SOUTHWEST AEROSPACE & MANUFACTURING STRATEGIC WORKFORCE INITIATIVE

STACKABLE CREDENTIAL PATHWAYS

SOUTHERN UTAH UNIVERSITY SOUTHWEST TECHNICAL COLLEGE

- ASSEMBLY MECHANIC
- FABRICATORS
- SHEET METAL MECHANICS
- INDUSTRIAL MACHINERY MECHANIC
- WELDERS, CUTTERS, SOLDERERS, & BRAZERS

Mid-level Yearly Salary*

$28,880–49,920

Entry Level Yearly Salary*

$18,720–37,440

OFF-RAMP TO INDUSTRY

HIGH SCHOOL WITH TECHNICAL TRAINING & CERTIFICATES

CERTIFICATES

Certified Solidworks Associate (CSWA)
AutoCAD Associate
Inventor Associate

CONCURRENT ENROLLMENT COURSES

INMA 0001 Industrial Robotics & Manufacturing
SHML 0001 Sheet Metal
SWWL 1001 Introduction to Welding
SWWL 1002 Advanced Welding
ENGR 1010 Engineering in the 21st Century
ENGR 1030 Computer Assisted Drafting
CCET 1010 Engineering Technology Graphics
CCET 1040 Computer Aided Design

IRON COUNTY SCHOOL DISTRICT · SOUTHWEST TECH · SUU SOUTHERN UTAH UNIVERSITY

- SUPERVISORS OF MECHANICS, INSTALLERS, AND REPAIRERS
- SUPERVISORS OF PRODUCTION AND OPERATING WORKERS
- ELECTRICAL AND ELECTRONICS DRAFTERS
- ENGINEERING TECHNICIANS

Mid-level Yearly Salary*

$52,000–62,400

Entry Level Yearly Salary*

$31,200–48,680

OFF-RAMP TO INDUSTRY

SUU AAS/STC CERTIFICATES

ASSOCIATE DEGREES

CAD/CAM Technology AAS
General Technology AAS
Pre-Engineering APE

CERTIFICATES

Industrial Maintenance & Automation
Welding Essentials
Production Welding
Structural Steel & Pipe Welding
Aircraft Assembler

SOUTHWEST TECH · SUU SOUTHERN UTAH UNIVERSITY

- COST ESTIMATORS
- INDUSTRIAL ENGINEERS
- INDUSTRIAL PRODUCTION MANAGERS
- AEROSPACE ENGINEERS
- QUALITY ENGINEERS
- CNC PROGRAMMERS
- MANUFACTURING PLANNING ENGINEERS

Mid-level Yearly Salary*

$47,840–101,920

Entry Level Yearly Salary*

$37,440–54,080

OFF-RAMP TO INDUSTRY

SUU BA/BS DEGREES

BACHELOR'S DEGREES

Engineering Technology Composite CAD/CAM Emphasis BA/BS

Engineering BS

SUU SOUTHERN UTAH UNIVERSITY

ON-RAMPS SERVING IRON, BEAVER, GARFIELD, KANE, PIUTE, SEVIER, SAN PETE, JUAB, MILLARD, AND WASHINGTON COUNTIES

* Salary levels were benchmarked against local company salary data.

Southwest Aerospace and Manufacturing Strategic Workforce Investment

Executive Summary

Southern Utah University (SUU) in partnership with Southwest Technical College (STC), Iron County School District (ICSD), MSC Aerospace and the Southern Utah Manufacturing Association (SUMA) submit this request for Strategic Workforce Investment funding. We will build upon and extend the current successful Utah Aerospace Pathway (UAP), a high school to technical college to job placement pathway partnership between ICSD, STC and MSC Aerospace to include degrees offered by SUU. Through this effort we provide the opportunity for stackable credentials with multiple entry points and exit points to support the aerospace and manufacturing industry in southern Utah.

The credentials begin with high school training and concurrent enrollment, and extend to additional certificates/certifications, associate and bachelor's degrees articulated through southern Utah school districts, to STC and/or SUU. These trained and educated students would supply skilled labor for the growing aerospace and manufacturing base here in southern Utah, meet the Governor's workforce goals, contribute to the Governor's rural initiative, 25k Jobs and celebrate 2018 as the Year of Technical Education.

The Need

Governor Herbert stated, "All students, urban, suburban, and **rural** need equal access and opportunities at an early age or other opportunities are lost and impact them and generations to follow."

The southwest portion of Utah is rural with unique needs. It is a vast area with many miles between businesses and schools. The number of jobs and the number of students within this region are low when compared to the Wasatch Front. These low numbers mean the need for an educated and trained workforce is even more critical for the local economy. For example, the impact of one successful skilled job placement in Iron County has the same economic impact as 11.48 skilled job placements in Salt Lake County. This Southwest Aerospace and Manufacturing Strategic Workforce Investment, (SAMSWI) will prepare individuals for high growth and high wage jobs to meet local aerospace and manufacturing needs, critical to grow the local economy.

Rural southern Utah lags behind the overall state scores in median income and per capita income, and most counties served by this proposal have higher unemployment rates and a greater percent of persons in poverty. While the focus of SAMSWI is to build our Iron County job placement and 9 additional southern Utah counties in SUU's service area. These counties include Beaver, Garfield, Kane, Piute, Sevier, San Pete, Juab Millard, and Washington and would benefit greatly by this initiative. Businesses are attracted to Iron County and the nearby region because of the accessibility of transportation (highway, rail and air), low criminal activity, high quality of living and the potential for a well-educated and trained workforce which we provide.

	Statewide	Iron	Beaver	Garfield	Kane	Piute	Sevier	Sanpete	Juab	Millard	Washington
Median Income	$62,961	$45,118	$50,492	$45,509	$47,530	$39,507	$48,711	$46,929	$55,201	$52,206	$54,398
Per Capita Income	$39,308	$27,037	$34,983	$34,084	$36,244	$27,399	$30,175	$26,808	$31,206	$33,522	$31,368
Unemploy-ment Rate	3.4%	4.3%	5.0%	8.4%	3.8%	6.0%	4.4%	3.9%	3.6%	3.3%	3.7%
Persons in Poverty, Percent	10.2%	18.4%	8.9%	10.9%	10.6%	17.7%	13.8%	16.8%	10.6%	11.2%	12.5%
Population Increase	2.0%	3.4%	1.9%	-0.01%	3.0%	-2.5%	1.6%	2.1%	4.2%	.4%	3.1%
Relative Rural to Urban Job Ratio 2016	1	11.48	81.7	105.04	73.92	350.24	25.74	19.18	51.63	42.64	Not listed
Year-Ago Numeric Change in Manufacturing Jobs	4,640	189	6	1	13	0	36	1	45	4	302

Figure 1. Comparative economic data indicators between Utah overall and southern Utah counties from Department of Workforce Services, U.S. Census Data and Utah Governor's Office of Economic Development.

In order to combat these lagging indicators, opportunities for residents to earn more must be addressed. To meet these needs, we propose a combination of outreach and gathering activities; outreach to the communities to offer resources, and gathering individuals to get needed training to improve their economic well-being. In a statement from the Department of Workforce Services, "In general, the more education, the higher the wage." And also, "Technical and management skills equal higher wages." (https://jobs.utah.gov/wi/data/occupation/occupationalwages.htmla). Thus, the outcome from this initiative is to offer a stackable credential education plan focusing on aerospace technology and manufacturing in southwestern Utah.

According to the *2015 Economic Report to the Governor,* prepared by the Utah Economic Council, the tech sector is having a transformative effect in Utah. Investments in this area in 2013 were over $100 million and total venture capital investments were around $1 billion in 2014. Jobs in this segment pay 167 percent of the Utah average annual wage.

Project Description

This proposal is building on the existing successful UAP Program developed between ICSD, STC and MSC Aerospace Company. The initiative addresses both traditional and non-traditional students as they work toward educational and workforce goals.
We propose to hire an Engineering/Engineering Technology Faculty to complete and coordinate all the items listed below. Each partner has personnel assigned to some aspect of these tasks. This individual would do all of the following and is a priority of the funding.

- Support and recruit students for the SAMSWI
- Improve the effectiveness and increase participation in concurrent enrollment programs within the school districts.

- Make students aware of articulation agreements between partners, recruit, mentor and support students through completion of their chosen credentialed pathway.
- Develop articulation agreements between partners as programs evolve.
- Train, mentor and support high school instructors and counselors so they are proficient with the curriculum and career options available to students. Completed through bi-semester visits and summer workshops.
- Develop and coordinate job shadowing, internships and industry led projects between the partners to provide students with real world experience.
- Develop a new hands-on manufacturing class for SUU CAD/CAM Engineering Technology students. This course requires coordination between all partners. Existing facilities will be used, but new tools and equipment are required, (reference budget).
- Specialized training for SUU and STI professors/instructors. First priorities are Verisurf Portable CMM and Creaform 3D Scanner.

It also incorporates the concurrent enrollment offered by SUU and STC to all its service area school districts.

The courses offered as concurrent enrollment by STC for this program are:

- INMA 0001 Industrial Robotics & Manufacturing
- SHML 0001 Sheet Metal
- SWWL 1001 Intro to Welding
- SWWL 1002 Advanced Welding

The courses SUU offers as concurrent enrollment directly related this proposal (aerospace and manufacturing) are;

- ENGR 1010 Engineering in 21st Century,
- ENGR 1030 Computer Assisted Drafting,
- CCET 1010 Engineering Technology Graphics,
- CCET 1040 Computer Aided Design

SUU will retrofit an existing lab space into a Makerspace. The Makerspace will house manufacturing equipment, a design station and work space for industry professionals to work with faculty and students on design and manufacturing projects and cultivate new and innovative ideas. This space will also be ideal for the adaptation of CCET1030 Intro to CAD/CAM 3D Design with manufacturing emphasis.

An SAMSWI Advisory Committee will convene annually to review progress toward the goals of this project consisting of the following members:

- Chuck Taylor, President of SyberJet Aircraft
- Megan Ralphs, HR Director, MSC Aerospace; Southern Utah Manufacturing Association
- Richard Cozzens, Southern Utah University Faculty, Engineering Technology
- Brad Cook, Southern Utah University Provost
- Will Pierce, Vice President of Instruction and Accreditation, Southwest Technical College
- Greg Sanders, Career and Technical Education Director, Iron County School District

As previously mentioned, a key component to the success of this project is the hiring of an Engineering Technology Faculty to increase the diversity and capacity of the department and be in a position to make the changes necessary to create an operational pathway for students to progress through multiple entry points through completion of their educational goals. With the improvement of the economy and the increase of jobs the CAD/CAM Engineering Technology program has seen increases in students in this major. At present the department is using adjunct faculty and faculty overloads for twelve courses. The Department of Engineering and Engineering Technology Advisory Committee has determined that our graduates of this program need to be accredited by the Accreditation Board for Engineering and Technology (ABET), and the department is in the process of applying for that accreditation. A barrier to this accreditation is that this major relies too heavily on adjunct faculty rather than tenure track professors. Funding this position will support the university strategic plan.

Below is an example of the successful outcomes of the work done through Utah Clusters Acceleration Partnership funding over the last three years. See figure below.

Utah Cluster Acceleration Partnership and Job Placement History

Partner	Institution Type	2016 Student Hires
Southern Utah University	Post-Secondary Education	
Southwest Technical College	Post-Secondary Education	
Iron County School District	K-12 Education	
Southwest Regional CTE Directors	K-12 Education	
Washington County School District	K-12 Education	
Utah Manufacturing Association (UMA)	Industry Trade	
Southern Utah Manufacturing Association	Industry Trade	
Metalcraft Technologies	Industry	9
SyberJet	Industry	13
Smead Manufacturing	Industry	17
Staheli West	Industry	2
Wilson Electronics	Industry	6
GAF	Industry	2
WL Plastics	Industry	2
Genpak	Industry	2
RAM Company	Industry	2
MCM Engineering	Industry	3
AMPAC	Industry	3
Utah State Office of Education	Government Agency	
United States Forest Service	Government Agency	3
TOTAL		**64**

Our Industry Partner MSC Aerospace

MSC Aerospace (comprised of MetalCraft Technologies, SyberJet Aircraft and Cedar Building Associates) is poised for immediate growth at all employment levels and will be looking to our community for the trained personnel it seeks. This expansion of the SAMSWI to include SUU degrees will assure the trained talent they need and is the focus of this initiative. While MSC Aerospace will be our key partner, providing internships, job shadowing and career opportunities, other companies locally and within the state are seeking personnel with the training we are providing including WL Plastics, ATK, Boeing, MCM Engineering and Smead Manufacturing.

MSC Strategic Hiring

Job Categories	2018	2019	2020	2021
Assembly Mechanics	4	4	4	4
Structure / Sheet Metal Mechanics	10	12	12	14
A&P Mechanics	1	1	1	1
Quality Inspectors	1	1	2	2
Assembly Inspectors	1	2	2	2
Assembly Planners	2	2	2	2
CNC Mill/Lathe Operators	1	2	2	2
CNC Programmers	1	1	1	1
Fabricators	4	5	5	7
Manufacturing Planning Engineers	2	3	4	5
Total Net New Hires	**27**	**33**	**35**	**40**

Stackable Sequence of Credentials

The students completing the SAMSWI have the option to go straight to work upon graduation from high school. They also have the option to continue their education through STC or SUU. Whether students come to this program through high school training or as traditional or non-traditional students, this program will facilitate and support their educational choices.

These individual courses are the on-ramps to a Certificate of Proficiency, an Associate Degree and/or a Bachelor Degree offered at Southern Utah University.

These stackable credentials will be supported by four (4) key ways:

First, for Certificates earned at STC that require 900+ clock hours, SUU will award 30 credit hours toward an appropriate Associate of Applied Science (AAS) degree. This is consistent with the exiting 15 articulation pathways that are already approved between STC and SUU (ranging from Accounting to Computer Science to Culinary Arts).

Second, for Certificates earned at STC that require fewer than 900 clock hours, SUU will grant an appropriate number of credit hours (consistent with Regent policy) that will count toward the attainment of an appropriate Associates degree. For example, a Certificate in Industrial Maintenance & Automation that requires 630 clock hours will articulate into SUU as approximately 21 credits toward an appropriate Associates degree.

Third, for individual courses completed at STC, SUU will grant credit according to the national definition of the Carnegie credit hour, which is approximately 3 credits for every 135 clock hours of training. Therefore, the Welding Technician–Interim Level course that requires 130.5 clock hours will articulate into SUU as a 3-credit course. That 3-credit course can then be applied to an appropriate Associate of Applied Science degree.

Fourth, and finally, every Associate degree earned at SUU (between 60-69 credits) can be applied to earning a Bachelor's degree, ranging from a Bachelor's degree in Engineering Technology all the way up to the Bachelor of Science in Engineering. (Note: SUU is currently

waiting for approval for a new Bachelor's degree in Mechanical Engineering; once approved, all Associate degrees will also feed into this new Mechanical Engineering degree.)

Programs at Southern Utah University (On-Ramps: High School or Post-secondary Education)	**Enrollment**	**Attainment**	**Job Placement (Off-Ramps into Industry)**
Certificates/Certifications			
Certified Solidworks Associate (CSWA)	130	126	2
AutoCAD Associate	92	92	2
Inventor Associate	24	24	0
Associate Degrees			
Pre-Engineering A.P.E	2	2	0
CAD/CAM Technology A.A.S.	3	3	1
General Technology – (various manufacturing emphases)	New Program		
Bachelor's Degree			
Engineering Technology Composite –CAD/CAM Emphasis, B.S./B.A	98	95	90
Engineering B.S.	152	150	135
Mechanical Engineering B.S	New Program		

Currently, we have students in the pipeline at both SUU and STC and shown below are the courses, hours or credits awarded, enrollment, attainment numbers and estimated job placement at the end of each of these pathways for 2017. Based on our history we expect to meet or exceed these numbers.

Single Course Offerings/Concurrent Enrollment Offerings					
PROVIDING ORGANIZATIONS	**COURSE NAME**	**Hours/ Credits**	**Enrollment**	**Attainment**	**Job Placement**
Southwest Technical College	Industrial Robotics and Manufacturing	130.5	29	26	0
Southwest Technical College	Sheet Metal (Aerospace Pathway)	65.25	10	10	4
Southwest Technical College	Welding Technician – Entry Level	65.25	159	142	0
Southwest Technical College	Welding Technician – Interim Level	130.5	83	77	0
Southwest Technical College	Electrical Safety, Meters, and Motor Controls (Adult Class)	60	7	7	5
Southwest Technical College	Industrial Safety Essential Skills (Adult Class)	60	14	14	7
Southern Utah University	ENGR 1010 Engineering in 21st Century	3	94	94	0
Southern Utah University	ENGR 1030 Computer Assisted Drafting	3	130	126	2
Southern Utah University	CCET 1010 Engineering Technology Graphics	3	82	79	0
Southern Utah University	CCET 1040 Computer Aided Design	3	92	92	2
Southern Utah University	EET 1700 Circuit Analysis	3	39	37	3
Southern Utah University	EET 2750 PC Hardware	3	40	40	1
Total			779	744	24

Project Timeline

Year 1:

- Upon notification of award, we will post the position opening for a July 1 hire for the Engineering Technology Faculty position.
- The CCET 1030 Manufacturing Course will have new curriculum and outcomes. This course will be taught once each semester at SUU.
- The Engineering Technology Faculty will make visits to the schools in the service area.
- We will prepare and notify teachers about the summer workshop for Summer 2018.
- Articulations between STC and SUU will be developed on courses in aerospace and manufacturing pathways.
- The first year of specialized training offered to SUU and STC professors/instructors would be to train on the Verisurf Portable CMM. This will insure these professionals have the most current knowledge when interacting with students and industry representatives. MSC Aerospace and other southern Utah businesses will offer job shadowing and internship opportunities.
- The Makerspace will be retrofitted and equipment installed and be operational spring/summer 2019.
- ABET Accreditation review will be initiated.

Year 2:

- The second year additional articulation agreements will be developed between SUU and STC.
- Based on our assessment findings in the first year we will adjust our activities to meet the needs in our service area with regards to courses, school visits and student outcomes. Summer workshop will be conducted for these teachers.
- Based on assessment findings the program will be adjusted.
- SUU and STC professors/instructors will be trained on Creaform 3D Scanner operations.
- MSC Aerospace will continue to offer job shadowing and internship opportunities and conduct offer tours for elementary and middle school field trips.
- Student pre and post assessments will be proctored at STC and SUU.

Year 3:

- Based on our assessment findings in the second year we will adjust our activities to meet the needs in our service area with regards to courses, school visits and student outcomes.
- The Engineering Technology Faculty will make visits to the schools in the service area sites and conduct summer training
- The third year of specialized training will be determined with advisement of the boards over SUU and STC insuring we are meeting the current needs of our community.
- Articulation agreements will be developed between the partners as needed..
- MSC Aerospace and additional partners will continue to offer job shadowing and internship opportunities and in the third year will offer tours for elementary and middle school field trips.
- Student pre and post assessments will be proctored at STC and SUU.

Budget and Justification

Budget	One Time Costs, FY 2019	Ongoing Funding FY 2019	Ongoing Funding FY 2020	Ongoing Funding FY 2021	Total
Grant Request					
Salary Faculty		$87,000	$87,000	$87000	$261,000
Salary Summer Workshop		$6,300	$6,300	$6,300	$18,900
Course Development	$9,667				$9,427
Student Workers		$5,500	$5,500	$5,500	$16,500
Benefits Faculty		$36,540	$36,540	$36,540	$109,620
Course Development	$2,175				$2,175
Benefits Summer Workshop		$1,418	$1,418	$1,418	$6,374
Benefits for student		$578	$578	$578	$1,733
Salaries Wages and Benefits	**$11,842**	**$137,335**	**$137,335**	**$137,335**	**$423,847**
Printing		$1,000	$1,000	$1,000	$3,000
Teacher stipends for summer workshop		$3,000	$3,000	$3,000	$9,000
Specialized Faculty Training for SUU/STC		$5,000	$5,000	$5,000	$15,000
Web Design		$1,000	$1,000	$1,000	$3,000
Go To Meeting		$300	$300	$300	$900
Workstation	$3,500				$3,500
Two monitors with graphics cards	$1,500				
laptop/portable device	$2,800				$2,800
Plotter Printer	$4,200				$4,200
Summer Workshop expenses, supplies		$2,000	$2,000	$2,000	$6,000
Makerspace tools and supplies	$8,720				
Current Expenses	**$20,720**	**$12,300**	**$12,300**	**$12,300**	**$57,620**
Classroom Retrofit	$90,000				$90,000
Construction	**$90,000**	**$0**	**$0**	**$0**	**$90,000**
Visit CE sites & DWS offices recruiting		$1,014	$1,014	$1,014	$3,042
Per diem		$576	$576	$576	$1,728
Hotel		$960	$960	$960	$2,880
Attend job fairs		$500	$500	$500	$1,500
Travel	**$0**	**$3,050**	**$3,050**	**$3,050**	**$9,150**
Total Budget	**$122,562**	**$152,685**	**$152,685**	**$152,685**	**$580,615**

Budget Justification

One time funding request:

1. **Salaries**

   One manufacturing course will be created that will be taught in the Engineering Technology Major at SUU. Students from STC will access this course through articulation. One month salary will be paid to an engineering faculty member to develop the curriculum for this course as a one-time expense of $9,667.

2. **Benefits**

   Benefits for the overload to faculty in the summer is calculated at 22.5% and includes retirement, FICA, Social Security and Workman's Compensation, $2,175 for the faculty teaching the summer workshop.

3. **Current Expenses**

   A design space will be created in the Makerspace for industry professionals to meet with faculty and students to develop prototypes using Makerspace equipment. One time purchases of an industry equivalent workstation with professional licensed software, $3,500. Two monitors with graphics cards are requested at $1,500. As the Engineering Technology Faculty will be traveling to partner meetings and schools around southern Utah, we also request a laptop computer or other portable device, $2,800. A plotter/printer will also be purchased for the workspace, $4,200.

   While much of the equipment for the Makerspace will come from various places on campus, the space lacks the tools and storage to make the space operational. We anticipate purchasing electric and manual toolsets, benches, cabinets, white boards, monitors, safety glasses, first aid kits, and electrical cords. $8,720.

   Total Current Expense: $20,720

4. **Construction**

   A lab in the Technology Building, (TH106) will be retrofitted to be used for a Makerspace and it will also be the classroom for the CCET 1030 Intro to CAD/CAM 3D Design class. The greater part of the space will be an equipped lab and teaching space. A portion of this space will be designated for meeting, and design space. The faculty will oversee the Makerspace and will meet with industry professionals by appointment to design and prototype parts. Cost for construction to retrofit the space: $90,000.

   Total One Time Costs: $122,562.

Annual Expenses Years 1-3

1. **Salaries and Wages**
   In the first year an SUU faculty in Engineering Technology will be assigned/hired permanently to teach in the Department of Engineering and Engineering Technology, oversee and teach technical concurrent enrollment courses, design business and community outreach activities including internships, industry tours, arrange for specialized training and testing, and supporting the high school technology and engineering teachers. This person will also manage the progress of students in the pipeline and beyond into careers for the reporting obligations of this program. The person for this job will require a unique set of skills in engineering, technology and curriculum development. As a faculty position the person will need to have a PhD in engineering and technical education and curriculum development. This position requires a proven record of quality teaching, project management skills and substantial background working with Utah high schools and concurrent enrollment. This person will also need substantial industry background so they can relate to the workplace requirements. This position with these skills and background require a salary of $87,000 each year.

   Each year a faculty or industry professional will be selected to develop and deliver a summer workshop to train high school teachers in a high demand area of the pathway program. One summer month's pay is budgeted for the person, $6,300.

   One student worker will assist the Engineering Technology Faculty with assessments, communications and reporting. The student will be paid $11 per hour and work 500 hours annually, $5,500.
   Total Salary and Wages: $98,800.

2. **Benefits**
   Benefits for the Engineering Technology Faculty include retirement, medical, dental, FICA, Social Security and Workman's Compensation. We are calculating the rate at 42% of salaries, each year, $36,540.

   Benefits for faculty overloads are calculated at 22.5% and includes retirement, FICA, Social Security and Workman's Compensation, $1,418 for the faculty teaching the summer workshop.

   Benefits for the student worker are calculated at $10.5% of wages and include FICA, Workman's Compensation and Social Security, $578.
   Total Fringe Benefits: $38,535

3. **Current Expenses**

   We request $1,000 in printing to advertise our pathway program to youth in the schools and adults especially those distant from our campuses.

The annual summer workshop will require stipends to help teachers with the costs of attending away from their homes. A stipend of $500 will be given to 6 teachers to help with lodging and gas, $3,000.

In order for faculty from SUU and STC to teach state of the art practices they will need annual training on industry standard equipment and software. Each year their advisory boards will meet to discuss the local needs for this training. Estimated cost is $5,000 per year.

To facilitate communication between the partners, industry, teachers in schools around southern Utah a license for "Go to Meeting" will be purchased, $300 and a website will be developed and maintained for posting announcements and information for teachers and students in the ten county area, $1000.

We also request $2,000 to pay for class supplies and materials for the summer workshop.

Total Current Expense: $12,300.

4. **Travel**
   Each year travel funds will be needed for the Engineering Technology Faculty to travel to the partner schools, and industry partners for meetings and trainings. Mileage is calculated at .41 per mile, ($1,014); Per Diem is calculated at $41 per day. ($576); and hotel costs are calculated at $120 per night, ($960). We also request $500 to pay for participation in regional job fairs ($500).

   Total Travel Request: $3,050.

Annual Cost to Operate the Southwest Aerospace and Manufacturing Strategic Workforce Investment: $152,685.

Total of one time costs and three years of annual costs: $580,617.

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SCOTT L WYATT
PRESIDENT

January 3, 2018

To Whom It May Concern:

The proposed Southwest Aerospace and Manufacturing Strategic Workforce Initiative will create educational pathways to support students in high school and post-secondary training. It will also prepare them for technical jobs in southern Utah. I fully support this initiative. Southern Utah University will partner with Southwest Technical College, Iron County School District and MSC Aerospace to fortify our connections as we work to strengthen articulation agreements that benefit high school, traditional and non-traditional students to prepare them for the workforce. In addition we will increase and strengthen our concurrent enrollment offerings.

This is an excellent opportunity to further our mission as a dynamic teaching and learning institution. SUU has a deep commitment to student success and developing experiential opportunities that will lead them to careers in fields of engineering and technology. This proposed initiative is fully aligned with our goals.

The credentials begin with high school training and concurrent enrollment and extend to additional certificates, associate and bachelor's degrees articulated through southern Utah school districts, to SWTC and/or SUU. These students would supply skilled labor for the growing aerospace and manufacturing base here in southern Utah and meet the Governor's workforce goals and contribute to the Governor's rural initiative.

Thank you for your kind consideration of this opportunity to enhance student learning in engineering and technical education at SUU.

Sincerely,

Scott L Wyatt

SOUTHWEST
APPLIED TECHNOLOGY COLLEGE

Strategic Workforce Initiative Review Committee

January 5, 2017

Dear Review Committee,

Southwest Applied Technology College (SWATC) is happy to support and to participate in this proposed Strategic Workforce Initiative project. We believe that the project will provide students and prospective students in our region with significantly enhanced opportunities to gain certificates and degrees in high demand technical areas. It will also assist our regional industry partners by providing an expanded pool of qualified candidates in hard to staff technical specialties.

SWATC and Southern Utah University (SUU) have a track record of working together to create pathways that begin in high school and allow students to continue though certificate and degree programs. The proposal will positively affect our pathways in Robotics and Automation, and Computer Science. We are excited by the prospect of expanding our collaboration and providing additional opportunity for our students to take advantage of stackable credentials, with multiple entry and exit points that prepare them to work in high demand, technical jobs. High school, traditional post-secondary, and non-traditional students will all benefit from this effort.

We believe that this project can help provide the structure to allow students reach their educational goals in an efficient, cost effective way. It will also expand the pipeline of students pursuing education in technical fields through targeted efforts to provide high school students with information about the excellent career opportunities that exist. Initial and ongoing training will be provided for critical high school partners to keep them updated and engaged. The project will provide the structure, training, and education/industry collaboration that will benefit our students and help create the skilled talent our regional employers need.

Sincerely,

Dennis Heaton
SWATC VP-Instruction

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MSC AEROSPACE

December 28, 2017

Governor's Office of Economic Development
Strategic Workforce Investment Grant Review Committee

Dear Review Committee:

It is with great interest that MSC Aerospace (MSC) and its subsidiaries Metalcraft Technologies and SyberJet Aircraft write this letter in support of Southern Utah University's (SUU) proposal to the Governor's Office of Economic Development, Strategic Workforce Investment initiative. SUU is a vital partner to the Iron County business community and has been a long time supporter of our organizations. With recent year's integration of the Zuken Design Software course into the SUU Electrical Engineering Technology Program and the continued offering of the Unigraphics (NX) course in Engineering, Metalcraft and SyberJet have been able to hire 8 students in various engineering roles from internships to part-time and full-time positions.

In August of 2015, SyberJet Aircraft relocated and established the wire harness assembly shop for the SJ30 light business jet at our Cedar City location. Since then, SyberJet has hired 5 new student interns from the Engineering and Engineering Technology programs at SUU. These students are getting hands-on experience in manufacturing and quality control aspects of wire harness assembly as well as direct mentorship from Quality Engineers and Electrical Technicians.

In April 2016, MSC Aerospace in partnership with the Governor's Office of Economic Development (GOED), Iron County School District (ICSD) and Southwest Technology College (SWTC) announced the expansion of the Utah Aerospace Pathways program into Iron County. Of the 13 students that began the program in the fall 2016, Metalcraft has hired 4 of those students into full-time positions and others are pursuing bachelor's degrees beyond their Aerospace Manufacturing Certificate and pursuing Engineering. Fall of 2017 brought 9 new students to this program as it begins its second year. The initiatives of Southern Utah University's UCAP proposal helped support the next step for these high school graduates to take in their Aerospace Career Pathway.

As part of our community outreach we intend to continue our successful internship partnership with SUU, offer tours for students interested in our manufacturing plant, send representatives to meet with students during SUU's Technology Fair and Engineering Week, provide specialized training and workshops as needed, and support the Aerospace Pathway. Additionally, as part of the Advisory Committee for SUU's College of Science and Engineering we will continue to meet as industry partners and give guidance to their programs. We will also continue to support the Engineering Technology Department through assisting with curriculum development and providing adjunct instructors for specific curriculum as appropriate.

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Cedar City, UT 84721

METALCRAFT TECHNOLOGIES SYBERJET AIRCRAFT CEDAR BUILDING ASSOCIATES

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The increase in S.T.E.M. programs and initiatives in Southern Utah will have major impact to our organization, as well as, our other manufacturing partners in the area. As MSC and companies anticipate the certification of the new avionics in the SJ30 and the production increase to support existing customers and the production of the SJ30, there will be an increase in positions and the need to have a pipeline of potential candidates. We are highly supportive of the efforts at SUU to provide these additional educational and career development opportunities for their students and support their initiative to obtain the funding necessary to give them the resources and tools to make these programs successful.

Sincerely,

J. Spencer Grant, President
Metalcraft Technologies

Chuck Taylor, President
SyberJet Aircraft

Megen Ralphs, HR Director
MSC Aerospace

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SOUTHWEST TECH
SOUTHWEST TECHNICAL COLLEGE

Strategic Workforce Initiative Review Committee

January 5, 2018

Dear Review Committee,

Southwest Technical College is proud to support and participate in this proposed Strategic Workforce Initiative project. We believe the project will provide students and prospective students in our region with significantly enhanced opportunities to gain certificates and degrees in high-demand technical fields. Also, it will assist our regional industry partners by providing an expanded pool of qualified candidates in fields experiencing tremendous workforce shortages.

Southwest Technical College and Southern Utah University have a positive track record of working collaboratively to create academic and career pathways which begin in high school and allows students to continue their education through certification and degree programs. The proposal will improve pathways in aerospace and manufacturing. We are excited about the prospect of expanding our collaboration and providing additional opportunities for our students to take advantage of stackable credentials which provide multiple entry and exit points preparing them for new and advanced employment in high-demand technical careers.

We believe this project can help provide the structure to allow students to reach their full educational and career goals in an efficient, cost-effective way. Also, it will expand the pipeline of students and employees seeking education in technical fields through targeted efforts to provide students with the knowledge and skills to add value to their employers and their industry. This project will provide the much needed structure, training, and collaboration between education and industry to benefit students and help to create and maintain the technical workforce desperately needed by regional employers.

Sincerely,

Will Pierce

Will Pierce, Ph.D.
Vice President of Instruction
Southwest Technical College

December 20, 2017

To whom It May Concern,

I am writing to support Southern Utah University's Strategic Workforce Initiative proposal, which would greatly expand a successful program in our community and help us build a much-needed workforce development program in Cedar City and throughout southwestern Utah. We have been extremely fortunate in Iron County to have outstanding collaboration between our school district, SUU, Southwest Technical College, and our private business community. This project will enlarge an existing educational program, creating valuable training for the manufacturing and aviation sectors of our community and, ultimately, strengthening our efforts to bolster these important industry sectors in our region.

I have had the opportunity to attend several meetings along with representatives from the University, Southwest Tech and the School district and I am very impressed with the high level of cooperation and coordination to move forward with this SWI proposal. Each of these entities are very interested in meeting the needs of MSC Aerospace and other companies in our region and throughout the state. Their efforts are very encouraging to me as I work with the Governor's Office of Economic Development and their 25K Rural Jobs Initiative, which will help rural counties like Iron County to create more employment opportunities. SUU's proposed project is an ideal plan to help meet existing business needs locally, while giving Iron County a leg up over competing areas that are also seeking to attract aerospace and manufacturing companies.

Iron County is currently working to address the problem of Intergeneration Poverty, as this issue significantly affects our county. Education and workforce development is the ideal way to tackle this issue, and SUU's plan to collaborate with the Tech College and the School District ties in directly with our IGP strategic plan.

I wholeheartedly support SUU's efforts and all of the work the University has done with our county's education partners. This project will have a tremendous positive impact in Cedar City, Iron County, and throughout the state of Utah. If it would be helpful to you, please contact me at my email or phone number listed below and I will be happy to answer any questions.

Sincerely,

Daniel B. Stewart
Director

Cedar City – Iron County Office of Economic Development
10 N Main, Cedar City Utah 84720
435-865-5115 • www.cedarcity.org

SUMA Southern Utah Manufacturing Association

January 5, 2018

Greetings;

The members employers of the Southern Utah Manufacturing Association (SUMA) write this letter to support SUU's funding proposal for the Southwest Aerospace and Manufacturing Strategic Workforce Initiative. As evidence of our support, SUMA will be donating $1,000 to SUU's Engineering and Technology Department toward funding of this initiative. This donation will be made at our 1st Quarter meeting held on January 16th, 2018.

SUU is an important partner for the manufacturing community in rural southern Utah; and we have been a longtime supporter of the Engineering and Technology Department. With a continued focus on preparing students for real-world opportunities; SUU has paved the way for students to be able to positively contribute to the community.

A focus on the career opportunities involved in today's manufacturing environment is vital not only to rural southern Utah; but also to the success of most of our companies located here. We encourage you to support the Southwest Aerospace and Manufacturing Strategic Workforce Initiative at SUU in order to make our community thrive and prosper.

Sincerely,

Spencer Douglas, SUMA President
Staheli West

Dallas Stephens, SUMA President-Elect
DHS

Mariah Rosie, SUMA Past President
BWAY Corporation

1033 N. Production Rd.
Cedar City, UT 84721

Telephone: (435) 865-1992 Ext. 16114
Facsimile: (435) 865-1993

Mariah L. Rosie, SPHR
Human Resource Manager

January 5, 2018

Greetings to the Board:

BWAY Corporation enjoys networking with Southern Utah University and has utilized the college for both internship opportunities and creating candidate pools when our technical positions become available. We rely on SUU's programs and initiatives, such as a Southwest Aerospace and Manufacturing Strategic Workforce Initiative, to find qualified and work-ready candidates.

While Southern Utah is a wonderful area to visit, the manufacturing segment is critical to those who wish to reside here. With our rural environment, students have limited opportunities for hands-on experience; having programs which allow students these real-world opportunities with the very latest of technology and automation only further their success. This initiative will prepare students to be more competent and capable of entering into careers and will empower them to be ready for the challenges these roles most surely will present. The Southwest Aerospace and Manufacturing Strategic Workforce Initiative will help students be able to achieve the skills needed to be placed in the workforce.

Please accept our strong encouragement of the Southwest Aerospace and Manufacturing Strategic Workforce Initiative, and support of SUU to help our rural area economy thrive.

Kind regards,

Mariah L. Rosie

Mariah L. Rosie
Human Resource Manager, Cedar City Operations

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December 26, 2017

To: Richard Cozzens

Southern Utah University

Re: Strategic Workforce Initiative

Dear Review Committee:

Southern Utah University's engineering program adds a much needed value to our workforce here in Iron County. WL Plastics supports the ongoing development of the Strategic Workforce Initiative by Southern Utah University (SUU). WL Plastics and SUU have worked together for years supporting the Southern Utah Manufacturing Association. We also provide class tours and presentations to SUU students including introductory manufacturing and material science courses.

WL Plastics has hired several SUU graduates and I myself am a graduate of SUU's engineering program. The education and training that I received there has enabled me to flourish in my engineering profession. We look forward to more students working through this training to help raise the quality of our Southern Utah workforce.

Dustin Langston

Manager - Engineering & Quality Assurance
WL Plastics

SUU SOUTHERN UTAH UNIVERSITY

January 4, 2018

To Whom It May Concern,

Southern Utah University (SUU) in partnership with Southwest Technical College (STC), Iron County School District, MSC Aerospace and Southern Utah Manufacturing Association (SUMA) submit this request for Strategic Workforce Investment funding. We will build upon and extend the current successful Utah Aerospace Pathway (UAP), a high school to technical college to job placement pathway partnership between Iron County School District, Southwest Technical College and MSC Aerospace to include degrees offered by SUU. Through this effort we provide the opportunity for stackable credentials with multiple entry and exit points to support the aerospace and manufacturing industry in southern Utah.

The credentials begin with high school training and concurrent enrollment and extend to additional certificates, associate and bachelor's degrees articulated through southern Utah school districts, to STC and/or SUU. These trained and educated students would supply skilled labor for the growing aerospace and manufacturing base here in southern Utah, meet the Governor's workforce goals and contribute to the Governor's rural initiative, 25k Jobs.

We are excited to bring this program to the state for consideration for funding and Board of Regent endorsement.

Sincerely,

Julia Anderson

Julia Anderson

Director of Sponsored Programs, Agreements, Research and Contracts