



# Coordinating Board for Higher Education

October 22, 2019

Teleconference

Call-in option: (646) 876-9923

Access Code: 341-092-625

Join by Video: <https://zoom.us/j/341092625>



## COORDINATING BOARD FOR HIGHER EDUCATION

October 22, 2019 | 8:30-11:30 a.m.

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## MEETING AGENDA

### 1. General Business

#### a. Action

- i. Call to Order
- ii. Roll Call of Members and Determination of Quorum

#### b. Information

- i. Chair's Appointment of a Nominating Committee for CBHE Officers (Tab 1)

### 2. Budget and Financial Aid Committee

#### a. Information

- i. FY 2021 MoExcels Recommendations (Tab 2)

1. Harris-Stowe State University	8:40-8:50 a.m.
2. Jefferson College	8:50-9:00 a.m.
3. Metropolitan Community College	9:00-9:10 a.m.
4. Mineral Area College	9:10-9:20 a.m.
5. Missouri Southern State University	9:20-9:30 a.m.
6. State Fair Community College	9:30-9:40 a.m.
7. Missouri State University	9:40-9:50 a.m.
8. Missouri University of Science & Technology	9:50-10:00 a.m.
9. Moberly Area Community College	10:00-10:10 a.m.
10. Ozarks Technical Community College	10:10-10:20 a.m.
11. St. Charles Community College	10:20-10:30 a.m.
12. Truman State University	10:30-10:40 a.m.
13. University of Central Missouri	10:40-10:50 a.m.
14. University of Missouri System	10:50-11:00 a.m.
15. University of Missouri-Columbia	11:00-11:10 a.m.
16. University of Missouri-St. Louis	11:10-11:20 a.m.
17. Southeast Missouri State University	11:20-11:30 a.m.

### 3. General Business

#### a. Action

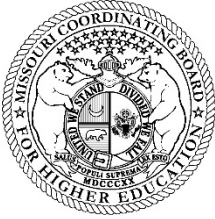
- i. Adjourn Public Session of the Coordinating Board for Higher Education

*Items identified above as "information" are based on reasonable pre-meeting expectations. All items listed on the agenda may be the subject of discussion and/or votes.*

*It is the policy of the Coordinating Board for Higher Education that all public meetings and events are accessible to people with disabilities. Individuals needing special accommodations relating to a disability should contact Alyssa McLeod at the Missouri Department of Higher Education, 205 Jefferson Street, P. O. Box 1469, Jefferson City, MO 65109, by emailing [Alyssa.McLeod@dhewd.mo.gov](mailto:Alyssa.McLeod@dhewd.mo.gov) or by calling (573) 751-1876.*

*For media inquiries, please contact Becky Dunn at [Becky.Dunn@dhewd.mo.gov](mailto:Becky.Dunn@dhewd.mo.gov).*

*Posted: October 16, 2019*



Tab 1

## Chair's Appointment of a Nominating Committee for CBHE Officers

Coordinating Board for Higher Education  
October 22, 2019

### BACKGROUND

Article III of the Coordinating Board for Higher Education Bylaws provides:

- 1) The officers of the Board shall be Chair, Vice Chair, and Secretary. They shall be elected by the Board from its own membership. The officers shall perform the duties prescribed by the Missouri Revised Statutes, these bylaws, and as may be prescribed by the Board. The duties of each position are as follows:
  - a. **Chair.** The Chair of the Board shall preside at all meetings of the Board and shall be the spokesperson for the Board and shall perform such duties as may be prescribed by the Missouri Revised Statutes and by the Board. The Chair shall appoint the members of any committee established pursuant to these bylaws and shall name the Chair of each such committee.
  - b. **Vice Chair.** In the event of the absence of the Chair, the Vice Chair shall serve as Chair of the Board and perform all the duties of the Chair. The Vice Chair shall perform such other duties as prescribed by the Missouri Revised Statutes and by the Board.
  - c. **Secretary.** The Secretary of the Board shall take minutes of any executive session of the board and shall perform other duties as prescribed the Missouri Revised Statutes and by the Board.
- 2) A nominating committee of three members shall be appointed by the Chair. It shall be the duty of this Committee to nominate candidates for the offices to be filled by election at the regular meeting immediately prior to December 31. Before the election at the regular meeting in December, following the report of the Nominating Committee, additional nominations from the floor shall be permitted. Officers' terms shall begin at the close of the regular December meeting, and officers shall serve for a period of one year and until their successors are elected and qualified.
- 3) No member shall hold more than one office at a time. No member shall be eligible to serve more than two consecutive terms in the same office, unless a member makes a motion that another member be permitted to serve more than two consecutive terms in the same office and the motion is approved by at least a two-thirds vote. No member shall be permitted to serve more than four consecutive terms in the same office under any circumstances.

Recent CBHE officers include:

Year	Chair	Vice Chair	Secretary
2019	Doug Kennedy	Mike Thomson	Joe Cornelison
2018	Doug Kennedy	Mike Thomson	Samuel Murphey
2017	Carolyn Mahoney	Doug Kennedy	Mike Thomson
2016	Brian Fogle	Carolyn Mahoney	Doug Kennedy

### CURRENT STATUS

The CBHE bylaws provide that the CBHE chair shall appoint a nominating committee of three members. Current CBHE chair Doug Kennedy has indicated that he will appoint Mike Thomson, Shawn Saale, and Joe Cornelison to the nominating committee.

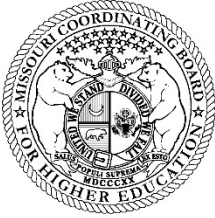
## **NEXT STEPS**

The nominating committee should nominate a slate of members to serve as Chair, Vice Chair, and Secretary for the CBHE to vote on at the December meeting. After the report of the nominating committee at the December CBHE meeting, but before the election of the new officers, additional nominations from the floor will be permitted.

## **RECOMMENDATION**

Staff recommends the nominating committee meet prior to the December CBHE meeting to make nominations.

## **NO ATTACHMENTS**



Tab 2

## FY 2021 MoExcels Recommendations

Coordinating Board for Higher Education  
October 22, 2019

### BACKGROUND

The MoExcels initiative facilitates development and expansion of employer-driven education and training programs to substantially increase educational attainment in Missouri. In FY 2020, institutions submitted 39 proposals requesting a total of \$74.8 million in state funds. For FY 2021, institutions submitted 24 requests for new funds and two requests for continued funding from FY 2020.

### CURRENT STATUS

Staff reviewed the proposals and ranked them using the attached rubric, which was included in the March 2019 board book in draft form, distributed to institutions along with proposal instructions, and posted online. Staff reviewed rankings with the Commissioner, who followed up with institutions to seek additional information, clarify proposals, and propose modifications to the proposal. At the conclusion of that process, staff revisited the proposals and made adjustments to reflect the additional information/changes. The attached ranked list is the product of those processes.

### RECOMMENDATION

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

### ATTACHMENTS

- A. FY 2021 MoExcels Rubric
- B. FY 2021 MoExcels Request for Proposals
- C. FY 2021 MoExcels Recommendations
- D. FY 2021 MoExcels Proposal Summaries

# 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	7	
Proposal provides a credible plan for substantially addressing the current and future labor market demand	8	
Proposal identifies geographic area(s) in which program completers are likely to work and those areas are primarily in Missouri	10	
Proposal is supported by statements of need from employers and other partners in the area to be served that express real need and commitment	10	
Proposal aligns with long-term local, regional, and/or statewide strategic plan for economic development	5	
Proposal offers an opportunity to develop a "center of excellence" in the state or region and a well-considered plan to do so	8	
Proposal includes a detailed, realistic timeline	10	
Proposal includes a detailed, realistic budget	5	
Proposal includes a funding match of at least 50%	5	
Proposal articulates a plan by which funded activities will have a sustained impact after the funding period ends	5	
Proposal is well-written, follows the format requested, and reflects substantial thought and planning	8	
<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	3	
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	3	
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	3	
<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>	



# MoExcels

## FY 2021 Request for Funding Proposals

The Missouri Department of Higher Education is pleased to provide the MoExcels Request for Proposals (RFP). We look forward to receiving your submissions. Please send questions and submissions to Allyssa Miget at [Allyssa.Miget@ded.mo.gov](mailto:Allyssa.Miget@ded.mo.gov).

### General Information

**Purpose.** MoExcels funding will facilitate development and expansion of employer-driven education and training programs. Funding recommended through MoExcels, if appropriated, will be available for a single fiscal year. If full funding of a project requires a multi-year phase-in, each year's funding should stand on its own in the event that funds are not appropriated in subsequent years. A core funding increase may be requested after the third year in which a funded project achieves its performance goals.

**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, and public universities, may submit proposals.

**Allowable Activities.** Funds appropriated through MoExcels may be used for professional and curriculum development, renovation of classroom space, the purchase of equipment, and other purposes approved in writing by the Department of Higher Education by July 20, 2019. Funds may not be used to pay students' tuition, fees, or other expenses.

**Match.** All proposals must include a match to cover a substantial portion of the cost of the new or expanded program, with a match of at least half being strongly preferred. 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, or a federal agency.

**Performance and Project Reporting.** Funding recipients must report on performance on October 30, January 30, April 30, and June 30 annually until the program has achieved its objectives.

### Proposal Requirements

Applicants must complete the MoExcels Application Form.

## **Timeline**

- May 1: Call for proposals issued
- July 20: Deadline to request approval to request funding for expenses other than professional and curriculum development, renovation of classroom space, and the purchase of equipment
- August 1: Deadline to submit proposals
- September 4: Ten highest-scored projects present to business leaders and chair of CBHE Budget and Financial Aid Committee
- September 11: Recommendations presented to the Coordinating Board for Higher Education

## **Review and Award Process**

Proposals will be scored by staff from agencies that comprise the Governor's Subcommittee on Workforce Development. Staff will score proposals based on a standardized rubric.

A review committee consisting of the Director of Economic Development, the Commissioner of Higher Education, business and industry representatives, and the chair of the CBHE's Budget and Financial Aid Committee will review the ten highest-ranked proposals, including a presentation by the proponents of each such proposal. That group may adjust the order of ranking to develop a balanced portfolio of recommendations in terms of any or all of the following: quality of proposal, economic sectors being trained for, project duration, magnitude of impact, geographic distribution of funds, and any other factor deemed relevant.

The review committee's recommendations will be conveyed to the Coordinating Board for Higher Education, which will make final ranking and funding recommendations.

## **Funding**

The Department of Higher Education 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.

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



# FY 2021 MoExcels Recommendations

For CBHE review 10/22/2019

Rank	Institution	State Request	Project	Got \$ in FY 20	Running Total
1+	Ozarks Technical Community College	\$ 2,500,000	Continuation of last year's proposal; project total is \$10m; next year we would recommend final \$2.5m -- manufacturing	Y	\$ 2,500,000
1+	Harris-Stowe State University	\$ 83,903	Continuation of last year's proposal; would leave one more year of \$83,903 then we would consider proposal to increase core -- alternative teacher certification	Y	\$ 2,583,903
1	University of Central Missouri	\$ 405,000	Allied health	Y	\$ 2,988,903
2	Missouri Southern State University	\$ 231,945	Autism services	Y	\$ 3,220,848
3	State Fair Community College	\$ 2,401,705	Manufacturing -- total request is \$4.8m; this would be first half of funding and next year we would recommend final \$2.4m	Y	\$ 5,622,553
4	University of Missouri-St. Louis	\$ 1,500,000	Nursing	N	\$ 7,122,553
5	Missouri State University	\$ 1,795,600	Cybersecurity	Y	\$ 8,918,153
6	Jefferson College	\$ 110,000	Vet tech	N	\$ 9,028,153
7	Truman State University	\$ 40,000	Autism services	Y	\$ 9,068,153
8	St. Charles Community College	\$ 2,200,000	Manufacturing and logistics -- recommendation is contingent on voter approval to join community college district in November	Y	\$ 11,268,153
9	Mineral Area College	\$ 624,500	Manufacturing and building trades	N	\$ 11,892,653
10	Metropolitan Community College	\$ 3,007,496	Manufacturing -- funding is contingent on MCC securing bonds or donor commitments AND purchase of property; total request is \$9m, funding would be recommended over 3 years	N	\$ 14,900,149
11	University of Missouri-Columbia	\$ 2,566,684	Clinical service engineering	N	\$ 17,466,833
12	Moberly Area Community College	\$ 210,000	Nursing in Columbia and Hannibal	Y	\$ 17,676,833
13	Missouri University of Science & Technology	\$ 380,766	Teacher prep	N	\$ 18,057,599
<b>CBHE Recommended amount for FY 21 (same as TAFP budget for FY 20)</b>					<b>\$ 18,915,975</b>
14	University of Missouri System	\$ 1,812,477	Business, health sciences, IT, criminal justice, cybersecurity, and business -- massive online expansion -- faculty	N	\$ 19,870,076
15	Southeast Missouri State University	\$ 1,961,308	Cybersecurity; total request is \$3.9m; this would be first half of funding and next year we would recommend final \$1.9m	N	\$ 21,831,384
16	University of Missouri System	\$ 1,289,400	Business, health sciences, IT, criminal justice, cybersecurity, and business -- massive online expansion -- student systems		\$ 23,120,784
17	Harris-Stowe State University	\$ 45,902	Entrepreneurship	Y	\$ 23,166,686
18	State Technical College of Missouri	\$ 4,000,000	Industrial electricity, welding, biomedical engineering, engineering technology, computer app development	Y	\$ 27,166,686
19	St. Louis Community College	\$ 1,064,510	IT	Y	\$ 28,231,196
20	Missouri State University-West Plains	\$ 126,000	Welding	N	\$ 28,357,196
21	Northwest Missouri State University	\$ 470,983	Cybersecurity	Y	\$ 28,828,179
22	Three Rivers College	\$ 295,150	Construction	N	\$ 29,123,329
23	East Central College	\$ 344,360	Adult education	N	\$ 29,467,689
24	Crowder College	\$ 2,500,000	Truck driving	Y	\$ 31,967,689
25	Northwest Missouri State University	\$ 73,200	Emergency management	Y	\$ 32,040,889
26	Northwest Missouri State University	\$ 5,760,000	Agriculture	Y	\$ 37,800,889



# Harris-Stowe State University Teacher Education Certification

Coordinating Board for Higher Education  
October 22, 2019

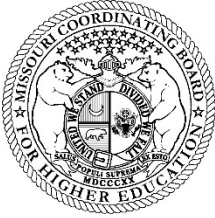
## BACKGROUND

HSSU is proposing a one year on-campus or online certification program to address the growing and urgent need to provide more qualified, certified elementary, middle and secondary teachers in districts across the State of Missouri.

## PROPOSED SOLUTION

The University has a 162 year tradition of successfully preparing a diverse population of educators. This certification program will offer an opportunity for training 20 fully certified teachers who will be highly skilled and possess the knowledge, skills, and culturally responsive pedagogy necessary to be successful within the classroom context. The HSSU program will support non-teacher education majors, recent graduates seeking certification, and career changers interested in becoming classroom teachers. The HSSU program will accomplish this by addressing the following three key components:

1. Recruiting individuals with Bachelor's degrees into the teaching field;
2. Ensuring support for scholars through mentoring, professional development, and internship opportunities;
3. Engaging participants in formal and informal teaching experiences.



## **Jefferson College**

# **Jefferson College Veterinary Technology Renovations**

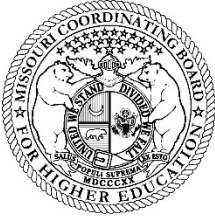
Coordinating Board for Higher Education  
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### **BACKGROUND**

There is a clearly expressed shortage of veterinary technicians in Missouri and nationwide. With the recent closure of multiple proprietary programs in the St. Louis area, this problem has been significantly exacerbated. Jefferson College's Veterinary Technology Program has been in existence since 1976 producing its first graduating class in 1978. Jefferson College has the only not-for-profit Veterinary Technology Program in southeast Missouri with the next closest program greater than 250 miles away. The current facilities for our program are at capacity and unable to support an expansion of the admitted cohort size. While the current facilities that house our Veterinary Technology Program have been maintained, there have been no significant renovations or facility expansions in the 40 plus year history. Our goal for seeking these funds is to increase the capacity of the Veterinary Technology Program to expand its admitted cohort size and to advance persistence initiatives in an effort to increase the number of technicians to meet acute and long-term worker shortages. We have a proposal that can break ground on July 1, 2020 and admit an expanded cohort that fall to create more veterinary technicians to help fill the job vacancies in St. Louis, Jefferson County and Southeast Missouri.

### **PROPOSED SOLUTION**

Our proposed solution is to address the limitations in our current facility infrastructure to increase in admitted cohort size from 36 to 48 per year to create more workers for existing jobs that remain unfilled. The Program will also address the traditional 30% attrition rate through persistence initiatives gleaned through exit discussions and graduation surveys. Jefferson College has, to the best of our knowledge, the only Veterinary Technology program in the state with larger animals on campus. This positions our program to work with those technicians that work in rural markets and help with treatment of large animals. We need to expand Room 139 in the Career and Technical Education building to seat 48 as we do not have the space to meet the didactic needs of our students in a computer classroom environment. The first cohort of 48 would be admitted in fall of 2020 (graduation date May, 2022). If Jefferson College is successful in gaining additional funding from MoExcels and other sources, the program will examine the potential of adding a second cohort, increasing to a maximum of 72 admitted per year. The potential of an additional 36 graduates per year would significantly impact the regional shortage.



# Metropolitan Community College MCC Advanced Manufacturing Institute

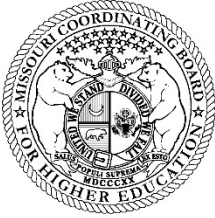
Coordinating Board for Higher Education  
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## BACKGROUND

The Kansas City region has opportunities for economic and workforce development. According to "Talent for Tomorrow Kansas City Regional Meeting" materials, "the Kansas City Region is expected to have nearly 50,000 total job openings between 2014 and 2024, including openings created by new job growth and the need for replacement workers" [based on MERIC Occupational Projections 2014-2024]. By 2027, 73% of jobs in Kansas City will require a postsecondary credential or degree. [Education Asset Inventory for Greater Kansas City October 2017]. Construction, Manufacturing, Utilities, and Transportation & Warehousing comprise 18.6% of Kansas City's industry sectors. The 5-year forecast for those industries shows .9% annual growth rate. As well, Kansas City occupations typically needing a 2-year degree or certificate are expected to grow .9% per year [JobsEQ Economic Overview Kansas City MSA September 15, 2019]. According to the Economic Overview of the Kansas City Metropolitan Statistical Area (MSA), a demographic profile of Educational Attainment for ages 25-64 shows 54.4% of the population is represented as No High School Diploma through Some College/No Degree. The formation of the Advanced Manufacturing Institute responds by providing communities access to increased educational attainment and economic and workforce opportunity

## PROPOSED SOLUTION

Metropolitan Community College is progressing forward with the Advanced Manufacturing Institute. It has been determined via a program study and a facilities analysis that the MCC Business and Technology (MCC BT) campus that houses the career and technical (CTE) programs is not a viable option for a manufacturing institute. The cost to renovate and bring the facility up to code is cost-prohibitive. Upon this discovery, MCC has formulated a plan to establish a state-of-the-art manufacturing institute by relocating some programs at the Business and Technology Campus to 2944 Troost Avenue ("Troost") in Kansas City. MCC has confirmed a sale price for the Troost property, and with this accepted offer, renovations will be required. Between FY 2013 and 2018, MCC posted 1,481 graduates (completers) with certificates or Associate of Applied Science degrees related to the manufacturing industry. Using this historical data and a conservative growth of 20% each year, the Advanced Manufacturing Institute is expected to graduate (completers) 1,041 new completers with credit certificates or Associate of Applied Science degrees by year five, and a total of 3,097 new completers over five years (that number grows to 3,595 if we include the 2020 completers).



# Mineral Area Community College Center for Excellence in Career and Technical Education

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

Employers in the Mineral Area College service area have expressed a dire need for skilled employees in the areas of welding and building trades. The situation has escalated to the point that some businesses have scaled back operations and others are turning away customers because they lack the trained personnel to carry out the work. Another local employer, Lee Mechanical, has started its own training program in an attempt to supply themselves with welders, an endeavor they would gladly relinquish.

Additionally, the Mineral Area Training Consortium which consists of 18 area manufacturers is alarmed by the dearth of qualified technicians that possesses the range of technical skills, particularly in welding, that they require. This is compounded by the knowledge that the majority of their technicians are nearing retirement.

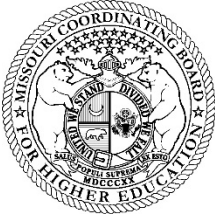
Finally, local and regional employers as well as high school administrators approached the college several years ago with a proposal for transitioning one of the region's career and technical centers to the direction and oversight of the college. They cited antiquated equipment, non-responsive programming, and a lack of qualified completers entering the workforce as primary concerns. Funding for an adequate facility and equipment have prevented the college from resolving this long-standing issue.

## PROPOSED SOLUTION

Mineral Area College (MAC) seeks to establish a Center for Excellence in Career and Technical Education on its Park Hills campus located 60 miles south of St. Louis and 85 miles north of Cape Girardeau. In the first phase of construction, a facility to meet the immediate needs of local employers for welders and plumbing, electrical and HVAC tradesmen will be constructed.

The college will complete construction in the first year of the project and will begin its first classes upon completion of the facility. Currently, MAC does not produce completers in the proposed programs, so the contributions toward closing the skill gap will be significant. The Center anticipates enrolling 24 welding students in the first year, along with 8 electrical, HVAC and plumbing technicians. The numbers for building trades is expected to increase to 30 students by 2023 as the college increases its recruitment of high school students.

Employer partners have already committed to provide some equipment and will provide supervised internships. The college has been approved to solicit CDBG and NAP funding through the Workforce Development Training Initiative. These funds will assist with construction and equipment costs for the 5,000 square foot welding portion of the project.



# Missouri Southern State University Southwest Missouri Center for Applied Behavior Analysis

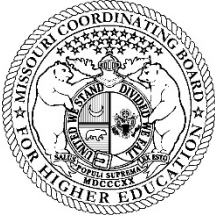
Coordinating Board for Higher Education  
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## BACKGROUND

According to the CDC (2018), about 1 in 59 children in the state of Missouri are identified as having autism spectrum disorder (ASD); yet, a staggering 68% of these children do not receive comprehensive developmental assessments by the age of three. One contributing factor to these deficits lies in an inadequate number of individuals trained to assess and treat individuals with ASD. Applied Behavior Analysis (ABA) is the most researched and effective treatment for ASD, as well as other developmental and behavioral issues. Across most states, including Missouri, medical insurances require that treatment be provided by practitioners that are board-certified behavior analysts which has led to a 1,000+ percent increase in demand for individuals holding certification from 2010 to 2018. There are many effective organizations in Southwest Missouri that are actively attempting to meet the needs of individuals with ASD, but families still struggle to find and obtain resources, which is demonstrated by agencies having 500+ individuals on multiple-year long waitlists. Early detection and treatment is but one concern; there is an accelerating need in our community for a streamlined and collaborative effort to meet the developmental, social, academic, and employment needs of individuals with ASD.

## PROPOSED SOLUTION

The solution is to create a center of excellence in Southwest Missouri that uses community partnerships to implement early-intervention coordinated efforts to meet the needs of individuals with ASD. This will begin with providing the educational opportunities for individuals to earn a Registered Behavior Technician (RBT) credential, an Applied Behavior Analysis Certificate, and/or a baccalaureate degree in Applied Behavior Analysis (BCaBA credential). The credentials and degree would help meet the shortfall of human capital necessary to handle the growing number of individuals in need of board-certified practitioners to provide assessments and treatment. The complementary component will involve creating a facility wherein ABA training and treatment can be provided in collaboration with community partners. This facility will serve to create a broader networking connection within the community. By extensively collaborating with community members, we will create a unified center to connect all stakeholders and effectively provide the resources necessary for individuals with ASD throughout their lifetime.



## **State Fair Community College Center for Excellence in Advanced Manufacturing & Automation Training**

Coordinating Board for Higher Education  
October 22, 2019

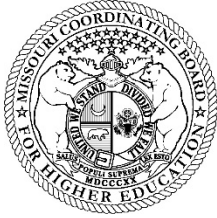
### **BACKGROUND**

Currently, industry and manufacturing has identified access to highly trained and skilled workers as a concern, especially in specific advanced manufacturing and automation areas that are not readily available in rural Missouri locations. With Missouri unemployment currently at 3.3%, fewer people are seeking employment, thereby shrinking the number of available workers even further. Economic Leadership (a firm involved with the Missouri Chamber of Commerce Workforce 2030 report), reports that in Missouri, "the ability to attract the types of workers with the right sets of skills is an acute problem. The pool is not big enough, and we don't have enough people." Access to workers trained in Advanced Manufacturing and Automation has become a significant barrier to workforce and economic expansion in the central Missouri geographic area. Companies are willing to invest financially to train and/or "up-skill" current employees, but this often results in shutting down a portion of the facility to facilitate this type of training reducing productivity. An accessible space for local industry to install their own equipment is not available in the central Missouri area.

### **PROPOSED SOLUTION**

"State Fair Community College (SFCC) will remodel existing space to create a Center for Excellence in Advanced Manufacturing and Automation Training at the main campus in Sedalia, Missouri. By expanding dedicated space and purchasing new equipment, this center will be a focal point for providing both students, and those already employed, high-quality training and certification using state-of-the-art technology and equipment.

New training and certification opportunities will be created in such in-demand fields as Robotics; Welding; Climate, Energy and Refrigeration Control Technology; Machining; and Certified Production Technicians. We will work in coordination with other programs at SFCC, including the funded Missouri Apprenticeships in Manufacturing Programs (MoAMP). Through these opportunities, we will provide industry and manufacturing partners in central Missouri with more highly skilled graduates and we will provide them customized training opportunities to up-skill their current workforce using the Center's equipment or space in the Center for their own equipment. As part of the Center for Excellence in Advanced Manufacturing and Automation Training, we will guarantee completers a valid job offer, we will recruit additional prospective workers and place them in local industry. Through this project, we will increase the supply of trained workers in specialized Advanced Manufacturing, Automation and Robotics."



# Missouri State University IDEA Commons Applied Learning Expansion

Coordinating Board for Higher Education  
October 22, 2019

## **BACKGROUND**

The Ozark region and the State of Missouri need workforce training in cybersecurity. This need is well supported by economic data and communications with employers throughout the region and the state. Employers and students also express the need for this training to be highly experiential-intertwined with internship, practicum and apprenticeship opportunities early and often throughout their educational pathway. Moreover, the modern economy requires that individuals already participating in the workforce have options available to "skill up" with credentials and non-credit programs to obtain new, relevant training as the needs of the economy change.

## **PROPOSED SOLUTION**

MSU operates economic development assets in IDEA Commons, an innovation district in downtown Springfield. One such asset is the Roy D. Blunt Jordan Valley Innovation Center (JVIC), a high tech applied research facility that bridges university research with business-tenants that develop commercial applications. MSU will leverage existing plans to expand JVIC to imbed a collaborative cybersecurity training program in JVIC and intertwine the education provided with the applied research that occurs at JVIC. The training program, called the Missouri Cybersecurity Center of Excellence (CCoE), will be a collaboration between multiple Springfield-area employers and higher education institutions. At full implementation, CCoE will generate 160 industry-recognized credentials each year to traditional and non-traditional students.





# Missouri State University of Science and Technology Teacher Prep Program Expansion and Center for Educational Excellence in STEM

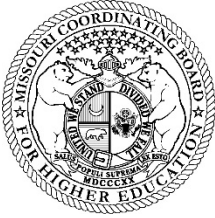
Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

Students who pursue STEM-based degrees and, later, STEM-focused careers are typically inspired by a meaningful educational experience or an inspiring teacher during elementary, middle, or high school. Yet, across Missouri but particularly in rural areas, school districts struggle to recruit fully credentialed STEM-focused teachers. Alarming, DESE identified over 300 elementary teaching positions that were left vacant or filled with unqualified candidates this past year, and over 600 such positions in middle and high school STEM fields. This need for inspiring, well-qualified STEM teachers is predicted to grow significantly in the next decade. Compounding the problem is the fact that Missouri offers too few post-baccalaureate alternative certification degree to create pathways for STEM professionals who want to transition into a teaching career. In addition, few innovative partnerships with school districts and institutions of higher education exist to promote STEM education as a career path, and Missouri teachers, especially rural teachers, lack access to the technology-rich equipment and training that will help them nurture their students' burgeoning interests in STEM topics. Missouri workforce development initiatives must focus on training teachers, who, over the course of a career, can positively influence thousands of individual students through exciting and innovative engagement with STEM curricula.

## PROPOSED SOLUTION

Missouri S&T is uniquely poised to offer high-impact expertise and resources for STEM educators, and its central location makes it an ideal hub for connecting with rural school districts. Developing an interactive Center for Educational Excellence in STEM, by renovating classroom space, purchasing equipment, and redirecting effort of existing and soon-to-be-hired faculty, will allow Missouri S&T to provide high-quality STEM experiences to Missouri teachers and to K-12 students, especially rural students in south central Missouri. The Center's goals will include (1) recruiting rural high school students into STEM majors and STEM-focused teacher education programs; (2) enhancing the training of currently enrolled teacher education students; (3) offering training and resources to practicing Missouri teachers; (4) developing an alternative certification, 18-month post-baccalaureate program focused on middle school and secondary STEM teacher credentialing, using blended and evening delivery; (5) and creating a teacher education program at Missouri S&T focused on STEM education in middle school – an important and unmet need in Missouri. Among other initiatives, the Center would provide equipment and opportunities for rural Missouri teachers to learn about robotics and other integrations of technology and pedagogy, without requiring them to make purchases or attend costly conferences out of state.



## **Moberly Area Community College Accelerated A.D.N (AADN) Expansion**

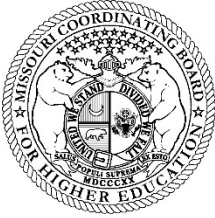
Coordinating Board for Higher Education  
October 22, 2019

### **BACKGROUND**

There is a national nursing shortage that is also being experienced in the Hannibal and Columbia area. According to the Missouri Economic Research and Information Center (MERIC) website, there will be 9,836 job openings for registered nurses from 2016-2019. Registered nurses are 12th on the list of top openings for the state of Missouri and offer the highest salary of the top twelve at an annual average wage of \$63,300 ([https://www.missourieconomy.org/occupations/occ\\_proj.stm](https://www.missourieconomy.org/occupations/occ_proj.stm) ). The Talent for Tomorrow report in September, 2018 lists Registered Nurses as the top job for longer-term training with 346 annual openings in the central region. The median wage in the central region is listed at \$60,523.

### **PROPOSED SOLUTION**

Moberly Area Community College (MACC) is proposing to add an evening Accelerated Associate Degree Nursing (AADN) program in Columbia and Hannibal. The proposed AADN program will help to fill the increasing demand and current shortages of registered nurses in Northeast Missouri by offering an evening virtual program to licensed practical nurses (LPNs). Often these LPNs are currently working in clinics. This will allow LPNs the flexibility to continue working while advancing their career. MACC is requesting \$210,000 to cover half of the costs of opening the program including faculty, training, simulation equipment, lab renovation, and laboratory supplies. This program will initially admit 10-20 students at each location each year at an estimated \$15,665 per graduate. The LPN makes an average of \$47,000 in the state of Missouri and will earn an average of \$63,300 as a registered nurse. The proposed program will positively affect not only the nursing shortage, but the quality of life for the students and the economy of the local communities.



## **Ozarks Technical Community College Center for Advanced Manufacturing**

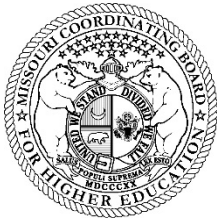
Coordinating Board for Higher Education  
October 22, 2019

### **BACKGROUND**

Advanced Manufacturing has been consistently identified as a key growth sector by Missouri organizations, including the Department of Economic Development, the Best in the Midwest collaborative initiative, and the Missouri Chamber of Commerce's Workforce 2030 project. These organizations also consistently recognize that this is one of the leading sectors facing a significant skills gap between workforce supply and employer demand. MERIC projects continued job growth for Advanced Manufacturing occupations, with long-term growth rates for many exceeding 10% statewide and 20% within OTC's Ozark region. This skills gap affects Missouri's competitive ability to attract and retain manufacturing employers. Improved skills training is needed to connect more Missourians with quality jobs and allow for employer growth.

### **PROPOSED SOLUTION**

OTC proposes to construct a Center for Advanced Manufacturing (CAM) at its Springfield Campus. This project is made possible by a combination of local tax support, private donations, grant funding, and support from the state. Last year, OTC asked for a total of \$10 million in support spread over two years and received the first half of that amount as the top-ranked MoExcels project. Funding this application would complete the state's portion of support for the CAM project. CAM will provide short- and long-term training opportunities covering high-demand specializations with active input and oversight from industry leaders. CAM will also provide adaptive training space, process-improvement space, and customized training programs to support existing employers. Business incubation test centers will provide space and support for new manufacturers. Programs for K-12 students, utilizing discovery space in the CAM facility, will build a strong talent pipeline. This center of excellence focused on Advanced Manufacturing will allow Missouri to become best in the Midwest for skilled manufacturing workforce development. CAM's talent pipeline, combined with the capacity to quickly train employees on new technologies or processes, will provide Missouri with a strong competitive advantage in employer attraction and retention.



# St. Charles Community College SCC's Technology & Logistics Regional Center of Excellence in Warren County

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

St. Charles Community College (SCC) is proposing to create a Technology & Logistics Regional Center of Excellence to support the growing demand for a skilled workforce across industry sectors. This Regional Center will address the lack of qualified workers in a variety of career pathways; the lack of access to training and education programs; the lack of access to equipment necessary to build in demand training programs; and the aging of the current workforce. The Regional Center will serve students from SCC's service area to include St. Charles, Lincoln, Warren, Montgomery, Pike and Callaway Counties. An area that spans over 3,239 square miles with limited and/or no access to education and training facilities and where public transportation does not exist.

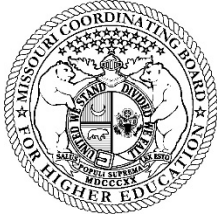
According to the National Association of Manufacturers, 2018 Third Quarter Outlook Survey, 73.2% of manufacturers identified the inability to attract a quality workforce as their top challenge. The National Tooling and Machining Association found that 90% of employers have moderate to serious trouble finding qualified employees. Additionally, a 2015 study by Deloitte estimates that nearly 3.5 million jobs will open before 2025 as boomers retire and estimate that 2 million will go unfilled because of the skills gap.

## PROPOSED SOLUTION

St. Charles Community College's Technology & Logistics Regional Center of Excellence will be created to support existing and future employers and prepare emerging workers for success in:

- Advanced Manufacturing and the regional industry clusters of automotive and aerospace manufacturing.
- Agriculture Technology and the region's precision agriculture and food production industry.
- Industrial Maintenance and Controls the region's large number of manufacturing companies.
- Transportation and Logistics to support transportation needs of the industry.

These training initiatives will support a multitude of career pathways to include, but not limited to, automation and systems; production and maintenance; and supply chain and logistics. SCC will leverage their existing MOAMP Apprenticeship grant to create apprenticeship programs in these high demand areas to help fill the workforce shortage. SCC's is collaborating with the Greater Warren County Economic Development Council, Warren County RII and RIII School Districts as well as other employer, community and government entities to bring this center to Warren County Missouri. This location, which lies to the west of St. Charles County, will be accessible to the targeted rural counties that have no public transportation and limited/no access to training or education facilities that offers the proposed programs.



# Truman State University Applied Behavior Analysis

Coordinating Board for Higher Education  
October 22, 2019

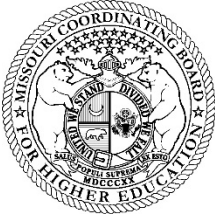
## **BACKGROUND**

A national shortage exists in individuals trained in Applied Behavior Analysis. Specifically, individuals certified to serve in the entry level roles of Registered Behavior Technician (RBT) and Board Certified Behavior Analyst (BCBA) are wholly insufficient and often near to entirely absent in rural communities. The BCBA is the front-line position in the treatment of autism spectrum disorders and BCBA's are required by insurance companies as supervisors of RBT's. In order to supply communities with these practitioners, programming to support their training and preparation for the required board exams is crucial.

From a workforce development perspective this emerging field affords individuals with backgrounds in a variety of fields an opportunity to "upskill" and train for opportunities in a field that projects 51% growth through 2023. As nationwide demand continues to grow, Missouri will be competing for qualified BCBAs. Qualitatively, the presence of more qualified mental health personnel capable of working with individuals coping with autism spectrum disorders has the potential to impact the employability of high functioning individuals with these disorders, whereas a lack of qualified support inhibits the ability of these often bright and talented individuals from fully participating in our society.

## **PROPOSED SOLUTION**

Truman proposes to adopt an eight-course graduate certificate in Applied Behavior Analysis. This certificate covers all of the topics required for an individual who already holds a master's degree (or is completing one) to sit for the national Board Certified Behavior Analyst (BCBA) certification. Once they possess this certification, these individuals can provide services that are accepted for reinforcement by insurance companies working in Missouri and most other states and can supervise Registered Behavior Technicians. Truman sees this certificate as an initial step toward a full-fledged master's degree in Applied Behavior Analysis that would provide a vehicle for individuals who currently lack a master's degree to pursue BCBA certification through Truman. Because the certificate program would be fully online and asynchronous, it would be highly accessible to students who are currently employed as well as those looking for new employment.



# University of Central Missouri Employer Driven Critical Healthcare Needs

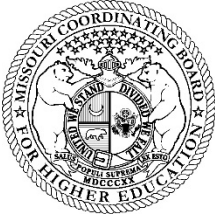
Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

Healthcare is the second largest industry in the region (based on employment) with almost 152,000 employees. If we included health insurance, medical equipment manufacturing and government health workers, it would actually be the largest industry. The Healthcare industry is an important part of the Kansas City metro area's workforce, encompassing 11.5 percent of the region's 1.1 million jobs, with additional jobs in related fields such as health information technology and manufacturing of health-related equipment. Healthcare is the only industry in the Kansas City region that maintained steady employment growth throughout the Great Recession, and it is expected the region's population will continue to grow by 400,000 by 2030. People over 65 will account for nearly half of that growth (48 percent). According to MERIC (Missouri Economic Research and Information Center), healthcare is one of three industries with the highest levels of employment growth. Average wage for healthcare workers and social services is \$44,026 while Professional Nurses, Medical and Health Services Manager, Certified Nursing and Personal Care Aides are recognized as top jobs for projected growth and job openings. Healthcare organizations make up four of the top ten private employers in the State of Missouri.

## PROPOSED SOLUTION

To meet the needs of Missouri and the Kansas City region, UCM has developed relationships with two of the largest healthcare systems, St. Lukes and HCA Healthcare Midwest to develop programs and a talent pipeline for various healthcare occupational roles to include: Medical Laboratory Scientist (MLS) Pathway with HCA Healthcare Midwest, additionally a Fast Track MLS Program for adults with an existing bachelor's degree delivered at MIC; Healthcare Technology Management Professional Pathway - Biomedical Equipment Technician/Technologist with St. Luke's Healthcare System; Sterile Processing Technician with St. Luke's Healthcare System; Surgical Technician with St. Luke's Healthcare System; and Phlebotomy Technician with HCA Healthcare Midwest. These collaborations and new programs will strengthen current program offerings including Certified Nursing Assistant, Certified Medication Tech., Certified Medical Assistant, Medical Billing and Coding, etc.



# University of Missouri System Faculty Development for Teaching in a Digital Format

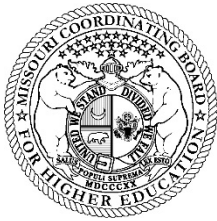
Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

Missouri's workforce development needs are continuing to grow. The University of Missouri System (UM) seeks to help narrow the gap while facilitating the development and expansion of employer-driven education. To address this growing need UM will focus on the 750,000 Missouri adults who have some college credit but have not received a degree as well as those looking to obtain a second degree to advance and enrich their careers. Employers express frustration at only being engaged by higher education institutions at the end of a program. We understand that actively responding to employer input is critical to the success of our proposed program and is a key to meeting Missouri's Big Goal "for 60 percent of working-age adults in Missouri to have a certificate or degree by 2025." Actively engaging this audience requires an innovative, adult learner-centric approach that offers relevant, industry-desired online credentials. In order to build relevant online content and material we need to improve faculty development frameworks to execute a holistic and high-touch approach for delivery of active and engaged learning that meets the skill demands of the market. UM has identified addressing Missourians with some college but no degree as a core institutional priority.

## PROPOSED SOLUTION

UM will retool faculty development to facilitate active engagement in the classroom that will leverage outcome-based assessments, prior learning assessment, alignment to market skills and using high impact practices (e.g. internships) to create innovative ways to think about building and crafting courses as part of our eLearning effort. This model will be built on three primary components: the creation of a Workforce Advisory Board, research-based and learner-centric faculty development, and the provision of high-quality instructional design spaces.



# University of Missouri-Columbia Imaging the Future-Clinical Service Engineering for Missouri

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

"Medical imaging has had a tremendous impact on healthcare, and its influence is constantly growing. Imaging allows healthcare professionals to detect diseases earlier and make treatments more effective. When usage is expanded into the arenas of prevention and precision therapy, imaging can significantly contribute to lower healthcare costs on a global scale. However, when the imaging equipment breaks down, schedules are disrupted and patients are not served. Competent Clinical Service Engineers (CSEs) reduce equipment downtime and positively affect patient care. Clinical service engineering is a critical element of healthcare technology management and is responsible for the application, implementation, and servicing of medical technology to optimize healthcare delivery. However, no formalized credentialing programs exist that incorporate medical imaging technology expertise, healthcare business acumen, customer relationship management, and specific modality training. The proposed program addresses this gap.

## PROPOSED SOLUTION

This program will expand the biomedical engineering curriculum to include imaging technologies (CT, MR, Rad/Fluoro) and develop a Clinical Services Engineer (CSE) apprenticeship focused on accelerating the edification of skills and knowledge necessary for placement as a CSE. The program will provide an appropriate mix of formal technical training and work experience, along with customer focused training. The CSE program will allow for multiple pathways, de-emphasizing the need to attain a bachelor's degree prior to pursuing a certificate in Clinical Service Engineering. Eligible students for the CSE program fall into one of three categories: 1) have military experience in advanced electronics; 2) have or are pursuing an Associate's degree in electronics; or, 3) have or are pursuing a Bachelor's degree in Biomedical Engineering. The apprenticeship program will be certified by the Department of Labor and the Veterans Association to allow Veterans to take advantage of their GI Bill benefits.





## University of Missouri St. Louis-UMSL Nursing Simulation Center

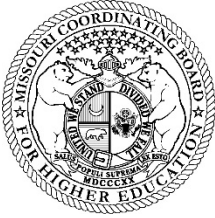
Coordinating Board for Higher Education  
October 22, 2019

### **BACKGROUND**

The University of Missouri-St. Louis (UMSL) College of Nursing (College) is a critical resource to meeting the nursing workforce needs of the St. Louis region and eastern Missouri. There is a current and future shortage of registered professional nurses to meet the workforce needs of the region. The College has made a promise to St. Louis to equip our graduates with the skills, knowledge, and compassion they need to provide the highest levels of health care to the region, particularly since 90% of UMSL's nursing graduates live and work in the St. Louis area. To meet this promise requires a transformation in the educational facilities for UMSL student nurses. Clinical rotations are increasingly challenging to access due to competition for limited clinical sites, faculty shortages, newer patient safety initiatives, shorter hospital stays for patients, difference and inequality in the learning experience each student receives, and the amount of time that instructors need to spend supervising nursing students' skills. To provide the highest level of quality and safe patient care upon entering the nursing workforce, students need opportunities to hone their clinical judgment and skills in a variety of simulated patient care situations they will encounter in practice.

### **PROPOSED SOLUTION**

With strong support from major health care employers, the College is embarking on a project that will transform the educational facilities for students in the BSN program. The project will expand the current learning and simulation facilities from 5,900 SF to 17,000 SF and renovate a classroom to support interactive, technology enhanced learning. The learning and simulation center will include two skills labs, eleven simulation suites and debriefing rooms, three medication rooms, five control rooms, and equipment preparation and storage areas. This space will increase the clinical time students spend in a simulation setting from 1 day a semester to 4-5 days a semester and support the application of knowledge from the concept-based curriculum. This state of the art facility will support expansion of enrollment in the pre-licensure BSN program by 40%. Simulation time for clinical learning has become essential for students to be workforce ready upon graduation to provide safe, effective, quality care. The renovated classroom will enhance the concept-based curriculum that began in fall 2019 and allow students to use resources in an interactive way to develop critical clinical judgement skills during class time much as they will during their careers.



# **Southeast Missouri State University Computer Science & Cybersecurity Expansion**

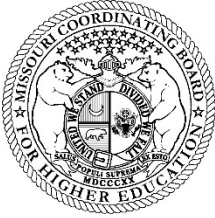
Coordinating Board for Higher Education  
October 22, 2019

## **BACKGROUND**

Data from Talent for Tomorrow, the Missouri Economic Research and Information Center (MERIC), the U.S. Department of Labor and others quantifies significant workforce need in southeast Missouri, the state and throughout the United States for talent in computer science and cybersecurity-related areas. However, reports from the Missouri Department of Higher Education indicate that Missouri's four-year public institutions of higher education are graduating less than 500 students a year in related disciplines. Using data from fall 2013 through fall 2018, internal forecasting suggests that undergraduate enrollments in computer science and cybersecurity at Southeast Missouri State University will grow by 28 percent and 51 percent respectively by 2023. The University is also anticipating significant growth in its graduate computer science and cybersecurity programs. As a result, classroom space, labs and other related learning areas need reconfigured and renovated to allow the institution to serve more students in these critical workforce areas at the undergraduate and graduate levels. Additionally, curriculum enhancements are necessary to create new, flexible, and short-term learning pathways, such as industry-recognized certifications, that have been identified as a gap in Missouri's workforce.

## **PROPOSED SOLUTION**

To address computer science and cybersecurity related workforce needs, this proposal will allow Southeast Missouri State University to create a Cybersecurity Center of Excellence; expand capacity in its existing undergraduate and graduate computer science and cybersecurity programs; develop new flexible learning pathways, such as industry recognized certificates and CS + X programs that will allow students to pursue studies that incorporate computer science with technical or professional training in the arts and sciences; and renovate classroom space.



## **Crowder College Transportation Technology Building**

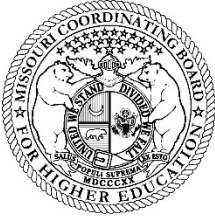
Coordinating Board for Higher Education  
October 22, 2019

### **BACKGROUND**

Occupations in transportation, including transport training, diesel tech and logistics are in high demand. According to MERIC, these 3 areas are included in their 2018-2020 Fastest Growth Industries and the time is right for Crowder College (CC) to add a logistics program to compliment our existing transport training and diesel tech programs. See CC's TTB Narrative for additional information being submitted with this proposal.

### **PROPOSED SOLUTION**

CC is seeking \$2.5 Million from the MoExcels grant program and \$2.5 Million in match from donors to build a new Transportation Technology Building (TTB) to combine facilities for our transport training and diesel tech programs, and allow us to create a new logistics program. Putting three of these programs together will complement one another and are all high demand occupations. Our transportation and diesel tech are both high demand programs and currently both enjoy 100% placement rates. We train 300+ drivers and over 75 diesel technicians each year. While the placement rate is high, we are not keeping up with industry demands for skilled workforce. For example, as soon as our diesel tech students complete 6 weeks of training, they are being picked off by local diesel repair shops with job offers. Students are enticed by the ease of jobs and go to whoever is paying the most. To help combat the lack of completers, we have created stackable credentials within the diesel tech program. Logistics is a natural fit with our two existing programs and based on conversations and input from local trucking companies, diesel repair businesses and recruiters for trucking companies, the time is right for CC to add a logistics program. See CC's TTB Narrative for additional information on our TTB proposal.



# East Central College Transitions Academy for Adult and Education Literacy

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

East Central College is presenting an opportunity to greatly enhance the job-skills training programming for nearly 10,000 individuals living in Franklin, Crawford, and Gasconade counties. The proposed “Transitions Academy” is designed for individuals who complete their High School Equivalency Exam (HISET) through the East Central College Adult Education and Literacy (AEL) Program. The HISET, similar to a high school diploma, provides student with the education need in an ever demanding workforce atmosphere.

Like many sections of Missouri there lacks a streamlined and fully supported pathway for students who are seeking to earn their HISET and train for an industry recognized credential, a college certificate or degree program in high demand career fields with local workforce employers.

Career preparation and planning activities are vital to HISET completion rates. Incorporating dual-enrollment courses and job-training into the program improves student completion while quickly teaching literacy, work, and college-readiness skills. Established training programs based on career pathways will help students further their education through a credentialed degree pathway for improved workforce employment opportunities.

The segment of the population that is the most affected by the lack of robust job and career skills training are those underemployed and unemployed incumbent or dislocated workers.

## PROPOSED SOLUTION

The proposed “Transitions Academy” would require the relocation of the ECC Adult Education and Literacy (AEL) Program from its current location in the East Central Training Center (ECTC) to a renovated space in Hansen Hall, located in the center of the campus. The proposal allows the opportunity for the AEL student to be fully integrated in the center of campus with greater accessing college support services, academic programs, instructor, academics advisors and career counselors. Placing this populace at the center of campus will breed a culture of success and inclusion to encourage the completion of HISET and continued secondary education.

A dedicated support-advisor, faculty, and mentorship team will focus on improving the overall HISET outcomes while preparing the student to transition into post-secondary credentialed pathway that are of high demand.

Students enrolled in Transitions Academy have the opportunity to complete a post-secondary Certificate of Specialization or Certificate of Achievement credentials while concurrently studying for the High School Equivalency Exam. Early College credit hour opportunities towards credentialed degree pathway could include applicable remediation course-work, previous relevant workforce skills, 180 Skills Development module training, and other identifiable skills sets that can be considered as credit-for-prior learning towards a specific post-secondary credential attainment.



# Harris-Stowe State University STEM Entrepreneurship Certificate at Harris-Stowe State University

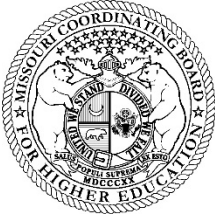
Coordinating Board for Higher Education  
October 22, 2019

## **BACKGROUND**

East The State needs to continually evaluate and adjust curriculum and programs to assure STEM graduates are prepared to excel in a changing STEM world. Technological disruptions of STEM industries will necessitate a workforce that can adapt and continually learn new skills. A recent Pew Research report (“Workforce of the Future”, 2016) indicates how quickly the job landscape is changing and that many jobs that will be prominent in the near future do not yet exist. A report from The American Institutes for Research (AIR, 2012) reported survey data of STEM educators and administrators expressing great concern that STEM majors were “leaving school without the necessary skills to succeed in entrepreneurial roles.” According to the Network for Teaching Entrepreneurship, an entrepreneurial mindset is critical for students to succeed academically, personally and professionally.

## **PROPOSED SOLUTION**

HSSU is proposing a 17 credit hour on-campus or online certification program to address the growing and urgent need to address the changing demands of STEM employers across the State of Missouri. This certification program will offer an opportunity for training 20 individuals who will be highly skilled and possess the knowledge, skills, and entrepreneurial mindset to be successful within the changing economy. The HSSU program will support current STEM majors, recent graduates seeking additional certification, and those already in careers interested in becoming more knowledgeable and adaptable.



## **Missouri State University West Plains-Advanced Technology Welding Lab**

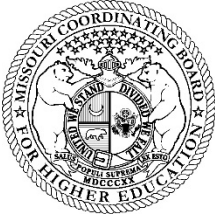
Coordinating Board for Higher Education  
October 22, 2019

### **BACKGROUND**

Machinery Manufacturing is the second largest Tradable Employment sector in the Opportunity Clusters identified by the Best in the Midwest program. According to MERIC data, the need for certified welders in Missouri is expected to increase by 490 new positions between 2016 and 2024 with a total of 2,629 new and incumbent openings expected by 2024. In the immediate MSU-WP service area, 14 industry employers reported in July, 2019, they currently have 75 openings for welders and expect 204 openings within one year. For many of these positions that require advanced certifications, prospective welders must go to expensive private training institutions such as in Nevada, Mo., and Tulsa, Okla. Often, area high school graduates will enroll in these programs, sustain sizeable debt, and leave the area, leaving local open positions unfilled.

### **PROPOSED SOLUTION**

"For MSU-WP and our Greater Ozarks Center for Advanced Technology (GOCAT) partnership to fill this critical workforce need, an Advanced Welding Technology program (credit and non-credit), offering AWS and NC3 certification and utilizing a welding lab with state-of-the-art welders, proper safety/ventilation, and classroom simulators and furnishings are required. The addition of this short-term, multi-certification program with a Level 3 welding lab to MSU-WP's advanced technology programs and industrial maintenance programs will provide training for new and incumbent workers and apprentices to complete multiple processes (MIG, TIG, Flux Core, etc.), operate robotic welders, and work in multiple metals (steel, aluminum, stainless, plastics, etc.), and multiple positions (horizontal, vertical up, vertical down, overhead, etc.), all needed by our area employers.



# Northwest Missouri State University Cybersecurity: Improving the Missouri Pipeline

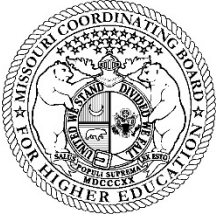
Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

The United States and the state of Missouri need more trained professionals to fill cybersecurity roles. The National Initiative for Cybersecurity Education (NICE), a program of the National Institute of Standards and Technology in the U.S. Department of Commerce, estimated that as of August, 2018 there were 5,362 unfilled cybersecurity jobs in Missouri and the supply of Missouri cybersecurity workers is very low as compared to other states(1). The Workforce 2020: A Call To Action report, developed by the Missouri Chamber of Commerce and industry, states that Missouri needs to provide more public-private partnerships to provide opportunities to handle occupational needs and trends, in particular technology trends (2). In the fall of 2018, Northwest Missouri State began offering a new cybersecurity major. After our first year, we have 37 cybersecurity majors and expect that the number of majors to grow over the next years. Northwest will need to expand facilities to handle the growth of this program as well as extend the pipeline from secondary schools thru Northwest to industry and government jobs in Missouri.

## PROPOSED SOLUTION

Northwest is proposing to strengthen the cybersecurity pipeline by developing cybersecurity awareness and interest in secondary schools as a possible major to students attending Missouri's universities, providing appropriate cybersecurity training in higher education, and working with industry and government to fill open cybersecurity internships and jobs. We plan to address this cybersecurity shortfall by updating and expanding our cybersecurity program facilities and equipment, providing university faculty professional development to ensure that faculty are appropriately training to meet industry demands, and offering cybersecurity training and programs to secondary schools that will advance a cybersecurity awareness with secondary students and, encourage secondary schools to offer cybersecurity classes and develop the pipeline of secondary students entering Missouri university cybersecurity programs. We plan to develop an alliance with industry and government as well as secondary school partners that will allow Northwest to appropriately train future students to fill the cybersecurity job gap.



# Northwest Missouri State University Preparing Future Emergency Managers and Responders

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

By all measures, the number of people impacted each year by disasters is increasing at a substantial rate (UNISDR, 2018). Also on the rise are the financial cost, death count, and number of countries impacted by disasters (ibid.). This increase in hazard events can only be properly addressed and ultimately mitigated by providing well-trained and educated practitioners, working to reduce vulnerability and increase resiliency.

The focus of the Northwest Missouri State University Emergency and Disaster Management (EDM) program is to reduce the impacts from disasters through activities related to preparedness, response, recovery, and mitigation. The proposed project will allow Northwest to expand the EDM program and fill a substantial regional and statewide gap in emergency management professionals.

## PROPOSED SOLUTION

Northwest Missouri State University is proposing to modify one of its existing classrooms to develop a state-of-the-art Emergency Operations Center (EOC) simulator. The EOC is the key facility in the field of emergency and disaster management, and having such a facility available for training and advanced education will allow Northwest to not only recruit additional students into the EDM major, but also provide critical, real-world experience with the actual equipment and environment used in emergency management today.

The proposed facility will mirror industry standards for equipment, furnishings, and layout, and will be utilized to reinforce the practice-based nature of many EDM courses, including Disaster Response and Recovery, Principles of Humanitarian Relief, Business Continuity, and Community Emergency Response Team training.





# Northwest Missouri State University Preparing Future Emergency Managers and Responders

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

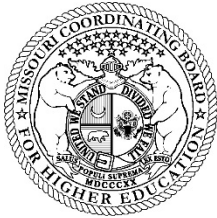
By all measures, the number of people impacted each year by disasters is increasing at a substantial rate (UNISDR, 2018). Also on the rise are the financial cost, death count, and number of countries impacted by disasters (ibid.). This increase in hazard events can only be properly addressed and ultimately mitigated by providing well-trained and educated practitioners, working to reduce vulnerability and increase resiliency.

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## St. Louis Community College STLC Excels

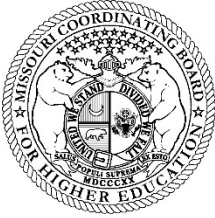
Coordinating Board for Higher Education  
October 22, 2019

### BACKGROUND

As an emerging technology hub, Missouri's IT industry employs over 143,000 workers in more than 10,500 establishments. Missouri counties with high concentrations of tech companies are situated in St. Louis, Kansas City, and along the I-70 corridor, according to the Missouri Chamber Foundation Technology 2030 Report. Missouri's tech industry is expected to grow jobs by 2.9% during 2018-2019. Along with greater presence in tech space, comes intense competition for skilled IT workers. The shortage of IT workers in the St. Louis Region is the problem St. Louis Community College (STLCC) plans to address through the MoExcels initiative. Sixty-one percent of IT firms in the St. Louis Region are experiencing a shortage of skilled applicants, according to STLCC's State of the St. Louis Workforce 2018 Report. Area IT employers identified the shortage of IT training as an issue of high importance. St. Louis' IT sector experienced growth of 11.2% between 2012 and 2017. IT firms are not the only companies grappling with IT workforce shortages. Every industry from health care to agriculture needs IT specialists. The problem has prompted STLCC to build its capacity to deliver cutting-edge IT education and training designed to meet the technological workforce needs of area employers.

### PROPOSED SOLUTION

To address the shortage of IT workers in the St. Louis Region, STLCC will implement a comprehensive IT capacity-building plan that includes: (1) the development and piloting of an immersive cybersecurity boot camp curriculum, (2) an overhaul of the IT academic curriculum that will lead to stackable credentials, (3) classroom technology upgrades and remodeling on three campuses, (4) the intensification of professional development to better equip IT faculty for cutting-edge teaching, (5) the addition of IT apprenticeships/internships, and (6) the transformation of the Center for Emerging and Advanced Information Technology into a center of excellence. Implementation of the plan will result in an increased pool of trained work-ready IT professionals. Through its enhanced IT capacity, STLCC will prepare students for the following careers: computer network architect, computer programmer, computer network support specialist, computer use support specialist, and software developer. In addition to serving more incumbent workers, the College's expanded capacity will enable the recruitment of students who are underrepresented in IT fields such as immigrants who reside in STLCC's service area, residents of the St. Louis Promise Zone, ethnic minorities, and unemployed or underemployed residents. Detailed descriptions of each of the proposed components are included in the attached five-page narrative.



# State Technical College of Missouri Engineering Technologies Center

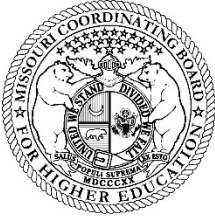
Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

State Technical College of Missouri (State Tech) is a leader in technical education in Missouri and is nationally recognized for its student and graduate outcomes. In a recent national ranking, Wallethub compared State Tech to 700 other two-year schools and ranked State Tech number one in Student Outcomes (retention and graduation rate) and number two in Graduate Outcomes (placement and salaries). State Tech has grown more than 30% over the last three years and expects to be able to continue that growth as a result of state support through programs like MoExcels. This proposal will help to address worker shortages throughout the State of Missouri in Industrial Maintenance Technicians, Electricians, Welders, Electronic Engineering Technicians, Drafters, Design Engineer Technicians, and Computer Application Developers. The space renovations will also allow for repurposing the lab space into general classroom space needed to accommodate State Tech's rapid growth.

## PROPOSED SOLUTION

A rapidly emerging issue on the State Tech campus is the space available to support high-demand fast-growing technical programs. Industrial Electricity and Welding Technology are two examples of programs that are now at capacity, as a result of space limitations. The renovation and expansion of these two adjacent buildings will allow the Industrial Electricity program to expand from 100 to 200 total students growing the industrial controls option. The Welding program will expand from 100 to 150 students, exposing them to pipefitting welding and allowing for a new credential to be earned by these students. The renovation will also house the Electronics Engineering Technology program enabling it to add 50 more students exposing them to manufacturing or healthcare technician careers. Space vacated will be filled by Drafting & Design Engineering Technology to expand from 44 to 88 students who typically work in manufacturing or construction fields. The Computer Application Development program's web design focus will incorporate integrated media and will grow from 54 students to 150 students working in manufacturing, healthcare, or construction fields. Curriculum development will also occur in programs that add credible industry credentials, which students may obtain as part of their two-year associate degree program.



## **Three Rivers College S.M.A.R.T.**

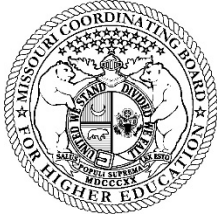
Coordinating Board for Higher Education  
October 22, 2019

### **BACKGROUND**

There is a need for skilled workers within the construction and agriculture workforce to learn how to operate different types of heavy equipment, tractors and to gain CDL skills.

### **PROPOSED SOLUTION**

Three Rivers College will create a 8-week program using new simulation technology and existing construction equipment to train individuals to get a quick set of skills to make them employable within the construction and agriculture workforce. This proposed training will include both simulation and ‘hands-on” skill building. In addition, an 8-week online surveying course will be created to allow existing and potential construction students to apply to TRC's existing short-term surveying certificate.



# University of Missouri System Student Experience in a Digital Format

Coordinating Board for Higher Education  
October 22, 2019

## BACKGROUND

Missouri's workforce development needs are continuing to grow. The University of Missouri System (UM) seeks to help shorten the gap while facilitating the development and expansion of employer-driven education. To address this growing need UM will focus on training the 750,000 Missouri adults who have some college credit but have not received a degree as well as those looking to obtain a second degree. We conducted a prospective student survey to find the needs of this population and their perceived barriers to re-entry. These barriers include: the need for flexibility, service needs 24/7, tools to manage online courses, the desire for interaction, technological barriers, price and access to the appropriate degree programs. All learners can be successful when given the appropriate supports.

## PROPOSED SOLUTION

As a foundation of its eLearning initiative, UM will provide holistic, individualized support for online learners by serving as a one-stop-shop for learners from enrollment to successful career placement. These supports are particularly important for the 750,000 Missouri adults who have some college credit but have not received a degree as their support needs are different than the traditional college student. UM is proposing the creation of a student experience that will allow for customization to best support their needs. This will start upon inquiring about a degree where a coach will help them navigate the choices in degree programs, innovative financial aid ideas, and the steps to complete an application. Once enrolled the learner will choose the mode of communication they prefer but will have a one-on-one connection to help with answering questions and finding ways to navigate between the multiple priorities. Resources will be built in a way to allow for learners to access help at the time and way that they need it. Many times, online students have trouble connecting with others since they are not in the same room, to remedy this we will create meaningful online communities to help them engage and learn together.