

**R.A. Long Foundation Grant Proposal
Metropolitan Community College
March 13, 2014**

Contact Information:

Robin McClain, MCC Grants Council
Metropolitan Community College
3200 Broadway
Kansas City, MO 64111
816.604.1124
robin.mcclain@mcckc.edu

Previously the R.A. Long Foundation supported MCC students coming from DeLaSalle or with GEDs who were interested in the areas of technical and health careers by pursuing their educational goals with first preference given to those attending MCC-Penn Valley, one of MCC's five campuses. That past support is much appreciated and MCC is pleased to provide information to the Board related to the MCC-Business & Technology campus as an avenue for garnering further support for scholarships and programmatic cost. While all MCC campuses provide a solid foundation of general education, each campus has distinctive qualities and programs.

The Business & Technology campus serves over 17,000 credit and non-credit students annually and is Kansas City's headquarters for career and technical education. The campus is a strong supporter of the STEM initiative: 1) host of the annual First Robotics Competition; 2) host of KC STEM Alliance events; 3) teach UMKC engineering students three classes in the Fabrication Lab which cover topics like shop safety, basic welding and basic machining; and 4) assist KC Art Institute students in creating their works in the Fab Lab. The campus also provides vital business services forging strong partnerships with employers by keeping abreast of the workforce needs of local employers. Its campus location near I-435 and Front Street allows easy access and houses state-of-the art labs for hands-on training for its many technical programs and "Gold Collar Jobs" that are high-demand well-paying positions that await qualified graduates. A few of those jobs include:

- Computer Networking
- Drafting and Engineering
- Welder & Pipefitter
- Machinist & CNC Programmers
- Electrical Powerline Installers & Repairers
- Environmental/Occupational Health & Safety
- Heating, Ventilation, Air Conditioning & Refrigeration
- Industrial Mechanic/Electrician

An additional program is Computer Integrated Machining and Manufacturing (CIMM). Workers use manual lathes, manual mills and computer numerical control (CNC) equipment to manufacture precision metal parts. This program, designed by MCC-BT's Precision Machining Consortium industry partners, begins with an intensive, one-semester certificate that prepares students to begin a career in manufacturing and machining. After completing the certificate, students can increase their skills and versatility by taking additional classes, such as CNC and MasterCAM, or by earning an Associates of Applied Science degree. The student cost for certificate coursework is \$5,000 while the AAS cost is \$11,000.

MCC has business consortiums who are involved in each technical program. For example, we follow parallel processes for two programs:

1. Computer Integrated Machining and Manufacturing (CIMM) -
Partial list of the CIMM Precision Machining Consortium employers: Abel Machine, LLC; ATK/Lake City Plan; Badder-Johnson; Burger and Brown Engineering, Inc.; Clay & Bailey; Computech; Pride Manufacturing; Vector Tool & Engineering; and Vista Manufacturing.
2. Industrial Technology-Industrial Maintenance (INTE-IM) -
Partial list of the INTE/IM Business Partner Consortium employers: Huhtamaki; Machine Laboratory, LLC; MeadWestvaco Calmar, Inc.; ACH Foam Technologies; Superior Linen; SOR Controls Group, Ltd.; Zerega; Kellogg; and Robbie Flexibles.

The consortiums inform curriculum based on the technical skills needed for their specific workforce. Through an MOU, each employer pays MCC an annual fee of \$200 and commits to hire one or more paid interns per CIMM and INTE-IM cohort and then considers students for permanent positions. For the latest CIMM cohort, 24 interns were hired with 22 hired into permanent positions (92% hiring rate).

The process for students and consortium employers works because of the seamless way in which the students are educated to be prepared for positions within these companies. A summary of the enrollment/education/selection/hiring process is as follows:

- a) Students enroll in the coursework - 12 weeks for CIMM, 24 weeks for INTE-IM.
- b) Near the end of the coursework, students engage in an on-campus "speed interview" with each employer to vie for internship positions. This is conducted in a special afternoon session at the campus with all employers present.
- c) Employers select and hire students into internship positions. Students are paid an hourly rate that is based on their GPA. All companies pay the same hourly rates which eliminates cross-company competition for students.
- d) The employer and MCC work together to monitor the work assignment and performance during the internship. At the completion of the internship, the student receives a grade for the capstone internship class based on performance and completes the CIMM or INTE certificate.
- e) Employers consider and hire qualified students into permanent positions.

To further illustrate employer involvement, MCC has partnered with Topeka, Kansas based Segal, Inc. (engineering and technical services) out of their Stilwell, Kansas office. Segal rents space at the campus and has networked four computers to their server for the purpose of unpaid, on-site internships for three-four drafting students. Each semester a Segal engineer comes to the Business & Technology campus once a week for four hours to provide instruction. Students are given versions of Segal design projects that are nearly finished and must use their AutoCAD skills to complete the projects reporting in each week with progress and questions. This mock exercise provides for directly germane experiences.

These relevant training and employment opportunities have a cost. This is where the R.A. Long Foundation can assist with scholarships and programmatic cost. A request of \$25,000 with \$15,000 for scholarships and \$10,000 for the program would go a long way in training Kansas City's workforce.

Student Scholarships - Our student body is diverse representing recent high school graduates, GED recipients, single parents, older returning students, and international students. More than 27 percent are people of color and 43 percent are first generation college attendees. Within the associate degree programs, 51 percent are classified as an ethnic minority, socio-economically disadvantaged and/or have educational barriers. Approximately 60 percent of students are in need of developmental education support and 49 percent receive federal Pell grants.

Although MCC's tuition is one third that of public four-year schools and a fraction of private college costs, educational costs are a barrier for a number of students. Within the past five years, the number of unemployed and underemployed students has increased significantly. Some struggle with full-time school while maintaining employment and may drop out or take a temporary stop out of the educational pursuits. Further, student loan or Pell grant defaults can result in non-qualification for such further assistance. The perfect scenario would be enough scholarship funds to graduate on schedule without any student loan debt.

Program Sustainability and Growth - Funds are needed for an electrical upgrade in the Machine Tool lab where the hands-on portion of several technical programs takes place. The electrical system modification would increase electrical capacity (ampacity) to allow for more simultaneous student access to the Computerized Numerical Control (CNC) equipment. The lab is used to its maximum capacity so students now wait in lines five to six people deep to use the equipment, decreasing the amount of practical experience. Further, MCC is turning away students. Area manufacturing companies need the trained workforce to sustain and grow. With increased ampacity we can provide additional qualified workers for the 2,500 Kansas City area manufacturers.

MCC and Missouri Department of Elementary and Secondary Education funding would purchase the equipment and supplies but funds are needed to cover the labor portion of the project. If funding is made available, we would issue an RFP and select an electrical contractor during May-June, 2014 with the work to be performed in July-August (4-6 weeks).

The MCC Foundation appreciates the R. A. Long Foundation Board of Director's consideration of this request as we continue work to transform the local workforce, provide resources for student success, and provide quality faculty and modern facilities and equipment -- all advancing individual and community betterment.

Attachments

- Success Stories

- Program Costs – MCC and Student

Success Stories demonstrating benefit of CIMM training by both students and employers

Story 1. Below are excerpts from an MCC Blog that tell the story of a successful student **and** the employer beneficiary. To view the blog go to <http://blogs.mcckc.edu/insider/?p=11864>.

Paul Ewert started the CIMM program March 4, 2013 with zero machining experience and in 10 weeks was machining airplane parts at Triumph Structures, an aerospace manufacturer in Grandview, MO. Paul is a student in the new CIMM program designed to help fill the local demand for skilled machinists. The CIMM program immerses students in the basics of lathe or mill operation for 10 weeks followed by a six-week paid internship at one of 27 local companies.

The Kansas City area is home to more than 2,500 manufactures. As manufacturing continues to grow in the United States, companies need high-skilled workers to run their high-tech machinery. "Triumph is a \$30 million a year company and we're on pace to be a \$50 million a year company in five years," says Chris Gable, Plant Manager at Triumph Structure. "That's why it is so important to have well prepared interns, like Paul, joining this industry. It takes a lot of skill, and a lot of trust on the part of the employer, to run a \$3 million machine."

"Within the first two-hours of his internship, I gave Paul a set of prints and pointed him to a machine to see what he knew," says supervisor David Godfrey. "I was amazed! Although I supervised very closely, he was able to do the set-up, machine the part, and check the quality. Paul is now working with some of our computer controlled machines and has really proven his desire to learn." Paul Ewert makes \$13.50 an hour as an intern at Triumph.

Story 2. In September 2013, KSHB TV 41 Action News reported on how the CIMM program is preparing a trained workforce for the regional manufacturing industry. To view the video go to <http://blogs.mcckc.edu/insider/?p=12560>.

MCC-BT Programs 2012-2013	Degree (D)/ Certificate (C)	Credit Hours	Current Enrollment^	Student Costs			MCC Program Costs for MCC-BT Programs (Engineering Technology, HVAC, Machine Tooling, Welding, Lineman, Industrial Technology, Welding and CISCO)
				Tuition*	Books, Fees and Supplies	Total Cost	
INTE-HVAC	C	24	33	\$ 2,208	\$ 1,262	\$ 3,470	Budgeted July 1 - June 30, 2014
INTE-HVAC (Advanced)	C	43	41	\$ 3,956	\$ 2,338	\$ 6,294	Salaries/Benefits \$2,022,577
INTE-Heating/Vent/Air Cond	D	67	117	\$ 6,164	\$ 3,979	\$ 10,143	Operational Expense/Supplies \$158,866
INTE-Industrial Electrical	C	36	55	\$ 3,312	\$ 1,949	\$ 5,261	Printing/Copying \$3,200
INTE-Industrial Maint. Cert	C	39	24	\$ 3,588	\$ 1,957	\$ 5,545	Dues/Memberships/Travel \$1,550
INTE-Lineman	D	66	23	\$ 6,072	\$ 7,041	\$ 13,113	Contracted Services \$1,500
INTE-Lineman	C	52	25	\$ 4,784	\$ 6,166	\$ 10,950	Software Expense \$15,800
INTE-Industrial Maintenance	C	64	20	\$ 5,888	\$ 4,210	\$ 10,098	Testing & Evaluation Materials \$4,500
INTE-Stationary Engineering	D	71	22	\$ 6,532	\$ 4,178	\$ 10,710	Sub-Total \$2,207,993
INTE-Industrial Electrical	C	36	9	\$ 3,312	\$ 1,949	\$ 5,261	
INTE-Instrumentation & Control	C	37	7	\$ 3,404	\$ 2,134	\$ 5,538	MoManufacturing Grant Funded Program**
INTE-Programmable Logic Control	C	40	12	\$ 3,680	\$ 2,112	\$ 5,792	Salaries/Benefits \$361,180
CSIS - Cisco Networking	C	29	20	\$ 2,088	\$ 1,945	\$ 4,033	Operational Expense/Supplies \$18,000
CSIS - Cisco Academy	C	17	13	\$ 1,564	\$ 811	\$ 2,375	Printing/Copying/Equip <\$5K \$1,000
CSIS - Cisco	D	71	45	\$ 6,532	\$ 4,324	\$ 10,856	Registration Fees & Travel \$6,000
Welding MIG/TIG Job Ready	C	23	39	\$ 2,116	\$ 1,382	\$ 3,498	Travel/Conventions \$19,000
Welding Technology & Management	D	68	39	\$ 6,256	\$ 4,567	\$ 10,823	Contracted Services \$1,600
Engineering Technology: Architecture, Civil & Electronics	D	66	32	\$ 6,072	\$ 4,360	\$ 10,432	Food/Meals & Mileage \$406,780
CIMM - Computer Integrated Machining & Manufacturing	C	20	16	\$ 1,840	\$ 1,091	\$ 2,931	Sub-Totals \$2,614,773
CIMM - Advanced Computer Integrated Machining & Manufacturing	C	39	13	\$ 3,588	\$ 4,598	\$ 8,186	Less Other Budgeted Federal & State Funding*** (\$227,477)
CIMM - Computer Integrated Machining & Manufacturing	D	64	-	\$ 5,888	\$ 3,269	\$ 9,157	
CIMM - Lathe Certificate	C	20	22	\$ 1,840	\$ 1,096	\$ 2,936	
CIMM - Mill Certificate	C	35	21	\$ 3,220	\$ 2,224	\$ 5,444	
CADD Computer Aided Drafting & Design	C	19	9	\$ 1,748	\$ 2,631	\$ 4,379	
CADD Computer Aided Drafting & Design	D	70	-	\$ 6,440	\$ 10,225	\$ 16,665	Grand Total \$2,387,296

^Contains the numbers of students who have declared a program that "resides" at MCC-BT. This is ONLY for students who have declared; thus, this does not reflect actual attendance numbers.
* Tuition Cost is based on in-district rate of \$92 per credit hour and the assumption that students start with no previous credit hours. In reality, students start with anywhere from no credit hours up to and including persons with advanced degrees.

**The U.S. Department of Labor MoManufacturingWINS grant term is 2013-2016 and provides funding at a declining level each year.

***Federal and State funding is normally received on a decreasing basis and can be eliminated all together depending upon the Federal and State budget allocation of funds.

NOTES for MCC Program Costs

Budget includes program specific expenses including instructional personnel, supplies, travel, professional memberships.

Budget excludes expenses covered by institutional funds for: 1) overhead such as maintenance and utilities; 2) district/campus support services including services for human resources processing, purchasing, enrollment, administration, and counseling/advising; and 3) renovation and major equipment purchases.

MCC Funding sources: Tuition and fees (16%); tax revenue (22%); state appropriations (21%); grants and contracts (29%); other-investment income, auxiliary services and other operating revenue (12%).