

Southwest Tennessee Community College
2024 Governor's Investment in Vocational Education (Give 3.0)

Program Title:

Advanced Manufacturing and Robotics Maintenance for Today and Tomorrow

Lead Entity:

Southwest Tennessee Community College

Fiscal Agent:

Southwest Tennessee Community College

IN PARTNERSHIP WITH:

Workforce/Economic Development Agency:

Memphis Chamber of Commerce

LEA/School District:

Shelby County Schools
Power Center Academy
Houston School District
Arlington School District

Employer Partners:

FedEx
Smith and Nephew

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Funding Requested:

\$1,400,000.00

DocuSigned by:

Dr. Tracy D. Hall

2304D4F473334CE...

President of Higher Education Institution

Dr. Tracy Hall, President

Dr. A. Jagers

Project Director

Dr. Aaron Jagers, Jr.

Fiscal Agent Lead Entity

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Abstract/Project Summary

An innovative partnership between academia and industry promises to bolster their connections and drive forward groundbreaking advancements in education. The Mechatronics Technology

program is poised to capitalize on a \$1.4 million dollar grant, directing the funds towards acquiring Festo pneumatics and electric automation technology equipment. This significant investment is expected to not only enrich the program's curriculum but also equip students with invaluable hands-on experience, ensuring their skills are finely attuned to meet the dynamic needs of the industry.

A substantial portion of the allocated funds will be dedicated to instructor training and certification, guaranteeing that the faculty possesses the necessary expertise to deliver exceptional education on both Festo and Amatrol technologies. Anticipated additions to the faculty team, potentially joining in the upcoming fall term, offer promising opportunities for the program's growth. Their specialized knowledge could lead to significant expansion of Mechatronics Technology courses, including the potential introduction of dual enrollment options, enriching the educational landscape of the Macon Cove campus.

The program is poised to extend its reach beyond campus boundaries, forging partnerships with high schools to offer dual enrollment opportunities in Mechatronics Technology. As the program flourishes, local school districts will receive support for their current Mechatronics programs. Their objectives encompass not only curriculum enhancement but also equipment modernization, ensuring that students receive education aligned with industry standards.

Section 1: Demonstration of Need

Governor Bill Haslam's Drive to 55 initiative aims to elevate Tennessee's educational attainment, targeting a goal of 55% of residents holding a certificate or college degree by 2025. Through this initiative, students will embark on a holistic learning journey, embracing a multifaceted approach that includes structured educational pathways, hands-on work-based learning experiences, and thorough preparation for obtaining industry-specific credentials.

Local Data Demonstrating the Need for Action

According to Jobs4TN, in March 2024, there were 5,751 job opportunities available in the Advanced Manufacturing industry in Tennessee, offering a weekly wage of \$1,329.00. This translates to an approximate hourly wage of \$33.23 for a standard 40-hour workweek, resulting in an annual wage of \$69,108.00. This significant earning potential can uplift economically disadvantaged students into the middle class. The success of this proposal is paramount for fostering the growth of the advanced manufacturing sector in the mid-south, especially with the imminent arrival of Ford Blue Oval, and for bolstering the middle class in the region. The data from the Memphis Chamber reveals that the area is home to 1,108 regional manufacturing establishments. This robust presence speaks to the industrial vitality of the region. Moreover, owing to the specialized nature of key manufacturing firms in this area, employees can look forward to earning approximately 2.5% more than their counterparts in similar metropolitan areas. In Greater Memphis, the manufacturing cluster stands strong with 1,108 business establishments and 43,356 jobs, setting the stage for ongoing expansion and prosperity. Spanning from non-durable goods like food and paper products to precision-based sectors such as surgical and medical instruments, as well as automotive component manufacturing, the production and transportation of materials form a cornerstone of the local economy. This robust presence underscores the region's diverse industrial landscape and its pivotal role in driving economic growth and innovation.

Additionally, the Memphis region boasts a notable concentration of African American manufacturing talent. Not only does this area possess the largest concentration of African American manufacturing professionals among comparable peer cities, comprising 44% of the manufacturing workforce, but it also surpasses all major metropolitan areas with populations exceeding 1 million in this regard. This significant representation stands in stark contrast to the national average of 10%. Such a robust presence underscores the diversity and strength of the

manufacturing sector in the Memphis region, highlighting its role as a hub for talent and opportunity within the industry.

According to the Tennessee Higher Education Commission's supply and demand report, Tennessee has made remarkable strides in cultivating one of the nation's most robust and specialized manufacturing workforces. As the state continues to bolster its investments in manufacturing, a multitude of occupations are in high demand across various sectors. These include roles like first-line mechanics supervisors, installers, repairers, and production workers. Additionally, there is a growing need for general maintenance and repair workers, machinists, welders, inspectors, testers, sorters, samplers and weighers, food batch makers, and computer numerically controlled (CNC) tool operators. This diverse array of in-demand occupations underscores Tennessee's commitment to nurturing a dynamic and skilled workforce capable of meeting the evolving needs of the manufacturing industry.

Since 2019, the Tennessee Department of Economic and Community Development (TNECD) has unveiled over 270 manufacturing projects, resulting in more than 41,000 new job commitments. Manufacturing positions constitute over half of the total new job commitments generated through TNECD projects during this period. Notably, in 2021, the state witnessed its largest-ever manufacturing job announcement courtesy of Ford Motor Company. Ford revealed plans for a groundbreaking investment in the creation of Blue Oval City, a sprawling 3,600-acre mega campus situated on the Memphis Regional Mega site. This ambitious project aims to commence production of all-electric F-Series trucks starting in 2025, marking a significant milestone in the state's manufacturing landscape.

In Shelby County, Tennessee, the impact of advanced manufacturing on economic growth and job creation is undeniable. According to data from the Tennessee Department of Economic and

Community Development's Center for Economic Research in Tennessee (CERT), the state has emerged as a powerhouse in advanced manufacturing. Remarkably, job creation in this sector in Tennessee significantly outpaces national growth, with employment concentration soaring 31% higher than the national average.

This robust performance underscores the pivotal role that Shelby County plays in driving the state's advanced manufacturing sector forward. With its strategic location, skilled workforce, and supportive business environment, Shelby County serves as a magnet for manufacturing investment and innovation. As a result, the county continues to attract companies seeking to capitalize on Tennessee's thriving manufacturing ecosystem.

Who We Serve

STCC consistently enrolls many students from traditionally underrepresented populations in higher education. It supports an area that has one of the lowest percentages of college-educated citizens in the nation. In fact, Memphis rates among the highest-ranked cities for the percentage of residents living in poverty. According to a 2022 analysis of the nation's 150 largest metropolitan statistical areas, Memphis ranked 103 for adults aged 25 and older with a bachelor's degree or higher (WalletHub, 2022). More than 65% of the city's residents aged 25 and older do not have a postsecondary credential.

As data from a 2023 Tennessee Board of Regents report indicates, STCC is the state's only community college designated as a Predominantly Black Institution (PBI), and it successfully enrolls significant numbers of diverse, underrepresented students, African American students, but they are not as successful as their white peers in terms of retention and graduation rates. In addition, the College's students are largely low-income according to the number of Pell Grant recipients and many arrive at college requiring some level of remediation as indicated by average ACT scores that fall below 19.

SOURCE: TBR (Tennessee Board of Regents) (Tennessee Board of Regents)

Our Goal

Excellence in Education & Training: In 2016, Southwest joined the Achieving the Dream (ATD) network and launched the Big, Audacious Goal to Redesign, Reinvent, and Reset the Student Experience. This work led to seamless process improvements for credit students from recruitment to completion and earned the College the coveted Bellwether Award for Planning, Finance, and Governance. As we now focus on “Reimagining Southwest,” we are positioning ourselves as the leading Workforce Solutions Center in Memphis and the Mid-South. In the Spring of 2023, we officially launched our new Center of Emphasis, the Southwest Workforce Solutions Center (SWSC). The SWSC takes the 2016 ATD work to the next logical level by providing a seamless experience for all students – credit and workforce.

SECTION 2. PROJECT PLAN

The goal of this proposal is to establish a comprehensive advanced manufacturing pipeline that begins in the K-12 education space and progresses through dual enrollment programs, summer enrichment boot camps, and professional development opportunities for faculty. Starting as early as ninth and 10th grade, students will have access to exploratory prep courses, laying the groundwork for future involvement in the Mechatronics Technology Technical Certificate program during their 11th and 12th grade years.

The proposed pipeline aims to provide students with a seamless transition from introductory courses to more advanced hands-on learning experiences. Summer enrichment programs, such as robotics boot camps, will offer students valuable insight into the industry, practical skills development, and opportunities to earn NC3 safety certifications. These programs will also

introduce students to the fundamentals of mechatronics, setting the stage for further exploration in the field.

Additionally, the proposal emphasizes the importance of equipping K-12 faculty with the necessary training and certifications to effectively teach advanced manufacturing concepts. Professional development opportunities will be provided, enabling educators to earn NC3 industry certifications and Snap-On PMI (Precision Measurement Instrument) certifications. This will empower them to deliver high-quality instruction and mentorship to students at the introductory level.

Industry partnerships will play a crucial role in the success of this pipeline initiative. Partnering companies will offer facility tours, engage with students through school visits, and provide guidance and work-based learning opportunities, including seminars and job shadowing experiences. These interactions will help students gain real-world insights into the manufacturing industry and develop essential skills for future success in the field.

Proposal Plan Timeline

Phase	Timeline	Activities
Planning and Coordination	Month 1-3	- Form an advisory board - Establish roles and responsibilities for partners - Develop a timeline and milestones
Curriculum Development	Month 4-6	- Professional Development for STCC instructors for NC3 related and Snap-on Certifications. Design exploratory prep courses for grades 9 and 10 - Develop the Mechatronics Certificate program curriculum for grades 11 and 12
		- Align curriculum with industry standards and educational requirements - Incorporate hands-on learning experiences and industry exposure opportunities
Professional Development	Month 7-9	- Plan and schedule professional development opportunities for K-12 faculty - Coordinate

		training sessions for faculty to earn industry certifications
		- Provide resources and support for faculty to implement new curriculum elements - Monitor progress and provide ongoing support as needed
Program Implementation	Month 10-12	- Roll out exploratory prep courses for grades 9 and 10 – Enroll K12 students in the dual-enrollment pathways Launch the Mechatronics Certificate program for grades 11 and 12
		- Administer summer enrichment programs, including robotics boot camps - Coordinate industry visits, seminars, and job shadowing experiences for students
Evaluation and Continuous Improvement	Ongoing	- Collect feedback from students, faculty, and industry partners - Assess program effectiveness and impact on student outcomes
		- Identify areas for improvement and adjust as needed - Share successes and lessons learned with stakeholders
Resources and Budget	Throughout	- Human Resources: Program coordinators, faculty, industry mentors, support staff - Facilities: Classroom space, laboratories, industry partner facilities
		- Equipment and Materials: Curriculum materials, technology, tools, robotics kits - Funding: Grant funding, sponsorships, in-kind contributions from partners
Communication and Collaboration	Throughout	- Regular meetings with partners to discuss progress and address challenges - Establish communication channels for sharing updates, resources, and best practices
		- Conduct outreach and engagement activities to promote the program within the community
Risk Management	Throughout	- Identify potential risks and develop mitigation strategies - Monitor program implementation and address issues proactively
		- Maintain open communication with partners to address any concerns or obstacles
Evaluation and Reporting	Ongoing	- Establish metrics and benchmarks for program success - Collect data on student participation, achievement, and post-program outcomes

		- Analyze evaluation findings and prepare reports for stakeholders - Use evaluation results to inform program improvements and future planning
Sustainability and Expansion	Ongoing	- Develop a sustainability plan to ensure the long-term viability of the program - Explore opportunities for program expansion, including additional grade levels or new program components
		- Seek funding and partnerships to support program growth and scalability

SECTION 3: STRENGTH OF PARTNERSHIPS

Students engaging in the Give 3.0 program will find themselves reaping substantial benefits from a wealth of established partnerships, complemented by fresh collaborations crafted for this grant endeavor.

K-12 Articulations

STCC has existing articulations in Mechatronics Technology for dual credit courses including (MECH 1310 Electrical Components, MECH 1320 Mechanical Components & Electric Motors, MECH 1330 Electro-Pneumatic and Hydraulic Control Circuits, MECH 1340 Digital Fundamentals and PLCs (programmable logic controllers) with Memphis-Shelby County Schools, Arlington Community Schools, and Germantown Municipal School District.

Industry Partners

STCC collaborates with a network of industry partners such as Riviana Foods and Kent Cates Medical Devices, LLC, offering both our traditional college students and high school participants invaluable opportunities for hands-on learning. These opportunities encompass mentorships, apprenticeships, and job shadowing experiences, enabling students to apply theoretical knowledge in practical scenarios. By teaming up with industry leaders, students gain crucial insights, mentorship, and exposure to professional environments, thereby enhancing their employability and preparing them for successful careers. Additionally, the Mechatronics

Technology program maintains an advisory board comprised of local industry professionals who play a vital role in guiding the program, ensuring that students are well-prepared to meet the demands of the manufacturing sector.

SECTION 4: Budget

The complete budget for the Give 3.0 grant is attached in Appendix A.

Professional Fees, Grants, & Awards.

The allocation of funds within this grant proposal is structured to ensure efficient administration and coordination of various aspects of the program, focusing on enhancing K-12 partnerships, facilitating summer camps, and managing dual enrollment courses. Below is a breakdown of the budget allocation:

Part-Time Stipends for Administration (2 Positions): These stipends are designated to support administrative duties related to grant management, overseeing partnerships with K-12 educational institutions, and managing collaborations with business partners. Responsibilities include grant reporting, budget management, communication with stakeholders, and ensuring compliance with grant requirements. The stipends are part-time to allow flexibility in scheduling and to accommodate other responsibilities of the individuals involved.

Coordination of K-12 Partnerships: Funding is allocated to facilitate the coordination of partnerships with K-12 schools, ensuring smooth implementation of the program at the school level. Responsibilities may include organizing meetings with school administrators, facilitating training sessions for educators, and providing ongoing support to integrate program components into the curriculum.

Coordination of Business Partnerships: A portion of the budget is dedicated to coordinating partnerships with businesses, which play a crucial role in providing resources, expertise, and

real-world experiences for students. Activities may include establishing internship opportunities, arranging guest lectures or industry visits, and fostering collaborations to enhance student learning outcomes.

Coordination of Summer Camps and Dual Enrollment Courses: Funds are allocated to manage organization, curriculum development, and instructor coordination for summer camps aimed at engaging students in hands-on STEM (Science, Technology, Engineering, and Mathematics) activities. Additionally, resources are allocated to facilitate the implementation of dual enrollment courses, enabling high school students to earn college credits while still in high school. Responsibilities include curriculum planning, scheduling, instructor recruitment, and student enrollment coordination for both summer camps and dual enrollment courses.

Travel, Conferences, & Meetings

The travel budget in this grant proposal is dedicated to enriching experiences for students and educators, focusing on field trips, job shadowing, and mentoring opportunities for teachers.

Other non-personnel

A portion of the grant funding is allocated towards teacher training, instructor certifications, instructor stipends, and consumables for the summer camps. This investment aims to enhance the professional development of educators and provide engaging learning experiences for students.

Capital Purchase

The allocation for capital purchases is centered around acquiring equipment for the participating high schools and Southwest. These purchases include various items aimed at enhancing technical education and skill development. Among the acquisitions are:

Festo Basic Pneumatics Training Package (NC3FPL1P) - 5 units

Festo Hydraulics add-on to existing pneumatics Learntop Bench (NC3FPLIHA) - 2 units

Festo Fundamentals of Electricity - AC/DC (NC3FEL1) - 2 units

Festo Fundamentals of Mechanical Systems (NC3MECCL1) - 2 units

Festo Fundamentals of Sensor Technology (NC3SENL1A) - 4 units

Festo NC3 Level 2 - add-on to Level 1, including basic electropneumatic and vacuum technology (NC3 FPL2) - 3 units

Festo Fundamentals of PLC's (Allen-Bradley) (NC3PLCABNS) - 2 units

Festo Mechanical Systems Level 2, add-on to NC3MECL1 (NC3MECL2) - 2 units

Festo Applied Industrial Motor Controls (NC3AIMCL2) - 4 units

Snap On Precision Measurement Certification Kit V2 (PMICERTKIT2) - 5 units

Snap On Meter Certification Kit with EEDM525F (525FMETERKIT) - 5 units

Snap On Tool Identification & Safety Certification Kit (HTISCERTKIT) - 5 units

Section 5: Sustainability

The sustainability of the program is underpinned by several key factors that establish enduring pathways to success. Through established pipelines to industry, students are afforded invaluable opportunities to engage with real-world professionals, gaining insights into current industry practices and future career pathways. By forging strong connections with local businesses and industry partners, the program ensures that students receive relevant, up-to-date training that aligns with the demands of the workforce.

Integral to this sustainability effort are the summer camps that provide immersive experiences for students designed to ignite their passion for STEM fields and provide hands-on exposure to robotics, programming, and engineering concepts. These camps not only spark interest but also lay the foundation for future academic pursuits and career aspirations.

The incorporation of dual enrollment classes offers students the chance to earn college credits while still in high school, providing a seamless transition into higher education and reducing barriers to entry for further academic advancement. By empowering students to access college-level coursework, the program enhances their academic preparedness and fosters a culture of lifelong learning.

The hands-on experiences facilitated by the program play a pivotal role in sustaining student engagement and fostering skill development. Through practical applications of theoretical concepts, students deepen their understanding and build confidence in their abilities, preparing them for success in both academic and professional settings.

The sustainability of the program lies in its ability to establish enduring connections between education and industry, provide transformative experiences through summer camps and dual enrollment classes, foster hands-on learning opportunities, and actively engage employers in the educational process. These efforts collectively contribute to the long-term success and impact of the program, ensuring that students are equipped with the skills, knowledge, and experiences necessary to thrive in an ever-evolving global economy.

Section 6: Optional Criteria

High Demand Programs

In Memphis, advanced manufacturing roles are witnessing a notable rise in demand, mirroring the city's dynamic industrial landscape. The continual evolution of manufacturing methods propelled by technology amplifies the necessity for adept workers skilled in advanced techniques. Per a recent analysis by the Memphis Business Journal, the call for such positions has been steadily increasing in recent years, fueled by innovation, automation, and the region's strategic positioning in the sector. With Memphis boasting a diverse spectrum of manufacturing enterprises spanning automotive, aerospace, and mechatronics, the requirement for proficient professionals well-versed in state-of-the-art manufacturing methodologies is peaking. These trends have been corroborated by reports such as THEC (Tennessee Higher Education Commission) Academic Supply Occupational Demand Report, Jobs4TN, and insights from the Greater Memphis Chamber, underlining the burgeoning demand for skilled talent in the region.

The THEC Academic Supply Occupational Demand Report sheds light on the high-demand jobs within the advanced manufacturing sector, aligning with the observations of the Greater Memphis Chamber and Jobs4TN. Among the highlighted roles are CNC machinists, industrial maintenance technicians, robotics engineers, mechatronics technicians, and advanced welders. These positions necessitate specialized skills encompassing areas such as computer-aided design (CAD), automation, programming, and precision machining. The report underscores the significance of robust training programs and educational initiatives to address the escalating need for skilled professionals in these domains, thereby bolstering the sustained expansion of the advanced manufacturing sector in Memphis.

County Economic Status Acknowledgement

Acknowledging the economic status of Shelby County is essential to understanding the challenges and disparities faced by its residents. Despite being Tennessee's most populous county, with approximately 910,042 inhabitants, Shelby County is classified as Transitional by the 2023 Tennessee Department of Economic and Community Development. Several factors contribute to this distress, including unemployment, poverty rates, educational attainment, and access to healthcare. The city's overall poverty rate stands at 21.4%, with particularly high rates among children (32.7%) and minority populations. For instance, the poverty rate for Blacks is 24.7%, Hispanics/Latinx is 22.7%, while Whites experience a lower poverty rate of 12.2%. These figures highlight the diverse poverty landscape within Memphis, where poverty rates consistently exceed those of Shelby County, Tennessee, and the United States at large. Drawing on data from the 2023 American Community Survey and previous datasets, it's evident that addressing economic disparities and fostering inclusive growth remain critical imperatives for the region.

Census Tracts in Persistent Poverty

Shelby County encompasses 62 Persistent Poverty Census Tracts, primarily concentrated in and around the Greater Memphis area. STCC operates two main campuses and five centers, strategically positioned to serve all these census areas. See Appendix C for the Tables for Census Tracts and Poverty zip codes.

Appendix A.

GRANT BUDGET					
GIVE Program Competitive Grant					
The grant budget line-item amounts below shall be applicable only to expenses incurred during the following					
Applicable Period:					
		BEGI	END:		
		N:	09/1/2		
		09/1/2	028		
		024			
POLICY 03 Object Line- item Reference	EXPENSE OBJECT LINE-ITEM CATEGORY	GRANT CONTRACT	GRANT PARTICIPATION	TOTAL PROJECT	
1, 2	Salaries, Benefits & Taxes		0.00		
4, 15	Professional Fee, Grant & Award	80,000.00	0.00	80,000.00	
5, 6, 7, 8, 9, 10	Supplies, Telephone, Postage & Shipping, Occupancy, Equipment Rental & Maintenance, Printing & Publications				
11, 12	Travel, Conferences & Meetings	1,250.00	0.00	1,250.00	

13	Interest	0.00	0.00	0.00
14	Insurance	0.00	0.00	0.00
16	Specific Assistance to Individuals	0.00	0.00	0.00
17	Depreciation	0.00	0.00	0.00
18	Other non-personnel	134,900	0.00	
20	Capital Purchase	1,062,500.00	0.00	1,062,500.00
22	Indirect Cost	43,000.00	0.00	43,000.00
24	In-Kind Expense	0.00	0.00	0.00
25	GRAND TOTAL	1,400,000.00	0.00	1,400,000.00

Appendix B MOUS

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100 Peabody Place, Suite 1000
Memphis, TN 38103
Phone: 901.543.3500
MemphisChamber.com

April 25, 2024

RE: MEMORANDUM OF UNDERSTANDING

We are pleased to initiate a partnership between Southwest TN Community College and the Greater Memphis Chamber to establish an advanced manufacturing pipeline program aimed at preparing students for careers in the manufacturing industry.

This Memorandum of Understanding (MOU) outlines the terms and conditions of our collaboration:

Objective: The primary objective of this partnership is to create an advanced manufacturing pipeline program that spans from the K-12 education space to post-secondary education, providing students with hands-on learning experiences and industry exposure.

Responsibility of Greater Memphis Chamber:

- a. Provide tours of partner facilities for students and educators from the K12 partners.
- b. Visit our K-12 schools to interact with students and provide insights into the manufacturing industry.
- c. Offer guidance and work-based learning opportunities, such as seminars and job shadowing experiences, to students participating in the program.
- d. Join and participate in the Mechatronics Advisory Board.

Commitment of Educational Institution:

- a. Develop and implement exploratory prep courses and the Mechatronics Certificate program in collaboration with industry partners.
- b. Facilitate professional development opportunities for K-12 faculty to earn industry certifications.
- c. Coordinate planning for facility tours, school visits, and work-based learning opportunities.
- d. Administer the summer enrichment programs, ensuring alignment with industry standards and objectives.

Collaborative Efforts:

- a. Both parties will work collaboratively to design and deliver curriculum content, ensuring relevance to industry needs and standards.
- b. Regular communication and meetings will be held to assess progress, address challenges, and identify opportunities for program enhancement.

Termination: Either party may terminate this MOU with 30 days' written notice. Termination shall not affect any ongoing obligations or commitments.

Confidentiality: Both parties agree to maintain the confidentiality of any proprietary information shared during this partnership.

Greater.



100 Peabody Place, Suite 1000
Memphis, TN 38103
Phone: 901.543.3500
MemphisChamber.com

This MOU represents the commitment of Southwest TN Community College and [Name of Industry Partner] to collaborate in the development and implementation of the advanced manufacturing pipeline program. We look forward to a successful partnership that will benefit students, educators, and the manufacturing industry.

Please signify your agreement to the terms outlined herein by signing and returning a copy of this MOU.

Southwest Tennessee Community College:

DocuSigned by:

Dr. Tracy D. Hall

4/25/2024

20403473334CE
Dr. Tracy D. Hall,
President

Date

Greater Memphis Chamber of Commerce:

Amity Schuyler

4/25/24

Amity Schuyler,
Chief Innovation Officer
SVP Workforce Development

Date

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SOUTHWEST

TENNESSEE COMMUNITY COLLEGE

P.O. Box 780 • Memphis, TN 38101-0780 • (901) 333-5000 • www.southwest.tn.edu

Dear Gestalt Community Schools
RE: MEMORANDUM OF UNDERSTANDING

April 26, 2024

We are pleased to establish a partnership between Southwest TN Community College and Gestalt Community Schools to implement an advanced manufacturing pipeline program aimed at preparing students for careers in the manufacturing industry.

This Memorandum of Understanding (MOU) outlines the terms and conditions of our collaboration:

1. **Objective:** The primary objective of this partnership is to develop and implement an advanced manufacturing pipeline program that spans from the K-12 education space to post-secondary education, providing students with hands-on learning experiences and industry exposure.
2. **Commitment of K-12 Partner:**
 - a. Participate in the development and implementation of exploratory prep courses for students in grades 9 and 10.
 - b. Facilitate the enrollment of eligible students in the Mechatronics Certificate program during their 11th and 12th grade years.
 - c. Support the administration of summer enrichment programs, including robotics boot camps, by providing access to facilities and resources.
 - d. Encourage faculty participation in professional development opportunities to earn industry certifications.
3. **Commitment of Educational Institution:**
 - a. Develop and deliver exploratory prep courses and the Mechatronics Certificate program in collaboration with K-12 partners.
 - b. Coordinate logistics for student enrollment, curriculum delivery, and program evaluation.
 - c. Facilitate professional development opportunities for K-12 faculty to earn industry certifications.
 - d. Administer the summer enrichment programs, ensuring alignment with industry standards and objectives.

Macon Cove Campus • Union Avenue Campus • Fayette Site • Gill Center • Maxine A. Smith Center • Millington Center • Whitehaven Center

Southwest Tennessee Community College, a Tennessee Board of Regents institution, is an affirmative action/equal opportunity college.

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4. Collaborative Efforts:

a. Both parties will work collaboratively to design and deliver curriculum content, ensuring relevance to industry needs and standards.

b. Regular communication and meetings will be held to assess progress, address challenges, and identify opportunities for program enhancement.

5. **Duration:** This MOU shall be effective from [Start Date] and shall remain in effect until [End Date]. It may be renewed by mutual agreement of both parties.

6. **Termination:** Either party may terminate this MOU with 30 days' written notice. Termination shall not affect any ongoing obligations or commitments.

7. **Confidentiality:** Both parties agree to maintain the confidentiality of any proprietary information shared during the course of this partnership.

This MOU represents the commitment of Southwest TN Community College and [Name of K-12 Partner] to collaborate in the development and implementation of the advanced manufacturing pipeline program. We look forward to a successful partnership that will benefit students, educators, and the manufacturing industry.

Please signify your agreement to the terms outlined herein by signing and returning a copy of this MOU.

Sincerely,

DocuSigned by:

Dr. Tracy D. Hall

230404F473354CE

Dr. Tracy D. Hall, President

Southwest Tennessee Community College

Yetta Lewis

Yetta Lewis, Chief Executive Officer

Gestalt Community Schools

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SOUTHWEST

TENNESSEE COMMUNITY COLLEGE

P.O. Box 780 • Memphis, TN 38101-0780 • (901) 333-5000 • www.southwest.tn.edu

Dear Arlington Community Schools Board of Education,

RE: MEMORANDUM OF UNDERSTANDING

We are pleased to establish a partnership between Southwest TN Community College and Arlington Community Schools Board of Education to implement an advanced manufacturing pipeline program aimed at preparing students for careers in the manufacturing industry.

This Memorandum of Understanding (MOU) outlines the terms and conditions of our collaboration:

1. **Objective:** The primary objective of this partnership is to develop and implement an advanced manufacturing pipeline program that spans from the K-12 education space to post-secondary education, providing students with hands-on learning experiences and industry exposure.
2. **Commitment of K-12 Partner:**
 - a. Participate in the development and implementation of exploratory prep courses for students in grades 9 and 10.
 - b. Facilitate the enrollment of eligible students in the Mechatronics Certificate program during their 11th and 12th grade years.
 - c. Support the administration of summer enrichment programs, including robotics boot camps, by providing access to facilities and resources.
 - d. Encourage faculty participation in professional development opportunities to earn industry certifications.
3. **Commitment of Educational Institution:**
 - a. Develop and deliver exploratory prep courses and the Mechatronics Certificate program in collaboration with K-12 partners.
 - b. Coordinate logistics for student enrollment, curriculum delivery, and program evaluation.
 - c. Facilitate professional development opportunities for K-12 faculty to earn industry certifications.
 - d. Administer the summer enrichment programs, ensuring alignment with industry standards and objectives.
4. **Collaborative Efforts:**
 - a. Both parties will work collaboratively to design and deliver curriculum content, ensuring relevance to industry needs and standards.
 - b. Regular communication and meetings will be held to assess progress, address challenges, and identify opportunities for program enhancement.
5. **Duration:** This MOU shall be effective from 6/1/2024 and shall remain in effect until 6/1/2025. It may be renewed by mutual agreement of both parties.

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6. **Termination:** Either party may terminate this MOU with 30 days' written notice. Termination shall not affect any ongoing obligations or commitments.
7. **Confidentiality:** Both parties agree to maintain the confidentiality of any proprietary information shared during the course of this partnership.

This MOU represents the commitment of Southwest TN Community College and Arlington Community Schools Board of Education to collaborate in the development and implementation of the advanced manufacturing pipeline program. We look forward to a successful partnership that will benefit students, educators, and the manufacturing industry.

Please signify your agreement to the terms outlined herein by signing and returning a copy of this MOU.

Sincerely,

DocuSigned by:

Dr. Tracy D. Hall

Southwest Tennessee Community College

James B. Mayo 4/15/2024
Arlington Community Schools Board of Education
Superintendent

Macon Cove Campus • Union Avenue Campus • Fayette Site • Gill Center • Maxine A. Smith Center • Millington Center • Whitehaven Center

Southwest Tennessee Community College, a Tennessee Board of Regents institution, is an affirmative action/equal opportunity college.

Zoom Out

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SOUTHWEST

TENNESSEE COMMUNITY COLLEGE

P.O. Box 780 • Memphis, TN 38101-0780 • (901) 333-5000 • www.southwest.tn.edu

April 27, 2024

RE: MEMORANDUM OF UNDERSTANDING

We are pleased to establish a partnership between Southwest TN Community College and Houston High School to implement an advanced manufacturing pipeline program aimed at preparing students for careers in the manufacturing industry.

This Memorandum of Understanding (MOU) outlines the terms and conditions of our collaboration:

1. Objective: The primary objective of this partnership is to develop and implement an advanced manufacturing pipeline program that spans from the K-12 education space to post-secondary education, providing students with hands-on learning experiences and industry exposure.

2. Commitment of K-12 Partner:

- a. Participate in the development and implementation of exploratory prep courses for students in grades 9 and 10.
- b. Facilitate the enrollment of eligible students in the Mechatronics Certificate program during their 11th and 12th grade years.
- c. Support the administration of summer enrichment programs, including robotics boot camps, by providing access to facilities and resources.
- d. Encourage faculty participation in professional development opportunities to earn industry certifications.

Commitment of Educational Institution:

- a. Develop and deliver exploratory prep courses and the Mechatronics Certificate program in collaboration with K-12 partners.
- b. Coordinate logistics for student enrollment, curriculum delivery, and program evaluation.
- c. Facilitate professional development opportunities for K-12 faculty to earn industry certifications.
- d. Administer the summer enrichment programs, ensuring alignment with industry standards and objectives.

4. Collaborative Efforts:

- a. Both parties will work collaboratively to design and deliver curriculum content, ensuring relevance to industry needs and standards.
- b. Regular communication and meetings will be held to assess progress, address challenges, and identify opportunities for program enhancement.

Macon Cove Campus • Union Avenue Campus • Fayette Site • Gill Center • Maxine A. Smith Center • Millington Center • Whitehaven Center

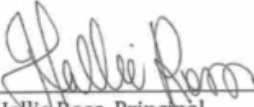
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5. Duration: This MOU shall be effective from July 1, 2024, and shall remain in effect until July 1, 2025. It may be renewed by mutual agreement of both parties.

7. Confidentiality: Both parties agree to maintain the confidentiality of any proprietary information shared during the course of this partnership.
This MOU represents the commitment of Southwest TN Community College and [Name of K-12 Partner] to collaborate in the development and implementation of the advanced manufacturing pipeline program. We look forward to a successful partnership that will benefit students, educators, and the manufacturing industry.

Please signify your agreement to the terms outlined herein by signing and returning a copy of this MOU.



Hallie Ross, Principal
Houston High School

DocuSigned by


Dr. Tracy D. Hall, President
Southwest Tennessee Community College

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Dear Riviana Foods,

RE: MEMORANDUM OF UNDERSTANDING

We are pleased to initiate a partnership between Southwest TN Community College and Riviana Foods to establish an advanced manufacturing pipeline program aimed at preparing students for careers in the manufacturing industry.

This Memorandum of Understanding (MOU) outlines the terms and conditions of our collaboration:

Objective: The primary objective of this partnership is to create an advanced manufacturing pipeline program that spans from the K-12 education space to post-secondary education, providing students with hands-on learning experiences and industry exposure.

Riviana Foods:

- a. Provide tours of partner facilities for students and educators from the K12 partners.
- b. Visit our K-12 schools to interact with students and provide insights into the manufacturing industry.
- c. Offer guidance and work-based learning opportunities, such as seminars and job shadowing experiences, to students participating in the program.
- d. Join and participate in the Mechatronics Advisory Board.

Commitment of Educational Institution:

- a. Develop and implement exploratory prep courses and the Mechatronics Certificate program in collaboration with industry partners.
- b. Facilitate professional development opportunities for K-12 faculty to earn industry certifications.
- c. Coordinate planning for facility tours, school visits, and work-based learning opportunities.
- d. Administer the summer enrichment programs, ensuring alignment with industry standards and objectives.

Collaborative Efforts:

- a. Both parties will work collaboratively to design and deliver curriculum content, ensuring relevance to industry needs and standards.
- b. Regular communication and meetings will be held to assess progress, address challenges, and identify opportunities for program enhancement.

Termination: Either party may terminate this MOU with 30 days' written notice. Termination shall not affect any ongoing obligations or commitments.

Confidentiality: Both parties agree to maintain the confidentiality of any proprietary information shared during this partnership.

This MOU represents the commitment of Southwest TN Community College and Riviana Foods to collaborate in the development and implementation of the advanced manufacturing pipeline program. We look forward to a successful partnership that will benefit students, educators, and the manufacturing industry.

Please signify your agreement to the terms outlined herein by signing and returning a copy of this MOU.

Southwest Tennessee Community College:

DocuSigned by:
Dr. Tracy D. Hall 4/30/2024

Dr. Tracy D. Hall,
President

Date

Riviana Foods

Mark E. Corbin

Mark Corbin,
Senior Human Resource Manager

Date – 4/30/24

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Dear Kent Cates, LLC,

RE: MEMORANDUM OF UNDERSTANDING

We are pleased to initiate a partnership between Southwest TN Community College and Kent Cates, LLC to establish an advanced manufacturing pipeline program aimed at preparing students for careers in the manufacturing industry.

This Memorandum of Understanding (MOU) outlines the terms and conditions of our collaboration:

Objective: The primary objective of this partnership is to create an advanced manufacturing pipeline program that spans from the K-12 education space to post-secondary education, providing students with hands-on learning experiences and industry exposure.

Responsibility:

- a. Provide tours of partner facilities for students and educators from the K12 partners.
- b. Visit our K-12 schools to interact with students and provide insights into the manufacturing industry.
- c. Offer guidance and work-based learning opportunities, such as seminars and job shadowing experiences, to students participating in the program.
- d. Join and participate in the Mechatronics Advisory Board.

Commitment of Educational Institution:

- a. Develop and implement exploratory prep courses and the Mechatronics Certificate program in collaboration with industry partners.
- b. Facilitate professional development opportunities for K-12 faculty to earn industry certifications.
- c. Coordinate planning for facility tours, school visits, and work-based learning opportunities.
- d. Administer the summer enrichment programs, ensuring alignment with industry standards and objectives.

Collaborative Efforts:

- a. Both parties will work collaboratively to design and deliver curriculum content, ensuring relevance to industry needs and standards.

Appendix C

List of Poorest ZIP Codes in Metro Memphis						
Rank	Map Key	Zipcode	Zip Name	County	Adjusted Gross Income	Median Household Income
1		<u>38126</u>	<u>Memphis</u>	Shelby	\$22520	\$14548
2		<u>38108</u>	<u>Memphis</u>	Shelby	\$25180	\$20747
3		<u>38106</u>	<u>Memphis</u>	Shelby	\$26070	\$24007
4		<u>38127</u>	<u>Memphis</u>	Shelby	\$27460	\$27589
5		<u>38114</u>	<u>Memphis</u>	Shelby	\$28040	\$25431

Census Tracts in Persistent Poverty: 2015-2019

Tennessee	Shelby Count	47157	47157001400
Tennessee	Shelby Count	47157	47157001500
Tennessee	Shelby Count	47157	47157001900
Tennessee	Shelby Count	47157	47157002000
Tennessee	Shelby Count	47157	47157002100
Tennessee	Shelby Count	47157	47157002400
Tennessee	Shelby Count	47157	47157002500
Tennessee	Shelby Count	47157	47157002700
Tennessee	Shelby Count	47157	47157002800
Tennessee	Shelby Count	47157	47157003000
Tennessee	Shelby Count	47157	47157003600
Tennessee	Shelby Count	47157	47157003700
Tennessee	Shelby Count	47157	47157003800
Tennessee	Shelby Count	47157	47157003900
Tennessee	Shelby Count	47157	47157004500
Tennessee	Shelby Count	47157	47157004600
Tennessee	Shelby Count	47157	47157005000
Tennessee	Shelby Count	47157	47157005300
Tennessee	Shelby Count	47157	47157005500
Tennessee	Shelby Count	47157	47157005700
Tennessee	Shelby Count	47157	47157005800
Tennessee	Shelby Count	47157	47157005900
Tennessee	Shelby Count	47157	47157006000
Tennessee	Shelby Count	47157	47157006200
Tennessee	Shelby Count	47157	47157006500
Tennessee	Shelby Count	47157	47157006700
Tennessee	Shelby Count	47157	47157006800
Tennessee	Shelby Count	47157	47157007000
Tennessee	Shelby Count	47157	47157007810
Tennessee	Shelby Count	47157	47157007821
Tennessee	Shelby Count	47157	47157007822
Tennessee	Shelby Count	47157	47157007900