



Tab 24

## ARPA Grant Funding Recommendations

Coordinating Board for Higher Education  
December 7, 2022

### BACKGROUND

During the 2022 legislative session, the Missouri General Assembly appropriated \$20 million from American Rescue Plan Act (ARPA) funding for two grant programs to be administered by the department: Private MoExcels and Agriculture Innovation & Workforce Development.

Private MoExcels awards will fund \$10 million in projects that allow institutions to reach and serve new populations and to enhance support for underrepresented students in order to give individuals the opportunity to train for entrepreneurship and other in-demand occupations. Accredited private, not-for-profit institutions of higher education in Missouri are eligible for the grant and may request up to \$1 million, which must be matched on a dollar-for-dollar basis.

Agriculture Innovation & Workforce Development awards will fund \$10 million in projects that allow institutions to implement programs that directly address negative economic impacts on agriculture production, the food or labor supply chain, or agriculture inputs. Public institutions of higher education in Missouri are eligible for the grant and may request up to \$2 million, which must be matched on a dollar-for-dollar basis.

### CURRENT STATUS

Both grant applications went live in the state's new ARPA grants management portal on July 1 of this year and were due on September 1. Through Private MoExcels the program, the department received 17 applications from eligible entities requesting \$10,737,793.01 from ARPA. Through the Agriculture Innovation & Workforce Development program, the department received 14 applications from eligible entities requesting \$21,708,407 from ARPA.

After September 1, staff followed up with institutions to seek additional information and clarify proposals. Staff from MDHEWD and the Department of Economic Development scored the Private MoExcels proposals, and staff from MDHEWD and the Department of Agriculture scored the Agriculture Innovation & Workforce Development proposals. Institutions were then contacted to negotiate changes in project scope to ensure the funding recommendations each totaled \$10 million. The funding recommendations in Attachment C are the product of those processes.

### NEXT STEPS

Upon approval from the Coordinating Board for Higher Education, a memorandum of agreement will be sent to each of the funded institutions to finalize the award.

### RECOMMENDATION

Staff recommend that the Coordinating Board for Higher Education approve the attached list of funding recommendations for Private MoExcels.

Staff also recommend that the Coordinating Board for Higher Education approve the attached list of funding recommendations for Agriculture Innovation & Workforce Development.

### ATTACHMENTS

- A. Requests for Proposals
- B. Scoring Rubrics
- C. Funding Recommendations
- D. Proposal Summaries

**Tab 24 Attachment A**  
**Requests for Proposals**



# **Agriculture Innovation & Workforce Development ARPA Grant**

## **2022 Request for Proposals**

The Missouri Department of Higher Education and Workforce Development (MDHEWD) and Missouri Department of Agriculture (MDA) are pleased to provide this Agriculture Innovation & Workforce Development Request for Proposals (RFP). We look forward to receiving your submissions. Please send questions to the ARPA Grants team at [Reimbursements@dhewd.mo.gov](mailto:Reimbursements@dhewd.mo.gov).

### **Background Information**

The American Rescue Plan Act of 2021 (ARPA) was signed into law on March 11, 2021. The act contains the Coronavirus State and Local Fiscal Recovery Fund (SLFRF), which creates opportunities for Missouri to respond to the health and economic impacts of COVID-19 through investments in higher education and workforce development. The fund is administered by the U.S. Department of the Treasury, and its allowable uses are described in [final rule](#) and [overview](#) documents. For more information on SLFRF and other related ARPA funds, please visit the U.S. Department of the Treasury's [website](#).

### **General Information**

**Purpose.** Agriculture Innovation & Workforce Development awards will fund projects that implement agriculture innovation and workforce development programs that directly address negative economic impacts on agriculture production, the food or labor supply chain, or agriculture input. Projects should impact Missouri agriculture broadly.

**Who May Seek Funding.** Proposals may be submitted by individual institutions or consortia of institutions. Only public institutions of higher education, including community colleges, State Technical College of Missouri, and public universities, may submit proposals.

**Maximum Awards.** Each institution may request up to \$2 million.

**Allowable Activities.** Funds appropriated through the Agriculture Innovation & Workforce Development ARPA Grant may be used for outreach and recruitment efforts, professional and curriculum development, construction/renovation, and the purchase of equipment. Funds may not be used to pay students' tuition, fees, or other expenses.

**Match.** All proposals must include a dollar-for-dollar match. Matching funds may be in-kind contributions but may not include the cost of staff time from the institution(s) proposing the project. The match can be provided by the institution; an organization; an individual; a local, state, or federal agency; or a grant. While the match does not have to be in-hand, it must be firmly committed and documented.

**Funding.** Funding will be released as a reimbursement to institutions for project expenditures. Institutions must submit the Agriculture Innovation & Workforce Development Reimbursement Form and supply copies of all invoices to MDHEWD to receive reimbursement.

**Performance and Project Reporting.** Funding recipients must report on performance on October 30, January 30, April 30, and June 30 each year until the program has achieved its objectives. MDHEWD may invite grant recipients engaging in similar activities to meet periodically to provide updates, identify best practices, problem-solve, and celebrate successes.

## **Proposal Requirements**

Applicants must complete the Agriculture Innovation & Workforce Development application form in the Missouri ARPA Grant Portal. You do not need to submit any additional documents unless you are asked to do so by the review committee.

## **Timeline**

- July 1, 2022:** Call for proposals issued
- September 1, 2022:** 5:00 p.m.: Deadline to submit proposals in the Missouri ARPA Grant Portal
- December 7, 2022:** Recommendations presented to the Coordinating Board for Higher Education

## **Review and Award Process**

Proposals will be scored by a committee comprised of staff from MDHEWD and MDA. The committee will score proposals based on a standardized rubric (attached). The committee's recommendations will be conveyed to the Coordinating Board for Higher Education, which will make final ranking and funding recommendations to the Governor.

## **Funding**

MDHEWD reserve the right to recommend funding for a project in whole or in part, to request additional information, to reject any of the proposals submitted, and to re-issue this RFP and accept new proposals if the review committee determines that doing so is in the best interest of the state of Missouri. In the event that available funds exceed the total amount requested by all institutions, MDHEWD may invite institutions to submit requests for additional funding.

All costs incurred in preparation of proposals submitted in response to this RFP shall be borne by the institutions that apply for funding.



# DEPARTMENT OF HIGHER EDUCATION & WORKFORCE DEVELOPMENT

## Private MoExcels ARPA Grant

### 2022 Request for Proposals

The Missouri Department of Higher Education and Workforce Development (MDHEWD) is pleased to provide this Private MoExcels Request for Proposals (RFP). We look forward to receiving your submissions. Please send questions to the ARPA Grants team at [Reimbursements@dhewd.mo.gov](mailto:Reimbursements@dhewd.mo.gov).

### Background Information

The American Rescue Plan Act of 2021 (ARPA) was signed into law on March 11, 2021. The act contains the Coronavirus State and Local Fiscal Recovery Fund (SLFRF), which creates opportunities for Missouri to respond to the health and economic impacts of COVID-19 through investments in higher education and workforce development. The fund is administered by the U.S. Department of the Treasury, and its allowable uses are described in [final rule](#) and [overview](#) documents. For more information on SLFRF and other related ARPA funds, please visit the U.S. Department of the Treasury's [website](#).

### General Information

**Purpose.** Private MoExcels awards will fund projects that allow institutions to reach and serve new populations and to enhance support for underrepresented students in order to give individuals the opportunity to train for entrepreneurship and other in-demand occupations.

**Who May Seek Funding.** Proposals may be submitted by individual institutions or consortia of institutions. Only private, not-for-profit institutions of higher education in Missouri may submit proposals.

**Maximum Awards.** Each institution may request up to \$1 million.

**Number of Awards.** MDHEWD staff expect to award funding for 10 projects, although that number may vary based upon the dollar amount of each funded project.

**Allowable Activities.** Funds appropriated through Private MoExcels may be used for outreach and recruitment efforts, student support services, professional and curriculum development, construction/renovation, and the purchase of equipment. Funds may not be used to pay students' tuition, fees, or other expenses.

**Match.** All proposals must include a dollar-for-dollar match. Matching funds may be in-kind contributions but may not include the cost of staff time from the institution(s) proposing the project. The match can be provided by the institution; an organization; an individual; a local, state, or federal agency; or a grant. While the match does not have to be in-hand, it must be firmly committed and documented.

**Funding.** Funding will be released as a reimbursement to institutions for project expenditures. Institutions must submit the Private MoExcels Reimbursement Form and supply copies of all invoices to MDHEWD to receive reimbursement.

**Performance and Project Reporting.** Funding recipients must report on performance on October 30, January 30, April 30, and June 30 each year until the program has achieved its objectives. MDHEWD may invite grant recipients engaging in similar activities to meet periodically to provide updates, identify best practices, problem-solve, and celebrate successes.

## **Proposal Requirements**

Applicants must complete the Private MoExcels application form in the Missouri ARPA Grant Portal. You do not need to submit any additional documents unless you are asked to do so by the review committee.

## **Timeline**

**July 1, 2022:** Call for proposals issued

**September 1, 2022:** 5:00 p.m.: Deadline to submit proposals in the Missouri ARPA Grant Portal

**December 7, 2022:** Recommendations presented to the Coordinating Board for Higher Education

## **Review and Award Process**

Proposals will be scored by a committee comprised of staff from MDHEWD and the Department of Economic Development. The committee will score proposals based on a standardized rubric (attached). The committee's recommendations will be conveyed to the Coordinating Board for Higher Education, which will make final ranking and funding recommendations to the Governor.

## **Funding**

MDHEWD reserves the right to recommend funding for a project in whole or in part, to request additional information, to reject any of the proposals submitted, and to re-issue this RFP and accept new proposals if the review committee determines that doing so is in the best interest of the state of Missouri. In the event that available funds exceed the total amount requested by all institutions, MDHEWD may invite institutions to submit requests for additional funding.

All costs incurred in preparation of proposals submitted in response to this RFP shall be borne by the institutions that apply for funding.

**Tab 24 Attachment B**  
**Scoring Rubrics**

**Agriculture Innovation and Workforce Development Scoring Rubric**

	<b>Maximum Points</b>	<b>Points Assigned</b>
Proposal provides a detailed, credible plan for substantially contributing to the agriculture industry and workforce	18	
Proposal includes specific, measurable, attainable, relevant, time-based goals	12	
Proposal responds to specific challenges or negative impacts to the agriculture industry and workforce resulting from the COVID-19 pandemic	12	
Proposal articulates a plan by which funded activities will have a sustained impact after the funding period ends	5	
Proposal is supported by statements of need from employers and other partners in the area to be served that express real need and commitment	8	
Proposal includes a detailed, realistic timeline	10	
<b>Students to Be Served</b>		
Points for institutions that serve more than 50% minority students OR that provide a plan to recruit more minority students into the funded program	4	
Points for institutions that serve more than 50% Pell-eligible students OR that provide a credible plan to recruit more Pell-eligible students into the funded program	4	
Points for institutions at which at least 36.9% of the student body is comprised of students from rural Missouri counties OR that provide a credible plan to recruit more students from those counties into the funded program	4	
Proposal includes a realistic budget	10	
Proposal includes a funding match of at least 50%	5	
Proposal is well-written, follows the format requested, and reflects substantial thought and planning	8	
<b>Total Points</b>	<b>100</b>	

# Private MoExcels Scoring Rubric

	<b>Maximum Points</b>	<b>Points Assigned</b>
Proposal provides evidence of a current and future labor market demand that is validated by Talent for Tomorrow labor market projections, MERIC, or other credible data source	8	
Proposal provides a credible plan for substantially addressing current and future labor market demand	5	
Proposal is supported by statements of need from employers and/or other partners in the area to be served that express real need and commitment	5	
Proposal aligns with long-term local, regional, and/or statewide strategic plan for economic development	5	
Proposal includes a detailed, realistic timeline	10	
Proposal provides evidence that students anticipated to be served through the program are underrepresented in higher education or the program of study	10	
Proposal adequately explains how students anticipated to be served through the program were impacted by the COVID-19 pandemic	8	
Proposal provides a credible plan for recruiting and supporting underrepresented students on the campus	5	
Proposal identifies geographic area(s) in which program completers are likely to work and those areas are primarily in Missouri	8	
Proposal articulates a plan by which funded activities will be sustained after the funding period ends	3	
Proposal includes a realistic budget	10	
Proposal includes a funding match of at least 50%	5	
Proposal is well-written, follows the format requested, and reflects substantial thought and planning	8	
<b>Cost per additional student served as a result of funding, annually</b>		
In top quartile of proposals (lowest cost per completer)	10	
In second quartile of proposals	7	
In third quartile of proposals	4	
In lowest quartile of proposals (highest cost per completer)	1	
<b>Total Points</b>	<b>100</b>	<b>0</b>

**Tab 24 Attachment C**  
**Funding Recommendations**

**Agriculture Innovation & Workforce Development**

<b>Institution</b>	<b>Project Title</b>	<b>Funding Recommendation</b>	<b>Running Total</b>
State Technical College of Missouri	Agriculture Technology Center - Phase A, Agriculture Demonstration Farm	\$ 2,000,000.00	\$ 2,000,000.00
Northwest Missouri State University	Growing Missouri's Dairy Industry Workforce	\$ 1,235,000.00	\$ 3,235,000.00
University of Central Missouri	Agricultural Certifications to Meet Modern Workforce and Industry Demands	\$ 2,000,000.00	\$ 5,235,000.00
Missouri State University	Agricultural Innovation Hub	\$ 2,000,000.00	\$ 7,235,000.00
University of Missouri	National Center for Applied Reproduction and Genomics (NCARG)	\$ 2,000,000.00	\$ 9,235,000.00
Missouri University of Science & Technology	Helping the Agricultural Workforce Harness the Remote-sensing Data Explosion	\$ 765,000.00	\$ 10,000,000.00
State Fair Community College	Center for Advanced Agriculture and Transportation Technology (CAATT)		
Jefferson College	Jefferson College Veterinary Technology Clinic		
University of Missouri - St. Louis	Center of Excellence in Controlled Environment Agriculture – Workforce and Business Development Training		
Lincoln University	LU AgriWorks Initiative - Innovation & Diversity in the Next Generation Agriculture Workforce.		
Metropolitan Community College	Metropolitan Community College (MCC) Agriculture Innovation & Workforce Development Project		
Truman State University	AgGrow: Entrepreneurship Capacity Building in Northeast Missouri Agriculture		
North Central Missouri College	North Central Missouri College Livestock Facility		
St. Charles Community College	GROWING Missouri – Advancing Innovation and Workforce Readiness in the Agriculture and Food Production Supply Chain		

## Private MoExcels

<b>Institution</b>	<b>Project Title</b>	<b>Funding Recommendation</b>	<b>Running Total</b>
Rockhurst University	Workforce Development in STEMM + Education	\$ 652,000.00	\$ 652,000.00
Webster University	The Impact Center	\$ 428,062.00	\$ 1,080,062.00
Saint Louis University	TGI Academy: Taylor Geospatial Institute Advanced Computing, Analytics, and big Data Education for Missouri	\$ 1,000,000.00	\$ 2,080,062.00
Washington University in St. Louis	Preparing and Credentialing Employees for Tomorrow (PACE for Tomorrow)	\$ 860,833.00	\$ 2,940,895.00
The University of Health Sciences and Pharmacy in St. Louis	Creating a Center for Equity in Health & Pharmacy Careers	\$ 473,524.00	\$ 3,414,419.00
College of the Ozarks	Entrepreneurship, Work Education, and Workforce Development	\$ 1,000,000.00	\$ 4,414,419.00
Maryville University of Saint Louis	Minority and Women-Owned Business Enterprises (M/WBE) Workforce Development	\$ 324,000.00	\$ 4,738,419.00
Webster University	Building the Education Workforce through Simulation Technology (BEWST)	\$ 105,350.00	\$ 4,843,769.00
Park University	Boosting State Economic Recovery through Adult Learner Pathways to Careers in Health Care	\$ 999,508.00	\$ 5,843,277.00
Central Methodist University	Health Care Professions Programs: Recruiting and Retaining Students for Missouri's Future	\$ 175,000.00	\$ 6,018,277.00
Fontbonne University	Retaining and Growing a Diverse Missouri Healthcare Workforce through an Interprofessional Living Learning Community	\$ 1,000,000.00	\$ 7,018,277.00
Lindenwood University	Community Paramedicine Enhancement Project (CPE2P)	\$ 134,612.00	\$ 7,152,889.00
Missouri Valley College	The Julien School of Nursing and Health Sciences at Missouri Valley College	\$ 578,839.00	\$ 7,731,728.00
Westminster College	Westminster Online	\$ 499,822.00	\$ 8,231,550.00
Drury University	A Workforce Ready to Tackle the Healthcare Shortage	\$ 1,000,000.00	\$ 9,231,550.00
Ranken Technical College	Mobile Technical Education Classroom 4.0	\$ 510,176.64	\$ 9,741,726.64
William Woods	Project CLEAR (Creating Leadership & Entrepreneurship Action & Response)	\$ 258,273.36	\$ 10,000,000.00

**Tab 24 Attachment D  
Proposal Summaries**

**Agriculture Innovation & Workforce Development Grant Proposals**

**Jefferson College**

**Jefferson College Veterinary Technology Clinic**

**BACKGROUND**

1. The insufficient supply of veterinary technicians has been a problem to meet workforce needs. Declining enrollment of students entering into the veterinary technology program has been noted during and immediately post-COVID. The low supply of trained veterinary technicians was exacerbated by decreased completion numbers secondary to the COVID-19 pandemic, furthering the workforce shortage in veterinary technicians to serve companion and food animals.
2. Strain on the food chain has been noted during and immediately following COVID. Veterinary Technology plays a significant role in the health of the animals as a part of Food Supply impact of Veterinary Medicine in Missouri. "Missouri is in the top 10 of states in the nation in producing 14 different commodities, and in the top five in hay, beef cows, rice and goats." (stlpublicradio.org). Veterinary Technicians play a key role in this industry.

**PROPOSED SOLUTION**

To alleviate the workforce shortage and to better serve a broader region of animal health care providers, Jefferson College aims to expand our cohort sizes to 48 students, a significant increase from the original founding cohort of 15 students. Jefferson College's Veterinary Technology program graduated its first class in 1974. They are in the original space used for a cohort size of 15. While cohort sizes have incrementally risen up to about 40 students, Jefferson College needs to create a larger veterinary clinic-style facility to effectively achieve the cohort expansion to the proposed 48 students. Jefferson College has maintained a quality program with AVMA accreditation and USDA approval consistently since inception. Unfortunately, we have recently received remarks from the AVMA concerning the need for a "contemporary veterinary clinic experience". This new facility will give us the ability to provide an updated veterinary clinical experience with expanded capacity.

# **Lincoln University**

## **LU AgriWorks Initiative - Innovation & Diversity in the Next Generation Agriculture Workforce.**

### **BACKGROUND**

The food, fuel, and fiber need of the country will be impacted by agriculture, the ability to adapt to changing climate, and the adoption of innovative technology. Close to 12% of the Missouri jobs are from agriculture and related industries. With the introduction of digital and precision agriculture and diverse crop such as industrial hemp the Missouri agriculture industry need more professionals to lead by solving current and future challenges. The rapid proliferation of COVID-19 at home and subsequent shutdown of parts of the economy led to unprecedented and simultaneous supply and demand shocks to the agricultural production and food system. The local and regional food systems (LRFS) nimbly responded to marketplace needs and connected to customers during the pandemic but the associated risk of producing and lesser workforce with skills affected the LRFS significantly. With the careful evaluation of gaps in the Missouri Ag industry, the multifaceted expertise of Lincoln University agriculture research, extension and education programs partnering with private stakeholders will provide next generation agriculture workforce which is critical at the state and national level. Also, these approaches will enhance the career opportunities of minority students and communities with limited access to resources.

### **PROPOSED SOLUTION**

To contribute to the agriculture industry workforce and its sustainable growth we will deploy training, certificate programs, education in agriculture innovation. Training programs, workshops, and performance development plan sessions for both public and private stakeholders, veterans, and Lincoln University agriculture students, focus to generate skills in Innovative agriculture and career opportunities. We will conduct professional development courses and internships. This includes digital agriculture, precision farming technologies including drone supported, climate smart and value-added agriculture, smart breeding, biofuel, supply chain management, economic analysis, product development and agriculture marketing which will impact Missouri agriculture broadly. Education and training focused on specific crop i.e., industrial hemp will be implemented. Certificate courses on hemp cultivation, crop management, pests and diseases, analytical testing to meet the state and national compliance, processing, industrial scale quality control for fiber and grain, and rules and regulation. For the processing and related industrial trainings on fiber hemp we will partner with the Midwest Natural Fiber, Sikeston, MO. Partnership with more private industries. Following activities also will be implemented. Specific agroforestry trainings: forest farming certification, Silvopasture certification, renewable energy certification; career development program for new/beginning farmers/returning farmers. We anticipate more than 300 students trained for targeted agriculture industries.

# Metropolitan Community College

## Metropolitan Community College (MCC) Agriculture Innovation & Workforce Development Project

### BACKGROUND

MCC's agricultural training programs are well-regarded within their respective professions. However, MCC lacks sufficient learning space and other resources to train the volume of students necessary to meet local industry needs. The pandemic led to the need for social distancing, which made it even more crucial for MCC to provide adequate space.

In 2019, MCC's Board of Trustees approved the new A.A.S. degree in Agriculture, which was another factor increasing the need for additional space and resources.

This degree offers the following pathways:

- Agribusiness: Business, economics, marketing, farm management, or logistics of agriculture
- Plant science: Horticulture, agronomy, hydroponics, aquaponics, aeroponics, landscaping, turf management, greenhouse management, or urban agriculture
- Animal science: Livestock production, aquaculture, animal nutrition, meat science, or veterinary science

Further, MCC's new Agriculture Science Institute introduces the need for a building that fosters interaction with industry, focused study, and intensive learning. The program's long-term vision is to impact rural and urban communities through a variety of opportunities including dual enrollment, Minorities in Agriculture, Natural Resources & Related Sciences (MANRRS) and National FFA Organization partnerships, and hydroponic farming.

Many local and regional agricultural jobs that employees left during the pandemic remain vacant. MCC completers can fill those vacancies.

### PROPOSED SOLUTION

With the growth of life science and agriculturally-focused industries in the region, MCC embraces future demand for training students to enter professions needed by area businesses. It is with this focus and growth of programs that MCC recently created the Agriculture Science Institute. MCC took into consideration 35+ metro area post-secondary agriculture programs, emerging partnerships with area Universities, 150+ secondary schools in the metro, and economic drivers (Animal Health Corridor, USDA).

The MCC Agriculture Institute will prepare individuals to manage or work in agricultural businesses and agriculturally related operations within diversified corporations. Programs provide instruction in agriculture, agricultural specialization, business management, accounting/finance, marketing, animal science, plant science, soil science, and other managerial responsibilities. The proposed project involves construction of greenhouse facilities and an Agricultural Sciences building addition, including lab space, along with procurement of specialized equipment. The programs involve actual experience in managed agricultural environments.

MCC offers veterinary technician courses at the Maple Woods campus, veterinary assistant and receptionist classes at the Maple Woods and Blue River campuses, pre-veterinary prerequisites at all five MCC campuses, and practice management courses at all four MCC campuses and online. With additional funding, MCC could expand upon the existing programs located at multiple campuses.

# Missouri State University

## Agricultural Innovation Hub

### BACKGROUND

The Southwest region's long-term agriculture projections for 2018-2028 have the lowest forecasted growth by region in the state. The MERIC data long-term projections for Ag (2018-2028) show the industry growing by 14.24% in Missouri. However, of the state's regions, the Southwest region has the lowest forecasted growth at 9.28%, which is well below any other region in the state (the next closest is Kansas City at 15.76%). This reduction was exacerbated by the pandemic due to overall decreased employment. This facility and related programs bridge this gap by expanding the Southwest regions innovative agriculture educational opportunities and training the workforce in the newest agricultural technologies of today and tomorrow.

Regional employers, such as John Deere Reman, are demanding employees with skills in agricultural mechanics and new agricultural technologies. The Innovation Hub will allow Missouri State University to deliver educational programs to produce graduates with these skills. Over time, as innovative technologies continue to be developed, the Innovation Hub will be prepared to keep pace with these technologies and offer educational programs to meet the needs of employers demanding workers with skills in these innovative technologies.

### PROPOSED SOLUTION

MSU will create academic programs in precision agriculture, including a Precision Agriculture undergraduate certificate and a graduate teaching education certificate in Precision Agriculture. MSU will also construct innovative space to deliver the programs. The proposed undergraduate and graduate certificates are included in the attachments.

Precision Agriculture facilities and academic programs have been successful at numerous other midwestern universities.

# **Missouri University of Science & Technology**

## **Helping the Agricultural Workforce Harness the Remote-sensing Data Explosion**

### **BACKGROUND**

The main problem addressed in this proposal is that the profit margin for farmers is often small, so unforeseeable problems can make agribusinesses unprofitable and potentially unsustainable. COVID-19 reduced farmers' profit margins by driving down prices on some commodities, such as corn and livestock, and disrupting established markets (restaurants and hotels) for agricultural goods. Precision agriculture can help raise farmers' profit margins, but the barriers to adopting precision agriculture practices are often high, especially for small farmers. This proposal addresses the barriers that keep some farmers from adopting precision agriculture practices that could help them weather difficulties such as those produced by COVID-19.

### **PROPOSED SOLUTION**

Our proposed solution is to lower the barrier for farmers to learn about and adopt precision agriculture technologies, with the goal of making agribusiness more efficient and environmentally friendly. Precision farming, fueled by detailed and site-specific data, can reduce both the material and labor costs of agriculture; reducing input costs helps to increase the profit margin. The main barriers to farmers' adoption of precision agriculture techniques are lack of knowledge in how to apply available information and costs of entry for both software and hardware. While precision agriculture is known to reduce input costs (a previously proven approach) our solution to reduce the barriers to practicing precision agriculture is new.

# North Central Missouri College

## North Central Missouri College Livestock Facility

### BACKGROUND

North Central Missouri College (NCMC) is the only community college serving the 17 counties across north Missouri. Currently, the Barton Farm Campus, which houses NCMC's agriculture programs, does not have the necessary facilities to support the applied learning environment needed for the equine program. Students enrolled in the equine certificate program must travel approximately 30 minutes to a horse farm owned by a retired instructor. The addition of the show arena at Barton would save our students resources of time and money by removing this the travel requirement for instruction. Additionally, our adjunct instructor/professor emeritus is an elderly gentleman. Due to COVID-19, we believe it is in the best interest of him and his family to limit exposure to foot traffic coming in and out of their horse farm.

### PROPOSED SOLUTION

North Central Missouri College (NCMC) requests \$750,000 for construction of a show arena on its Barton Farm Campus.

The 25,000 square foot show arena will feature the arena, 6 animal stalls, a tack room, and a classroom.

This facility will support NCMC's animal science pathway and its livestock judging team. It will allow the college to host regional livestock judging clinics, livestock demonstrations, and hands-on learning experiences.

NCMC is the only community college in Missouri and one of only two higher education institutions in the state to offer a competitive collegiate livestock judging team. The arena will aid in team preparation and provide opportunity for NCMC to host competitive events.

The show arena will benefit all NCMC agriculture students and specifically those pursuing the Agriculture and Natural Resources, AAS degree, the Equine Management Certificate, and the Livestock Management Certificate.

The facility will aid in attracting new students to the agriculture field and help to build a pipeline of qualified workers to support the food and agriculture industry in north Missouri.

NCMC plans to use a cash match of at least \$750,000 through the NCMC Foundation, Inc. to complete the project which is expected to have total costs greater than \$1.5M.

# Northwest Missouri State University

## Growing Missouri's Dairy Industry Workforce

### BACKGROUND

In 2015, the University of Missouri Extension produced the Missouri Dairy Industry Revitalization Study. Funded by the Missouri Agricultural and Small Business Development Authority (MASBDA), the study concluded “[t]he number of Missouri’s dairy farms and processing plants are declining slowly, as they have for decades. Unless reversed, the state will lose thousands of milk production and processing jobs.”. Northwest Missouri State University (Northwest) is proposing to partner with the Missouri Department of Higher Education and Workforce Development and the Missouri Department of Agriculture to expand and enhance its dairy collection, processing, and production facilities and programming in an effort to recruit additional students into the dairy industry, provide regional producers with education and exposure to the latest dairy technology and trends, and demonstrate the economic impact of on-farm, value-added dairy products originating from small dairy producers. As the COVID-19 pandemic demonstrated, local and regional food supply chains can be severely impacted by disruptions in labor availability. Labor disruptions continue to impact the Missouri dairy industry, as “the great resignation” continues to tighten labor supplies for skilled on-farm workers. The proposed project would help to alleviate this labor shortage by providing industry-demanded skills within Missouri’s dairy sector.

### PROPOSED SOLUTION

The proposed project will enhance and expand Northwest’s dairy processing and production capabilities in two concurrent phases. In the first phase, Northwest will add a fully-functioning micro-creamery to the recently-completed Agricultural Learning Center (ALC). The ALC, completed in 2021, is a 29,000 square foot state-of-the-art academic and exposition building located on Northwest’s R.T. Wright Farm, just north of the primary campus. The \$8.5M facility features classrooms, exposition space, and three practical laboratories – Animal Health, Agronomy, and Food Processing. Space for a fourth lab, a micro-creamery, was allocated in the initial building but constructed as a shell only due to funding limitations. The first project phase would complete the build-out of this fourth, 1,226 square foot laboratory space (electrical, plumbing, drywall, etc.) and install micro-creamery equipment, including a pasteurizer, separator, homogenizer, bottle washer, bottle filler/capper, butter churn, ice cream machine, and various tanks. The second phase of the project will make improvements to the dairy production and collection processes on the R.T. Wright Farm. These upgrades are proposed to include a robotic feed pusher, automated milking system, cow comfort technology/flexible feed rail, and cow health collar technology to allow monitoring of heat, stress, and milk production.

# **St. Charles Community College**

## **GROWING Missouri – Advancing Innovation and Workforce Readiness in the Agriculture and Food Production Supply Chain**

### **BACKGROUND**

Missouri's workforce participation rate has continued to decline from its peak in 1998. Exacerbated by the COVID-19 pandemic, the participant rate dropped in May 2020 to a low of 59.50%. While the participation rate continues to improve, as of July 2022 Missouri has not returned to even pre pandemic levels of workforce participation (per the Federal Reserve Economic Data Labor Force Participation Rate in Missouri).

### **PROPOSED SOLUTION**

This proposed solution leverages previously proven strategies by developing and expanding stackable and integrated workplace and skill-based programs that

1. Develop and/or expand career pathway options in target areas to include industry related credentials, certificates, and degrees;
2. Integrate opportunities for workplace learning and promote employer participation;
3. Incorporate credit for prior learning strategies to encourage engagement and/or reengagement;
4. Purposely include established program development and implementation strategies that promote and encourage inclusion, opportunity, and retention.

# State Fair Community College

## Center for Advanced Agriculture and Transportation Technology (CAATT)

### BACKGROUND

Already operating on thin profit margins, farm families and their finances were severely affected by Covid-19. "Farm businesses experienced disruptions to production because of lowered availability of labor and other inputs, and output prices were affected by changes in demand for commodities." (USDA) In the first 13 months of the pandemic over 9% of the agricultural workforce was lost (Lusk JL, Chandra R (2021)). The reduction in miles driven during lockdowns led to reduced demand for grains used in biofuels, and the drastic decline in food demand by schools, restaurants and hotels isolated farmers and food processors from their biggest buyers. Utilizing the CAATT facility, SFCC will address the issues of labor shortages and reduced profit for farm businesses by training a workforce that can enter the agriculture industry with a foundation of knowledge and hands-on experience in advanced agricultural technology that increases production. Agriculture mechanics and equipment service are also priorities in the industry. Last year's demand for technicians outpaced supply three to one; now, it's estimated to be five to one. SFCC's proposed Ag Equipment program will help meet this demand and keep Missouri's agriculture production, the food and labor supply chain, and agriculture input at maximum production.

### PROPOSED SOLUTION

Agriculture is the #1 industry and #1 economic driver for the Missouri. SFCC's Center for Advanced Agriculture and Transportation Technology (CAATT) will provide opportunities to keep agriculture as a Missouri priority and expand training programs and certifications that prepare technicians for the agriculture industry. The Center will provide drive-in classrooms, simulation labs and shop/lab spaces for new and expanded programs in ag mechanics and precision agriculture. Annual openings for ag equipment technicians in our service region is projected to total 510 by 2028.

The new facility will complement SFCC's ag program expansion of a 200-acre farm. Transportation and logistics are closely tied to the agriculture economy and food supply chain. On the production side, transportation and logistics are vital to move products to market and to supply production inputs like seed, feed, custom fertilizer and herbicide/insecticide applications. The regional agriculture economy is supported by industries such as Tyson Foods, Cargill Inc., ConAgra Brands, Schreiber Foods, and Mid-Missouri Energy.

The Center will expand training for area high schools and provide students with certification opportunities and a seamless transfer into SFCC's programs. SFCC's certifications will be applied across multiple disciplines providing students with flexible, stackable and relevant credentials for high-skill, high-demand occupations.

# State Technical College of Missouri

## Agriculture Technology Center – Phase A, Agriculture Demonstration Farm

### BACKGROUND

According to a study conducted by the Missouri Agricultural Foundation and MU Extension, “As the global demand for food continues to rise, the State of Missouri has an ambitious goal of doubling its agricultural production over the next thirty years. Achieving this goal will require multiple strategies, including the development of a next-generation agricultural workforce.” The same study went on to state that between 2019 and 2029, food, agriculture, and forestry employers will have about 13,000 annual openings. While many of these are unskilled positions, nearly half of employers were considering automation to reduce manual labor and increase output. Fewer production farms will continue to produce more output, and smaller farms will continue to consolidate and increase efficiencies using technology, which requires a skilled workforce. Processing manufacturers have invested heavily in automating production. A shortage of workers to install, troubleshoot, and maintain automated equipment is well documented.

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). Additionally, as a result of the COVID pandemic, food production workers left their positions for safer employment alternatives. Market disruptions such as lower production (meat, dairy, crop) values and increased costs further exasperated production with furloughed or laid-off employees that need to return to the workforce so that producers can again be viable post-COVID (USDA, 2022). These combined factors negatively impact Missouri’s economy and economic growth.

### PROPOSED SOLUTION

State Tech is proposing a comprehensive approach to agriculture education resulting in 400 students serving Missouri’s agriculture workforce needs. The State Tech Agriculture Technology Center will have two phases:

Phase A, the Agriculture Demonstration Farm, will be a working farm that provides hands-on experiences in row crops and beef production. Through project-based learning, students will learn how to determine the best use of cropland, maximize crop yield utilizing precision farming technology, and apply the latest in livestock breeding and animal nutrition. Funding will be utilized to purchase the farm, acquire livestock and equipment, and potentially construct structures needed to support crop and livestock production.

Phase B, the Agriculture Demonstration Center, will be constructed on the State Tech campus and include classrooms, a livestock arena, wet and dry labs, and a food processing lab. Funds for this building will be pursued in FY24.

This proposal builds on 35 technical programs to support the agriculture workforce needs of Missouri and adds new programs in Agriculture Technology (Ag Tech) and Facilities Operations and Management. Ag Tech graduates will have skills in agribusiness, animal husbandry, agriculture mechanics, and precision farming, which will enable them to start a career in multiple farm environments. Facilities graduates will be exposed to HVAC, plumbing, electrical, building automation, and specific facility management instruction and will be well suited for a wide range of facilities roles, including food processing operations.

State Tech, ranked #1 two-year college in the US with the country's second-best graduation rate, does one thing and does it better than anyone--provide a transformational technical education experience and start graduates’ careers. Leveraging this proven model of success, State Tech will use funding to address Missouri’s shortage of agriculture production and facilities operation professionals.

# Truman State University

## AgGrow: Entrepreneurship Capacity Building in Northeast Missouri Agriculture

### BACKGROUND

Relatively little has been done to increase the breadth and depth of agricultural production and staffing in the northeast Missouri region. It suffers from labor shortages worsened by COVID-19. A May 17, 2022 report by Lightcast reports jobs in the 12 northeastern most counties declined by 2.4% and labor participation decreased 2.6% from 2016-2021. The retirement risk is high in the area with more people over 55 than the national average.

COVID-19 led to increased chronic health conditions, both due to long-term impacts of infection and isolation and restrictions of movement. Problems with physical and mental health have increased, amplifying the need for traditional and alternative medical interventions. A well-educated workforce is needed to meet demand for these products.

Truman's farm is an underutilized resource for promoting agricultural entrepreneurship and training workers to support innovation. In particular, the growth industry of medicinal plants has little foothold in the region while there exists a need for greater awareness of sustainable farming and environmental protection. This project aims to fill gaps in employment in the region and support resilience and adaptability in agriculture in response to future economic and environmental changes.

### PROPOSED SOLUTION

This initiative aims to promote entrepreneurship by developing undergraduate programs in Cannabis & Natural Medicinals and Environmental Science and provide connected outreach to the agricultural community. In particular these programs will focus on transferable agricultural skills, such as cultivation, composting, sustainability, and business. As sustainability has recently become more urgent, many institutions have developed environmental science programs to better prepare students for opportunities supporting farmers. Truman has an existing, highly successful, Environmental Studies minor and students have used our Interdisciplinary Studies major to craft individualized environmental studies paths. As the legalization and regulation of medicinal plants has expanded nationally, more universities are developing programs to prepare farmers for legal, ethical, regulated, and profitable cultivation, processing, and distribution. Within Missouri, training options are extremely limited and confined primarily to non-credit certificate programs. We know of no program in Missouri that integrates the science, business, and ecological knowledge that is fundamental to the successful growth of this industry - particularly at the bachelor's degree level. Diversification of crops is not only good for the economy, but it is good for the environment as well. This proposal is a new solution for Truman, but is based on a sound history of outreach in agricultural education.

# University of Central Missouri

## Agricultural Certifications to Meet Modern Workforce and Industry Demands

### BACKGROUND

This proposal will provide much needed workforce training for demographic segments that are filling the employment gaps in Missouri's agriculture and related industry. This proposed workforce training meets the needs of industry partners while also strategically addressing precision agriculture training to maximize automation to offset labor shortages as well as providing additional avenues for direct sales to consumers addressing COVID's production shortages.

Factors contributing to a smaller state-wide agricultural workforce in Missouri include: inability to complete production agriculture tasks remotely, or allow for flexible production schedules; close confined working conditions in food manufacturing contributing to viral transmission; inability to automate some agricultural positions and/or an infeasible cost of automation for the positions that can be automated; reduced pool of willing and available employees in production agriculture (i.e. H-2A temporary guest workers) as a result of political, economic, and/or travel restrictions; tight labor pool leading to higher wage rates for qualified workers; and low rates of U.S. labor force participation and with slow recovery.

These factors compounded already tight pre-COVID-19 labor supplies in the agricultural and related industries sectors. The development of these new agricultural workforce credentials will provide clear employment/career pathways for participants as well as creating multiple credential entry points (dual credit, transfers, non-degree seeking, undergraduate, and graduate).

### PROPOSED SOLUTION

The proposed solution is five sets of newly development stackable or standalone agriculture workforce certificates addressing specific challenges and labor issues faced in agriculture:

- Greenhouse Management
- Agritourism
- Precision Agriculture
- Agricultural Safety
- Agricultural Lab Research Technician

The basis of the curriculum aligns with existing successful structures in other states and which is currently lacking within Missouri. These certificates would provide credentials for individuals to immediately join the agricultural workforce, and/or to advance within agribusinesses looking for skilled workers to operate automated aspects.

Some certifications will incorporate augmented or virtual reality elements, allowing students to experience potentially hazardous agriculture operations or situations, in a safe, simulated environment.

Each certificate would include at least one course that could be taken dual credit through UCMO or another institution offering the specific dual credit class. This would allow students to start the credentialing and workforce development process in high school. In addition to reducing the cost of higher education, offering a dual credit start to the certificates is important as the minimum age for agriculture employment in Missouri is 16 years during school hours and 14 years outside of school hours.

# University of Missouri

## National Center for Applied Reproduction and Genomics (NCARG)

### BACKGROUND

The National Center for Applied Reproduction and Genomics is a multi-disciplinary partnership among faculty in MU's College of Agriculture, Food and Natural Resources and the College of Veterinary Medicine. The Center will serve as a national training site for veterinary students, practicing veterinarians, genetics providers and pharmaceutical industry personnel, and producers. The Center's focus will lead to the creation of a skilled workforce able to utilize and profit from reproductive and genomic technologies. A primary emphasis will be to create impactful educational programming, including: Electives for current veterinary students, Veterinary Continuing Education (CE) courses for veterinary practitioners, a Graduate Certificate Program in Bovine Reproductive Management and Genomic technologies, and expanded internship opportunities for undergraduate and graduate students. The overall concept of NCARG aligns with the Missouri Food, Feed, Fiber, Fuel, & Forestry Consortium (MO-5) as part of the Food, Beverage, and Forest Product Manufacturing Initiative. A focus of the MO-5 consortium is intended to advance the beef industry in Missouri. The new operational model presented by NCARG will be crucial in transferring complex reproductive and genomic technologies to U.S. livestock producers, and essential to addressing the state and nation's future food security, a weakness highlighted by the COVID-19 pandemic.

### PROPOSED SOLUTION

Federal funding has been secured to develop curricula and training opportunities associated with NCARG; however, long-term success hinges on development of a modern training facility suitable to the needs of the developing workforce. Professional and industry support for NCARG is significant, including: the American Veterinary Medical Association (AVMA), American Association of Bovine Practitioners (AABP), and the Academy of Veterinary Consultants (AVC); 5 major AI industry genetics providers, including ABS Global, Origen, Select Sires, Inc, Genex, and Sexing Technologies, in addition to the parent organization, National Association of Animal Breeders; 9 major beef breed associations; 5 major pharmaceutical houses; and 4 branded beef and feeder calf programs. Collectively, these industry partners recognize the potential for NCARG to provide the nation's beef industry with the necessary tools required to effectively translate advancements related to reproduction, genetics/genomics, performance, and efficiency that impact beef herds across the state and nation. Industry partners across the nation recognize that MU is uniquely positioned to lead this effort with its internationally recognized team of reproductive biologists, geneticists, economists, veterinarians, and extension scientists with unparalleled experience in R&D and management of industry-wide extension and genetic improvement programs, evidenced by success of the Show-Me-Select® Replacement Heifer Program.

## **University of Missouri – St. Louis**

### **Center of Excellence in Controlled Environment Agriculture – Workforce and Business Development Training**

#### **BACKGROUND**

Global population growth, strains on natural resources, loss of arable land, consumer preference for local food, and climate shifts increase the need for sustainable agricultural practices. Urban and rural areas need to address food deserts and economic development in high poverty communities. Further, COVID-19 exposed the need to have more sustainable supply chains to limit disruptions to market access to goods as well as the economic hardship COVID placed on many communities, especially high poverty communities like those around the University of Missouri-St. Louis. Food production that is environmentally sustainable, scalable, closer to consumers and that creates greater economic opportunity for businesses and workers is needed throughout Missouri. Controlled environment agriculture (CEA) allows for greater food production with fewer and more precise use of resources, allows for longer and more consistent production cycles, and can be implemented in many different community settings and at different production scales. Evidence of growth in this sector is seen by Aerofarms 150,000 sq. ft. facility being built in St. Louis. However, the workforce to support this growing industry is underdeveloped to support growth in the Missouri ag-tech industry. Business development for entrepreneurs seeking to begin a controlled environment agriculture company is also needed to advance this industry in Missouri and make sure underrepresented founders and students have the needed supports and training to succeed in establishing firms in this growing market.

#### **PROPOSED SOLUTION**

The University of Missouri-St. Louis in partnership with University of Missouri Extension and the College of Agriculture, Food, and Natural Resources, the Yield Lab Institute, the Donald Danforth Plant Science Center and community and industry partners in the St. Louis region propose the creation of a Center of Excellence in Controlled Environment Agriculture (CEA). The proposed center will test, pilot, and experiment with different growing systems, genetics, technologies, innovations, and solutions. It will partner globally with academic institutions and research organizations in the public, private and nonprofit sectors. It will support startups as well as established enterprises. It will be a place that develops the workforce to support this new burgeoning industry. It will seek ways that CEA can contribute to greater food access and security. As an early step in standing up the Center of Excellence, the university and partners will develop and scale workforce training across areas such as master gardener, indoor growing technician roles, specialty crop production, and more. A second area of training to be created in this initial phase of work will be in business development - management of indoor growing facilities, supply chain, and financial sustainability models.

# Private MoExcels Grant Proposals

## Central Methodist University

### Health Care Professions Programs: Recruiting and Retaining Students for Missouri's Future

#### BACKGROUND

Students in the health professions, including occupational therapy assistants, physical therapy assistants, registered nurses, and athletic trainers, are not retained in educational programs due to a variety of factors. In addition, there are fewer students of underserved populations enrolled in these programs. With the national shortages in these fields, and the growth in minority populations, institutions need to attract and retain students to the health care professions.

#### PROPOSED SOLUTION

The institution proposes to develop a program that includes recruitment, and retention of students, through targeted marketing, partnerships with high schools and career centers with health professions programs, as well as student support in areas such as early interventions for academic support, giving students additional personal support through mentoring, connections with appropriate social services, such as daycare, helping with study habits and student success, mental health issues, including anxiety and stress, and course specific supports for the health progressions programs of occupational therapy assistant, physical therapy assistant, nursing, and athletic training. According to Kim Mitchell et. al. (2020) in a literature review of twenty years, the most common supports were: “mentorship, study skills, literacy and language approaches, and tutoring the most common components.”

Mitchell, K.M. et. al. (2020). Strategies for retention of nursing students: A scoping review. *Nurse Education in Practice*, 50(3), 102596. <https://doi.org/10.1016/j.nepr.2020.102956>

# College of the Ozarks

## Entrepreneurship, Work Education, and Workforce Development

### BACKGROUND

Our proposal addresses the pervasive need for skilled labor in Missouri and the Ozarks region, especially regarding entrepreneurship, E-commerce and the hotel and restaurant management industries.

### PROPOSED SOLUTION

Our proposed solution is to offer stackable credentials to students in the College's Student Work Education Program (SWEP) and academic programs at the College to meet the diverse workforce needs in our region.

This solution is grounded in research and literature as an effective method to

- Help students understand how their education cultivates employable skills,
- and create new workforce paths for students,

We rooted this strategy in the Employability Skills Framework developed by the Support for States Employability Standards in Career and Technical Education and Adult Education Project (U.S. Department of Education, 2022).

This framework employs stackable badges to

- Provide flexibility for students;
- Meet the evolving skill needs of employers;
- Improve the ability of colleges and communities to increase postsecondary credential attainment, especially among underserved populations;
- Give colleges tools for addressing technology advancements. (U.S. Department of Education, 2021, p. 1, 2)

This framework also supports the strategies and tactics of existing federal workforce development legislation, including the Workforce Innovation and Opportunity Act (WIOA), the Carl D. Perkins Career and Technical Education Act of 2006, as amended by the Strengthening Career and Technical Education for the 21st Century Act, and the Higher Education Act.

U.S. Department of Education. (2021). Introduction to Stackable Credentials. <https://s3.amazonaws.com/PCRN/file/introduction-to-stackable-credentials.pdf>

U.S. Department of Education. (2022). Employability Skills Framework. <https://cte.ed.gov/initiatives/employability-skills-framework>

# Drury University

## A Workforce Ready to Tackle the Healthcare Shortage

### BACKGROUND

The problem we are addressing is the shortage of primary care physicians in southwest Missouri. There are 327 total Primary Care HPSA Designations in Missouri, affecting 1,644,535 residents. The number of practitioners needed to remove the HPSA designation is 491. <sup>1</sup>

According to the American Association of Medical Colleges, the United States will face a shortage of between 17,800 and 48,000 primary care physicians by 2034, making it difficult for millions of people to get preventive healthcare services. <sup>2</sup>

People in HPSA areas may be geographically isolated, low-income, or both. An aging population and physician retirements demand a different strategy in Missouri to provide primary care for its residents.

<sup>1</sup> Bureau of Health Workforce, Health Resources and Services Administration (HRSA), U.S. Department of Health & Human Services, Designated Health Professional Shortage Areas Statistics: Designated HPSA Quarterly Summary, as of September 30, 2021, available at <https://data.hrsa.gov/topics/health-workforce/shortage-areas>.

<sup>2</sup> Association of American Medical Colleges, <https://www.aamc.org/news-insights/gme>

### PROPOSED SOLUTION

Physician assistants (PA) are a viable solution to the challenges in healthcare. PAs can work independently in rural areas while the doctor is just a phone call away.

Drury is launching a PA program in fall 2023 to address the growing need for primary care providers in Missouri. Primary care, first-contact continuous care by a medical provider, is associated with significantly better health outcomes and lower costs. Drury's Master of Science in Physician Assistant Studies program will prepare students to meet the healthcare needs of an increasingly diverse population, expand access to care, and ease the shortage of primary care providers.

Investing in healthcare education and workforce development is a proven approach to the problem. We can train medical professionals quickly to work in Missouri communities, delivering healthier families and lower healthcare costs.

With a shorter path to the workforce and a high starting wage, PA graduates enter fulfilling careers that make a difference. PA students graduate with less debt and have lifetime earnings above the general population. The average starting salary in Missouri is \$106,000. The Drury PA program is establishing clinical rotation opportunities in rural Missouri with the expectation that students will pursue employment opportunities in these areas.

# Fontbonne University

## Retaining and Growing a Diverse Missouri Healthcare Workforce through an Interprofessional Living Learning Community

### BACKGROUND

Fontbonne University seeks to address two problems. First, Missouri is not producing or retaining an adequate supply of health care professionals. According to the Missouri Hospital Association's 2022 Annual Workforce Report, health care providers are battling both a 24.7% turnover rate and a 17% vacancy rate, which is an 87% increase in vacancies since 2020 (<https://web.mhanet.com/media-library/2022-workforce-report/>). Research suggests that health care professional attrition is closely linked to their level of burnout. Contributing to provider burnout is the reversal of expectations between training and practice, as training commonly occurs in silos while practice occurs in interconnected communities. Fontbonne has well-established programs in dietetics and speech-language pathology and a new nursing program; each of these is expecting strong job demand that outstrips current capacity. Unfortunately, we cannot grow the number of accepted students across entering cohorts for all three programs without additional on-campus living. Entering this academic year, our residence halls are over capacity. In order to increase enrollment in health and allied health programs and continue to diversify the student population engaged in our allied health programs, we must expand our housing capacity and create a living learning community which provides students with academic and social integration to retain students.

### PROPOSED SOLUTION

Missouri is experiencing a shortage of allied health professions prepared to meet the health and wellness needs of our state's residents. Interprofessional practice is a proven approach to improving job satisfaction, workplace quality, group cohesion and staff retention while decreasing burnout. Providers who have engaged in interprofessional learning are not only better equipped for their individual roles but also better prepared to collaborate as a part of an interdisciplinary care team. We aim to address career preparation, recruitment and retention of rural and underrepresented students in the allied health professions, through interprofessional learning and the best practice of living learning communities.

Due to a shortage of on-campus housing, Fontbonne will renovate existing non-residential space to add approximately fifty beds and create space conducive to an interprofessional living-learning community.

The living learning community increases student success by holistically addressing critical first-year needs. Students will connect to their peers, faculty, and student support services while experiencing deliberately designed interprofessional learning activities in support of their mastery program competencies. Students will gain a deeper insight and understanding of the course material through the integration of activities into an existing curriculum and clinical experiences within communities reflective of their own.

# Lindenwood University

## Community Paramedicine Enhancement Project (CPE2P)

### BACKGROUND

Health professional shortages create significant problems for healthcare access in rural areas within Missouri. Nearby Lincoln and Warren counties are designated as health professional shortage areas (HPSA) by Health Resources and Services Administration due to their rural classification and high rates of low-income populations (HRSA, 2022). Additionally, rural Missourians encounter barriers to health access, in part, due to a lack of public transportation. Furthermore, County Health Rankings (2018-2020) notes that Lincoln County residents consistently outpace Missouri for preventable emergency room visits. In Warren County, substance use disorders cause additional social challenges as one of the top two adverse health factors for their residents (exploreMOhealth.org, 2022). Collectively, these situations result in the overuse of hospital emergency rooms often for preventable emergency room visits. This project addresses these challenges through Lindenwood University's (LU) implementation of a targeted rural telehealth training program designed to assist community paramedics and other health professionals allowing for in-home preventive care, facilitate engagement with medical providers, and reduce the need for unnecessary ER visits.

### PROPOSED SOLUTION

By advancing LU's existing BS-Paramedicine education program by adding telehealth training and enhancing shared space used by Paramedicine and future Nursing program, we will be able to provide simulations and experiences for all community-based health science students. Based on a hybrid training model comprised of evidence-based community paramedicine and telehealth nursing simulations (University of MN, 2013), all graduates will be prepared with transferrable skills to support unmet rural workforce needs locally. Similar models are being piloted like the Mobile Integrated Healthcare Network supported by HRSA funding in Washington County, MO. The collaboration between Mineral Area College, Great Mines FQHC, and the Washington County ambulance district expands the role of telehealth to a sustainable community-based preventive care solution (RuralHealthInfo.org, 2022). LU's program is differentiated by the partnership with Lincoln County's ambulance district to prepare providers for licensure as community paramedics and teach them how to harness telehealth. The CPE2P project will build synergies between the existing BS-Paramedicine program, Lincoln County, and the upcoming BS-Nursing program by developing professional certificates for community paramedics and community health nurses. By implementing these enhancements, we expect our graduates will be prepared as effective community health professionals and reduce preventable ER visits in rural, HPSA communities.

# Maryville University

## Minority and Women-Owned Business Enterprises (M/WBE) Workforce Development

### BACKGROUND

Minority-owned businesses face unique problems including access to capital, mentoring, networks, and business acumen. One viable solution is providing access to high-quality upskilling courses tailored to minority- and women-owned small business needs.

Across Missouri, the percentage of Black-owned businesses is not on parity with the Black population. In Greater St. Louis, there are 3,112 Black businesses, or 6% of the total. If Black businesses accounted for 19.5% of employers (equivalent to the Black population), there would be 9,448 additional Black businesses. Similarly, Black businesses create an average of 6 jobs per firm, compared to 25 for all businesses.

The Federal Reserve defines a small business as having fewer than 500 employees, representing 99.7% of all employers in the U.S. Ninety-two percent of Black-owned firms reported financial challenges in 2020, and are the most likely to experience difficulty accessing credit (53%).

Brookings argues Black entrepreneurs need better access to startup capital and technical support, and are significantly underserved by mainstream banks and financial services. (Black-owned businesses in U.S. cities: The challenges, solutions, and opportunities for prosperity. Feb 14, 2022, Brookings {multiple authors}. <https://www.brookings.edu/research/black-owned-businesses-in-u-s-cities-the-challenges-solutions-and-opportunities-for-prosperity/>

Women small business owners face many of the same obstacles as other nonmajority small business owners.

### PROPOSED SOLUTION

Our solution will upskill 500 minority- and women-owned business through asynchronous, online training tailored to their business needs. The topics were derived from national research and a St. Louis focus group with 45 minority-owned small businesses. This led to a list of 20 modules in these certificate clusters: Small Business Leadership; Digital Marketing for Small Businesses; Small Business Administration, Money, and Data; Small Business Customers, Employees & Relationships; Small Business Sales & Growth; and Small Business Technology & Intellectual Property.

Prior to, and separate from this proposal, we launched these courses with the St. Louis Development Corporation and the Missouri Minority Business Development Agency Business Center in Q4, 2022, allowing us to help 100 businesses a year for three years.

We will host three listening sessions annually with small businesses to learn what additional skills they need and will produce one new short course each month over the five years of the program.

Our solution is unique in that our content is based on what businesses actually need, based on expert analysis and feedback from those businesses. Yet, our educational delivery process is based on more than 10 years of success in online education design and delivery at Maryville University.

# Missouri Valley College

## The Julien School of Nursing and Health Sciences at Missouri Valley College

### BACKGROUND

MVC is addressing the severe shortage of nurses in Missouri and other allied health professionals. <https://www.americanprogress.org/article/how-to-ease-the-nursing-shortage-in-america/>

According to the MO Department of Commerce and Insurance, nursing shortages are even more pronounced within rural counties. Compounding the workforce shortage, more than one-third of MO's RNs are age 55 or older, increasing to nearly half in some rural counties, with retirement imminent. According to the U.S. Bureau of Labor Statistics (BLS), approximately 194,500 openings for registered nurses are projected each year, on average, over the next decade. Given that this number was projected prior to the pandemic, the demand for nurses is substantially higher. <https://www.bls.gov/ooh/healthcare/registered-nurses.htm>

It is with these dire projections that the American Nurses Association recently urged the US Department of Health and Human Services to declare the nurse staffing shortage a national crisis. In January of 2021, governors across the country, some for the second time, called in the National Guard to assist health care providers, and 1,118 hospitals—more than 1 in 6 hospitals in America—reported critical nursing shortages. As of March 2022, almost every state had taken executive actions to address the shortage, such as issuing temporary licenses to put nursing students to work. <https://www.americanprogress.org/article/how-to-ease-the-nursing-shortage-in-america/>

### PROPOSED SOLUTION

Missouri Valley College will build a new 16,300 square foot Health Professions Building to house the Nursing Program and ultimately other health care profession programs, graduating critically needed nurses to meet state and rural workforce shortages. The College's School of Nursing has outgrown its 6,800 square foot space, a renovated basement within the local hospital; it is impossible to expand the program in its current home. The new site will be twice the size and house state-of-the-art technology, simulation and computer labs, and room for other health professions as the industry continues to evolve. This is not a new solution and has been proven effective for nearly a century.

# Park University

## Boosting State Economic Recovery through Adult Learner Pathways to Careers in Health Care

### BACKGROUND

Park's project responds to MDHEWD's imperative that "postsecondary institutions and employers/industries work together to serve adults, especially as the state addresses economic recovery" (1) and its strategic goal that by 2025, 60% of Missouri adults possess a post-secondary credential.

Park is well-versed in supporting diverse adult learners: The average age of a Park undergraduate student is 30, 56% identify with racial, ethnic, and cultural groups typically underrepresented in higher education and over 60% are military affiliated. While Park offers degree programs, there is more we can do with micro-credentialing—non-credit bearing educational experiences that provide job-ready skills and an on-ramp to post-secondary credentials.

Park's project addresses the problem of limited entry points into high-demand patient care positions for underserved adult learners. In 2021, patient care was rated by employers as the most important skills shortage in Missouri (2). Additionally, there is growing urgency for "organizations [to] close gaps in health disparities by focusing in part on diversity, equity, and inclusion." (3)

Park has the expertise to help meet the demand for diverse and skilled patient care professionals through a unique program that prepares adults for Certified Medical Assistant (CMA) roles and offers prior learning credit toward a degree.

### PROPOSED SOLUTION

Park will offer a hybrid Medical Assistant preparation program consisting of an online asynchronous training course and in-person skill development taught by our nursing faculty. Completers will be prepared for the Certified Medical Assistant (CMA) examination and placement in roles requiring a CMA credential. The in-person skills curriculum can be customized to meet the needs of employers who wish to upskill and promote employees to patient-facing positions. Additionally, Park will engage in internal (current students) and external (community) recruitment.

In addition to supportive services, Park will offer prior learning credit for completers. This credit can accelerate time-to-degree completion for enrolled students and provide an on-ramp to enrollment for new students. Nationally, adults with prior learning credit are 17% more likely to complete a post-secondary credential (4). This effect is amplified for underrepresented students (23% for Black adult learners; 47% for Hispanic adult learners; and 28% for adult Pell Grant recipients) (5).

Park's proposal is patterned from effective models. Career ladder infrastructure for Medical Assistants, including credentialing, has been shown to result in income increases from \$3,000 to \$10,000 annually "while also potentially addressing issues of equity, efficiency, and quality in the health care sector." (6)

# **Ranken Technical College**

## **Mobile Technical Education Classroom 4.0**

### **BACKGROUND**

According to the Missouri Economic Research and Information Center (MERIC), Missouri is predicted to have more than 307,000 total middle-skill job openings between 2014 and 2024. Recruiting and training workers for these positions is the challenge for businesses and industries in the State. This workforce shortage comes mostly from jobs created by new technology and a spike in worker retirement.

Because technology is increasing rapidly, we are now in the midst of an industrial revolution, better known as Industry 4.0. This revolution seeks to displace workers employed in simple assembly line type work with automation. These workers will need to be educated to become middle-skilled, which is a level that requires more training than high school but not necessarily a 4-year degree. The need for more training opportunities that offer associates degrees, certificates and industry recognized credentials will continue to increase as these technologies impact the workplace.

The workforce problem is exacerbated by the reluctance from young people to pursue technical career fields. With the Pandemic we saw many students lose the opportunity to participate in recruitment activities. Because of these reasons there is a growing gap of talent pursuing these career fields.

### **PROPOSED SOLUTION**

Our proposed solution is a unique approach to mobilize technical training by building a customized training trailer equipped with technology such as Amatrol hands-on workstations, Fanuc Educational Robotic Cells, and Lincoln Electric Virtual Welders. Since it is an educational trailer that provides technical education, it will be known as the “Mobile Technical Education Classroom” or MOTEC 4.0. The 4.0 is a reference to the fact that the training will target skill sets in automation as it exists in industry 4.0. These are all modular and portable high-tech training equipment pieces that will allow for students at all 3 Ranken locations to have access to the most current technical training. It will also bring workforce development training to business and industry sites throughout the State. Furthermore, this mobile training approach allows for students to build skills in high demand areas and earn industry recognized credentials (IRC) from the National Institute of Metal Working Skills (NIMS), and the Smart Automation Certification Alliance (SACA). MOTEC 4.0 will also coordinate with school districts and career centers in Missouri to allow their students to have access to the training equipment. MOTEC is a flexible training solution that will enable Ranken to help recruit new students into technical careers, train existing students to earn IRCs, and offer workforce training to support industry.

# Rockhurst University

## Workforce Development in STEMM + Education

### BACKGROUND

Recruitment of students from underrepresented groups into certificate and bachelor's degree programs in STEMM + Education (Science, Technology, Engineering, Mathematics, Medicine & Education) is essential to meet current and future workforce demand in Kansas City and the State of Missouri. The COVID-19 pandemic and rising inflation have created unprecedented barriers for many Missouri students and adult learners, especially individuals from low income and underrepresented groups based on race/ethnicity and gender. Travel restrictions caused by the pandemic hampered efforts to bring prospective students to campus recruiting events, negatively impacting the number of degree completers. Nationally, post-secondary enrollment has declined 6.6% between 2019 and 2021. Within this context, the Kansas City region and the State of Missouri have critical shortages of credentialed STEM professionals, nurses and medical assistants, and teachers, particularly among persons of color. Creating pathways for underrepresented students to grow the number of credentialed graduates in these fields is critical to meeting workforce needs. Our project will expand and enhance efforts related to increasing the number of students from underrepresented and low-income backgrounds entering programs in STEMM + Education, leading to an increase in the number of incoming students in these fields by 5% annually.

### PROPOSED SOLUTION

Rockhurst University, located in Kansas City's urban core, holds the Community Engagement Classification from the Carnegie Foundation with more than 100 years of commitment to remain "In the City for good." Funding will increase the pipeline of students from underrepresented groups completing STEMM + Education programs by adapting proven solutions for recruitment and retention including: (1) expanding pipeline programs and recruiting efforts with individuals from underrepresented backgrounds through "Rockhurst University – In the City" events on campus with high school juniors and seniors from high-poverty districts in the Kansas City region. Students will engage in hands-on activities in their fields of interest and career-jumping events; (2) preparing admitted students for success through campus-based Summer Bridge Programs with strategic design of applied learning experiences, study strategies, and academic leveling; (3) increasing access to higher education through a new Resources Navigator position to support students from underrepresented groups with identifying resources to fund college; and (4) creating a Diversity, Equity, and Inclusion (DEI) Faculty Development program to promote and support student success. These initiatives will increase the number of graduates from underrepresented backgrounds and support post-graduation workforce connections for high need careers in Missouri, making a significant economic and cultural impact.

# St. Louis University

## TGI Academy: Taylor Geospatial Institute Advanced Computing, Analytics, and big Data Education for Missouri

### BACKGROUND

Geospatial science and technology is a multibillion-dollar industry, and people with geospatial skills are increasingly in demand. The Saint Louis region is emerging as the national geospatial hub with booming research and tech innovations catalyzed by the relocation of the NGA West (NGA-W) campus to north St. Louis. There is an expected 60 percent growth in STEM positions in the St. Louis region (<https://www.bizjournals.com/stlouis/news/2018/10/18/tech-talent-deficit-it-jobs-projected-to-grow-60.html>), creating 5,000 new jobs in Missouri in the next few years producing roughly \$600 million to Missouri's economy (Missouri Department of Economic Development, NGA and Beyond, 2018). However, the lack of a skilled workforce in critical areas such as geospatial artificial intelligence, big data analytics, sensor technology, and drones has emerged as a major roadblock for this promising sector. The drastic decline of geodetic capacity in NGA (where there are only 2 Ph.D. geodesists), the DOD and the defense industry will undermine U.S. national security. One of the highest priorities for Missouri workforce training efforts should be to expand training capacity in this high-tech, high-growth area as quickly as possible. Missouri is best positioned to help solve this problem in a way nowhere else in the U.S. can through its strategic position in geospatial science.

### PROPOSED SOLUTION

Saint Louis University and the Taylor Geospatial Institute (TGI) intends to build the infrastructure that will enable the training of the region's geospatial and geodetic workforce at multiple levels, from undergraduate STEM and geospatial degree and credential programs to advanced professional development opportunities for the current geospatial workforce, focusing on the critical and under-resourced areas of geodesy and photogrammetry among others such as geospatial AI (GeoAI), drone technology, virtual reality/extended reality (VR/XR), and software engineering. We will accomplish this by (1) establishing a high-performance computing training lab with high-end graphical processing unit (GPU) machines, (2) developing VR/XR applications to teach foundational geospatial science, and (3) developing microcredentials in sensors, manned aircraft and drone data collection, geodesy, and photogrammetry, as well as traditional geospatial science degrees. We will recruit underrepresented students from Saint Louis University and our partner institutions, including Harris-Stowe State University, and our industry partners. The students will be connected to career advancement opportunities upon completing the training program.

# University of Health Sciences and Pharmacy in St. Louis

## Creating a Center for Equity in Health & Pharmacy Careers

### BACKGROUND

This proposal will address workforce needs in Missouri, with a focus on reaching and serving underrepresented minority (URM) students for careers in the Health Care Science & Services (HCSS) industry (e.g., health and pharmacy). According to the US Census Bureau, the total population in Missouri is comprised of 23% non-white citizens while only 15% of the workforce identifies as non-white (US Census Bureau, 2021; State of Missouri's Workforce Diversity, 2021). Having a workforce representative of the populations they serve is especially helpful to the HCSS industry. University of Health Sciences and Pharmacy in St. Louis (UHSP) proposes to create a Center for Equity in Health & Pharmacy Careers, as a pipeline program for URM students to secure employment in the HCSS industry. Training individuals in the technical competencies that represent the knowledge and skills needed for success in the HCSS industry is what UHSP does best and has been doing since 1864.

### PROPOSED SOLUTION

Our proposed solution is to build the Missouri workforce by using a transformative approach to developing the skills and competencies for success in HCSS careers, building upon UHSP's strengths in educating students for health and pharmacy careers. Further, UHSP will work towards recruiting URM students from where they are physically located, by developing partnerships with organizations such as the St. Louis Regional Business Council, high schools with high URM populations (e.g., Roosevelt High School, Bayless High School, Affton High School, Ritenour High School), and the International Institute of Saint Louis. This proposal uses a tiered approach to address workforce needs in Missouri, focusing on teenagers and young adults at various stages of their career trajectory. There are four primary objectives for this proposal: (Objective 1) Recruit URM students into the (a) pharmacy technician certification program (i.e., Pharm Tech); and (b) selected bachelor's degree programs; (Objective 2) Train and Credential URM students; (Objective 3) Provide support to URM students; and (Objective 4) Track employment trends of graduates over the next five years.

# Washington University in St. Louis

## Preparing and Credentialing Employees for Tomorrow (PACE for Tomorrow)

### BACKGROUND

We seek to address three overlapping regional problems: educational and income inequality, the 656,000 Missourians with some college but no degree, and training individuals to qualify for high demand high wage jobs.

Gaps in educational attainment exist in marginalized populations, with 38% White to 20% Black, Bachelor's degree attainment. This disparity aligns with median household income: household income for marginalized populations is 52% lower than White population (American Community Survey, 2016-2020). For formerly incarcerated people, education and income inequalities are magnified by gaps in educational support and employment opportunities. In addition, lack of social capital and access to professional networks threatens to increase the gap and future earnings (Chetty, 2022).

Many Missourians have made educational progress but have not earned their degree. A lack of degree impedes one's ability to advance in their profession. Adult learners who attend college for work outcomes are more likely to graduate if they connect their credentials with a job. In order to promote completion we must design to maximize credit transfer and accept credit for prior learning. We must also develop learners who are both well-rounded and adaptable to change in the workforce as outlined in the state's Occupational Projections.

### PROPOSED SOLUTION

We propose a new approach to provide nimble and current training and educational opportunities for adult learners by developing a Bachelor of Science in Integrated Studies (BSIS) and associated AA degree that combine self-standing, workforce-aligned certificates in data, health, and management with liberal arts study. These degrees will (1) prepare workers with skills needed for immediate employment, (2) develop higher-order skills necessary for career advancement and jobs of the future, (3) emphasize the application of learning, and (4) build a professional network.

With a flexible timeline and transfer credit up to 75% for the degree, graduation is attainable and affordable. The BSIS awards credit for prior learning in free local programs such as Launchcode or online certifications. We will meet adults where they are and help them achieve their goals, whether that is a certificate that leads to immediate employment or completion of a degree that leads to long-term advancement and professional adaptability. Ongoing coaching supports students, making them continual learners. Our students will be connected to St. Louis business and nonprofits, including a required community-based course in which students participate in a project serving in the community. An evaluation plan will be developed, so UCollege can assess its impact.

# Webster University

## The Impact Center

### BACKGROUND

The pace of technological change in industry and business presents a challenge to the academy, which needs new sources of information and nimbler curriculum design processes to keep pace. Secondly, while metro-located businesses report shortages of skilled labor, small towns and rural areas are increasingly underserved for both higher education and job opportunities. We see these challenges as opportunities.

The process by which higher education (HE) develops and redesigns academic curriculum is cumbersome and often disconnected from contemporary industry needs, severely limiting students' exposure to cutting-edge skills and technologies and opportunities to practice applying them in ways useful for future careers, constraining the qualified applicant pool. Indeed, over two-thirds of St. Louis-area businesses indicate that a shortage of skilled workers limited their ability to expand employment opportunities.

24% of the US population lives in "low-growth/rural areas," with higher unemployment and lower educational attainment than elsewhere. Many first-generation college students come from rural areas, and as such encounter additional cultural challenges in higher education access and retention. There is a dearth of information about rural Midwestern students. Increasingly deliberate efforts are needed to understand how HE can move away from traditional practices to promote college-going and college "fit" among this population.

### PROPOSED SOLUTION

Support from this grant will allow Webster University (WU) to achieve near-term and longer-term objectives. Most immediately, funding will help launch the proposed Impact Center (IC) to deploy institutional student employment funds and other resources to support students selected for specific high-impact practice (HIP) opportunities for the purpose of skills training for in-demand jobs in the knowledge economy. Building deliberate opportunities integrating mentored, rigorous training and practice of specific skills within HIPs will help prepare students to compete in today's workforce.

Next, the proposed activities build on existing strengths at WU and in the School of Communications in particular, as we seek to integrate rapid, industry-driven development of new credentials and significant investment in cutting-edge technologies – including an innovative LED Video Wall and Virtual Cinema system – into labs and studios. Lessons learned through 7+ years of NSF S-STEM grants for the recruitment and support of underrepresented students completing STEM bachelor's degrees will be expanded and refined to broaden the population of students we serve to engage rural and other Missourians from underrepresented communities. Ongoing assessment and refinement will further institutionalize this work, leading to a dynamic, integrated series of campus-wide programs that multiply and extend these benefits to other programs.

# Webster University

## Building the Education Workforce through Simulation Technology (BEWST)

### BACKGROUND

Many well-publicized stories of – and empirical data on - local, regional, and statewide shortages of educators highlight a clear need to rapidly and creatively develop strategies for recruitment, training, and retention of qualified teachers in order to strategically build back our teacher ranks. Notably, the shrinking pool of prepared, experienced teachers nationwide is magnified for rural and other underserved student populations. Rural, urban, underrepresented, and/or financially disadvantaged students are often disproportionately impacted by teacher vacancies and report difficulty recruiting and retaining qualified educators. Further, teaching has increased in its complexity since the pandemic, requiring pedagogical approaches that provide teachers with opportunities to practice crucial skills.

One promising strategy to address this challenge involves "Grow Your Own" (GYO) programs, which aim to recruit, educate, and train high school students who are interested in becoming teachers, and ultimately hire them to work in their home districts.

A second avenue is additional training and support for new or provisionally- certified teachers in the field. For both preservice populations, early opportunities to gain experience in realistic, safe, and reflective contexts allow them to make better-informed decisions about entering the field, which is key to career perseverance and long-term success in teaching.

### PROPOSED SOLUTION

Simulation software is increasing in fields such as teacher preparation, health care, and leadership. Simulation provides realistic, iterative experiences and practice, offering teachers the chance to build skills and grow in their efficacy, which guards against attrition. In 2020-2021, Webster piloted Mursion simulation software to help replace the in-person classroom experiences students missed during lockdown. Over the course of this radical redesign, Mursion's technical features proved especially influential in supporting students' skill development and reflection. Students benefitted from the opportunity to adapt lessons for different teaching situations and unexpected student responses. This unique approach to design, implementation, and practice developed students' abilities to plan instruction flexibly and shift quickly in the moment to meet the demands - or limitations - of the instructional environment and the unique needs of students.

We will procure a site license for Mursion software to provide immersive and robust teaching simulation to preservice and in-service teachers from rural, urban, financially disadvantaged, and underrepresented populations, as well as BA and MAT students preparing to work in these settings. Mursion simulation software can assist these individuals in exploring and developing crucial skills in a realistic space, while allowing for rich and dynamic feedback, reflection, and practice.

# Westminster College

## Westminster Online

### BACKGROUND

In the United States, there were 39 million people in the 2020-2021 academic year who had earned some college credit but had not completed their degrees. They are referred to as the Some College, No Credential (SCNC) population. In Missouri, the SCNC population is 655,908 individuals. Most of this population is older than 24 years of age. The lifestyle of these individuals does not accommodate the traditional college experience of attending in-person classes full-time and living on campus.

SCNC population in surrounding states and target markets for Westminster College are:

Illinois: 1,892,039

Kansas: 381,941

Arkansas: 304,513

Iowa: 304, 513

Oklahoma: 403,289

Texas: 2,501,802

In 2020, most active-duty U.S. Armed Forces personnel did not have a college degree. In that year, there were 891,790 United States Armed Forces personnel who had at least earned a high school diploma but did not have a bachelor's degree.

Military service members in all branches must possess a bachelor's degree to become an officer. Currently serving military personnel are likely to seek online degree programs to advance ranks within the military. Military veterans are likely to use online degree programs either to return to civilian life or advance in their civilian careers.

### PROPOSED SOLUTION

In the Fall 2022, Westminster College launched Westminster Online to provide accelerated and flexible bachelor's degree options to the SCNC and military populations. Westminster Online currently offers three bachelors of arts programs with more programs to be launched in the coming years. Westminster Online targets adult learners, which is a new market for Westminster College.

Westminster Online programs are designed to be flexible and convenient for busy, working adults. Courses run in 7-week sessions, allowing students to move through the program at a faster pace. Our program allows students to skip a 7-week session, without penalty, when they must focus on other priorities.

The college researched specific degrees that are in high demand in the regional market according to interest, employment forecast, competition, and reputation. Westminster ranked the top programs according to internal strength and ease of transition to an online modality. The programs that were deemed most attractive and feasible to transition to an accelerated, online format were:

- Business Administration, concentration in Management, minor in Organizational Leadership
- Organizational Leadership, minor in Business Administration
- Psychology, minor in Organizational Leadership

# **William Woods University**

## **Project CLEAR (Creating Leadership & Entrepreneurship Action & Response)**

### **BACKGROUND**

We are in a period of rapid globalization and change. Increasing and ever-changing demands are being placed on social and economic systems in Missouri, the United States, and worldwide. The challenges have been further exacerbated by the COVID-19 global pandemic. Specifically, the pandemic has threatened the individual and collective economic livelihoods of those living in Missouri, noting that Hispanic and Black families with childcare interruptions reported lost employment income at higher rates (MDHEWD, 2020). Further, the Missouri Chamber of Commerce and Industry reports only 44 percent of Missouri business owners are satisfied with the state's availability of skilled workers citing weaknesses in the state's ability to prepare, attract and retain workers (MCCI, 2022a). This is further exasperated by the need for social infrastructure and people management positions to meet the workforce needs of Missouri in 2030 (MERIC, 2022b) and the need to reduce Missouri's failure rate of new businesses, which currently rests below the national average (MERIC, 2022a). The call to action is clear, Missouri must improve the education system at all levels and integrate the skills needed by businesses into every curriculum (Missouri Chamber of Commerce and Industry, 2022).

### **PROPOSED SOLUTION**

Project CLEAR (Creating Leadership & Entrepreneurship Action & Response) is a new solution based on a proven approach cultivating leadership and entrepreneurial capacity to address the economic and workforce challenges of Missouri and beyond. Project CLEAR includes three pillars.

P1. Academic Innovation is composed of the Entrepreneurial Leadership & Change Certificate, a 12-credit hour undergraduate certificate open to all undergraduate students at William Woods University, and the Community Leadership & Entrepreneurship Certificate (CLEC), a five-session program offered one weekend a month for 5 months for community members who have entrepreneurial ideas, but lack the focus, leadership, and/or business acumen to launch the initiative.

P2. Programmatic Integration focuses on high-level experiential learning that connects students, local, regional, and state business leaders, community members, and policymakers to interact and discuss the complex challenges facing our world locally, throughout the state of Missouri, nationally, and internationally.

P1. Outreach & Scope develops partnerships with industry leaders that lead to authentic experiences that contextualize complex problems for our student and community learners and allow for the development and presentation of innovative solutions with far-reaching implications for Missouri and beyond.