cutting-edge curriculum, UCM will leverage XR technologies to cultivate innovation, creativity, and adaptability among our diverse workforce.

PROPOSED SOLUTION

Building on our initial MoExcels proposal, where Governor Parson lauded the early contributions of our Mixed Reality Studio by sharing, "This is exactly what we need to do, and the only thing is, we need to do more of it," when highlighting education and industry collaboration. UCM will continue to collaborate with industry experts and educators to design a comprehensive curriculum that integrates XR technologies across various disciplines. This curriculum will be tailored to meet the needs of individuals from diverse backgrounds and skill levels. UCM will create immersive and interactive learning experiences that enable participants to engage with real-world entrepreneurial challenges and simulated business environments by leveraging XR technologies. IHRIM reported that students utilizing XR technology have higher cognitive retention rates opposed to traditional classroom teaching which reduces training time by 70%. XR technology provides students the opportunity to practice industry readiness through real world simulations, safely and effectively. Students can overcome limitations, interview patients in real time, assess and diagnose critical situations, play a lifesaving role, or coordinate disaster relief within virtual spaces. Established partnerships with industry will provide additional networking opportunities, mentorship, and access to entrepreneurial resources through virtual collaboration spaces and XR-enabled platforms.



University of Missouri - Columbia MO Childcare Workforce Development

Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

There is a critical need to expand and support Missouri's early childhood education workforce. A 2021 report by the US Chamber of Commerce Foundation and the Missouri Chamber of Commerce and Industry showed that 78% of Missouri counties are child care deserts, and 7 out of 10 child care providers in the state are not operating at full capacity due to staffing shortages. Importantly, nearly one third (28%) of the respondents indicated that they or someone in their household has left or not taken a job or drastically changed their jobs or careers due to limited child care availability. This is particularly true in rural areas where issues with child care access and affordability are compounded.

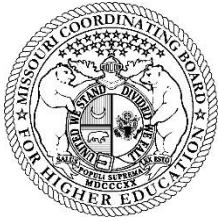
Missouri loses an estimated \$1.35 billion annually (\$280 million in tax revenue) due to limited child care availability and the ensuing challenges it presents, including parents missing work, forgoing promotions or furthering education, or leaving the workforce. Establishing high-quality child care and early childhood education programs throughout Missouri, especially in child care deserts, is essential to attract businesses and promote economic development. Expanding Missouri's early childhood education workforce is a key step in this direction.

PROPOSED SOLUTION

This project aims to professionalize the early childhood workforce development pipeline and build new credentials and bridges between existing credentials. Utilizing a "MU Child Development Lab (CDL) School Virtual Lab" platform, this project will:

- 1) Develop middle and high school career counseling programs to spur interest in the field, including Social Media Badges in best practices;
- 2) Develop a High School Course Sequence with Mizzou Academy that leads to the Child Development Associate (CDA);
- 3) Develop two online undergraduate certificates at MU: a 12-credit Director's Certificate and a 12-credit Business of Childcare Certificate focused on opening and financing a childcare business, both culminating in the Missouri Association for the Education of Young Children's Director Credential; and
- 4) Create an evidence-based consulting service for industry-supported child care.

The first three aims will create an early childhood state-wide career pipeline leading to existing Associate Degrees at community colleges, expanding articulation agreements with colleges, and leading to the online BA degree in Early Childhood Education in a Mobile Society at MU. Graduate degrees and certificates in these areas are also currently available. The fourth aim will allow us to work directly with industries to hire these graduates at on-site child care centers.



University of Missouri - Columbia

Center of Excellence for Engineering and Information Technology (CEEIT)

Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

The significance of engineering and information technology has grown exponentially in recent years, as more industries heavily rely on advanced technology to manage and maintain complex systems. For Missouri industries to effectively compete on the national stage of fast-growing high-tech industry it must produce highly skilled technicians, technologists, and engineers. However, a recent Regional Labor Supply and Demand study shows that the state's Science and Technology sector has the largest distribution gap in terms of labor supply and demand.

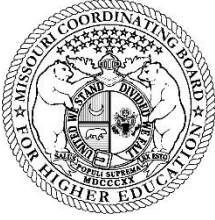
While the state has made notable growth with its 4-year engineering and 2-year technical degree programs, 4-year skilled technology programs are not keeping up with the demand. Based on Lightcast's Q1 2023 data, currently there are 716 completions regionally (MO+8 surrounding states) from baccalaureate level engineering technology programs (CIP 15.0000 and 15.0613) compared to 60,149 annual openings with a median annual salary of \$67,100/year and 12.6% projected growth. Currently no Engineering Technology programs exist in the UM System.

According to a review by the Engineering Technology National Forum, technology programs provide a more viable avenue to the skilled technical workforce for veterans, non-traditional adult students, community college students, and adults seeking to change professions than traditional engineering programs.

PROPOSED SOLUTION

The MU College of Engineering proposes to establish a new state of the art Center of Excellence for Engineering and Information Technology (CEEIT) that integrates advanced manufacturing technologies and cutting-edge information disciplines. CEEIT will facilitate the expansion of our existing BS in Information Technology program and support our forthcoming BS degree in Engineering Technology. This new Center of Excellence will provide students with a strong foundation in engineering technology and information principles and technology, along with providing them with the practical hands-on experience they need to succeed in the workforce.

The degree programs supported by this new CEEIT will effectively address the workforce needs of regional employers who employ engineers in manufacturing engineering and information technology roles by serving as a hub for new partnerships with community colleges and high schools, with an eye toward articulation agreements and that streamline the pathway to a degree. With their community college partners, CEEIT will also facilitate entry into manufacturing engineering and information technology jobs for non-traditional adult students. The facility will become a vital asset in our institution's efforts of the development and expansion of employer-driven education and training programs.



University of Missouri - Columbia Unmanned Aircraft Systems (Drones) Hands-on Training

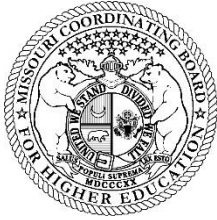
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Labor market projections suggest that Missouri workers need additional technical training to be competitive in the labor market. This is especially true in the agriculture industry, which is not currently equipped with the advanced skills needed to be competitive in an industry that increasingly requires a deep understanding of unmanned aircraft systems (UAS). Use of UAS requires licensure and skills in mapping, imagery collection and analysis, and other skills currently out of reach for many Missouri workers. The value of the agricultural drone market is expected to exceed \$1 billion in 2024, indicative of its importance in an industry that employs 460,000 people around the state and generates \$93.7B in economic value to the state. While UAS training is of particular importance to the agriculture industry, UAS also have significant implications for the public safety sector as they are increasingly utilized by fire and police departments. The benefits of UAS training will be felt throughout the state and put it in a strong position for the future.

PROPOSED SOLUTION

MU is uniquely positioned as the state's R1, land-grant institution to provide accessible UAS education throughout the state. Through the combined power of MU Extension and the College of Agriculture, Food and Natural Resources (CAFNR), regional faculty situated throughout the state are well positioned to create four Centers of UAS Training that will provide industry-driven certificates in partnership with local industry. MU will utilize MoExcels to develop region-specific UAS curricula in partnership with local employers to develop a train-the-trainer model, enabling the program to persist for years to come. Participants that complete the course will earn an FAA required pilot's license. Stackable credentials after receiving the license will include mapping, imagery collection and analysis, and application of pesticides and fertilizer. The credentials will allow the workforce to work in a broad range of industries using these skillsets acquired from the certification program. Professional law enforcement and safety trainings can also be established in the future to expand the number of participants.



University of Missouri - Kansas City Student Career Pathways & Student Success Space

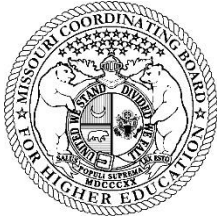
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

The Division of Student Success, established in 2020 has made many significant investments including the revisioning of Career Services, the launch and now expansion of the Professional Career Escalators (PCE) program, and the expansion of various retention programs that target historically underserved populations. This has led to record retention rates and improvements in graduation rates and career outcomes. MoExcels funding has been critical and will continue to be so in supporting the integrated career focus that has been established in various units and programs. Unfortunately, these student-facing services are spread across campus in ways that challenge student access and easy coordination and collaboration between many offices. Students are not well served and can easily give up rather than walk across campus multiple times as they are referred on to a variety of offices. Additionally, we do not have adequate staffing in Career Services or the Escalator program to build student serving partnerships with industries and employers to meet local workforce needs or to create a paid internship program. These shortcomings create particularly acute challenges for the success of students historically underserved by higher education institutions.

PROPOSED SOLUTION

This year's request will enable us to expand the accessibility, scope, and impact of prior MoExcels-initiated projects. We hope to continue to support an on-campus paid internship program, recruitment into the High School Professional Career Escalator cohort, existing Career Services platforms, and the provision of professional development. New components include the development of an off campus paid internship program and the addition of two greatly needed staff positions to support experiential learning within growing industries. National trends in higher education support the physical centralization of student support services, allowing for a coordinated, welcoming, intuitive network of services. Two co-located spaces have been identified for renovation to achieve this end: the Atterbury Student Success Center and the fourth floor of the Miller Nichols Library. Work has been done to identify which offices should be co-located to enhance their collaborative efforts, for example Career Services and Academic Advising. We expect the increased centralization of and access to career focused services will lead to campus-wide improvements in student success metrics and position UMKC as a destination for career development and support that takes students beyond the academic degree into meaningful, well-paying careers, taking better advantage of Kansas City's career opportunities.



University of Missouri – St. Louis Center for Entrepreneurship & Innovation

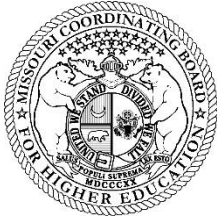
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

Startups are a significant component of the regional and state economy responsible for over 80% of new job creation in Missouri. St. Louis-based startups created on average 6,895 firms and 14,722 jobs over the last seven years (2022 St. Louis State of the Workforce). St. Louis is recognized as one of the best cities for startups and has an outstanding entrepreneurial ecosystem. However, despite these strengths, Missouri has the second highest one-year business failure rate and a 60% five-year business failure rate (LendingTree, BLS Data Analysis). Thus, there is a critical need to support startups and reduce the barriers to entrepreneurial success, particularly for Blacks and women. In addition to access to capital, The Kaufman Foundation found that startups face several challenges including access to customers, employees, networks, and mentors, limited understanding of laws and regulations, branding, marketing, pricing, cash flow as well as self-doubt. Black entrepreneurs and especially Black women entrepreneurs often lack access to a customer, mentors, workspaces, capital, and support needed to grow their businesses (STL 2030 Jobs Plan).

PROPOSED SOLUTION

The proposed Center for Entrepreneurship and Innovation at the University of Missouri-St. Louis will serve the unmet needs of entrepreneurs and startups and addresses a critical gap for business planning, mentoring, networking, and co-working spaces. The center builds upon UMSL's nationally regarded work in leading startup accelerators including the Ameren Accelerator focused on energy technologies and the UMSL Diversity, Equity and Inclusion Accelerator which has supported 17 local minority startups with capital, mentoring, and small business planning. The center will serve as a vital hub for entrepreneurial training and innovation and will provide an overarching structure for existing undergraduate and certificate programs in entrepreneurship, Accelerators, our Entrepreneur in Residence program, co-working space for early-stage startups, and a Distinguished Speakers Series. Two stackable micro credentials will be offered targeting aspiring entrepreneurs, startups, and students and the unique needs of minority and female entrepreneurs. Credentials will be accessible to the needs of small business owners including non-credit, two-hour modules scheduled on weeknights and weekends. Renovation of an existing campus space will provide modern technology-enabled classrooms, collaborative spaces, 3D printing, and co-worker spaces vital to supporting early-stage startups. Early-stage space, near anchor institutions plays a major role in startup growth (STL20230 Jobs Plan). All project activities will be on the UMSL campus and certificates will be awarded by UMSL.



University of Missouri – St. Louis Workforce Development and Career Advancement Center

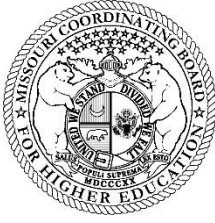
Coordinating Board for Higher Education
September 13, 2023

BACKGROUND

The University of Missouri – St. Louis (UMSL) is a vital workforce development resource in the St. Louis region and Missouri, particularly in business management, geospatial and computer literacy education. With over 85% of UMSL graduates living and working in Missouri. Despite this, major employers throughout the STL MO-IL MSA have identified a growing skills gap in job applicants (49%) possessing adequate communication, leadership, geographic information systems (GIS), and basic computer programming and application skills. Demand for major occupational groups like management, computer & mathematics, and transportation are projected to increase at a higher than expected rate both locally and statewide through 2030. To fulfill UMSL's promise of workforce development, provide GIS educational solutions as part of our Educational Partnership agreement with the NGA, and meet the growing skill gap among workers, the university needs a centralized approach to non-credit hour professional development programming.

PROPOSED SOLUTION

UMSL proposes the creation of an on-site workforce development center that will offer professional development certifications in Operational Management, Geospatial, and Computer Programming & Applications. Certificate content will be informed with the support of faculty experts and regional employers, strengthening communication, management, office application, GIS, and computer programming skillsets. This workforce development center will incorporate UMSL's Computer Education Training Center (CETC), which over 41 years, has provided nearly 4000 certificates to workers in the St. Louis area. The funding will renovate over 10K SF of campus facilities and upgrade computer hardware and teaching spaces to meet the pedagogical needs to scale up talents and workforce in St. Louis and Missouri through technology-enhanced training. While there is already a critical skills gap for the identified occupational groups, professions like general/operational managers, accountants/auditors, GIS analysts, and software quality assurance analysts will see rapid growth of 6%, 5.5%, 9%, and 11%, respectively. Employers expect formalized education to prepare individuals for the workforce, yet these skills are primarily left to be learned on the job. Establishing a workforce development center focused on upskilling the highest in-demand professional skills through a non-degree-focused structure will allow for affordable professional development while meeting employer needs in a fast-paced setting.



Ozarks Technical Community College OTC Bolivar Education Center

Coordinating Board for Higher Education

September 13, 2023

BACKGROUND

This project is in response to local requests for OTC to provide increased educational opportunity in Bolivar and the decision by the Bolivar R-I School Board to place joining the OTC District on the ballot in November 2023. Construction, equipment, and land acquisition for this project are estimated at \$20 million. OTC is requesting \$10 million from the state and would provide the match through other sources. This funding request is contingent upon voter approval of Bolivar joining the OTC community college district in November 2023.

PROPOSED SOLUTION

The OTC Bolivar Education Center would be an anticipated 30,000 square foot facility serving Bolivar and the greater Polk County region. This Center would include training facilities for high demand health care and technical workforce program, as well as general education courses. The specific programs offered would be selected through market analysis and community engagement to be sustainable and best aligned with local industry needs. The Center would also house student services utilizing the OTC Cares Navigator model to provide area students with access to personalized, holistic support. It would provide space for services, such as early childhood care, to meet student and community needs.