Request for Proposals for New FY19 – TRAIN Grant Projects

MASSACHUSETTS
Department of
Higher Education

COVER PAGE

Applicant Information	
Lead Applicant (Campus): Middlesex Community College **Name of Project/Project Title:** Advanced Manufacturing Training Program **Program Partners (list all):** 1) Custom Group: Custom Machine, LLC and the Center for Manufacturing Technology; 2) MassHire Lowell Career Center; 3) MassHire Greater Lowell Workforce Development Board	**Grant Focus (check):** __X__ Long-term unemployed, underemployed and new entrant adult workers **Type of Grant (check):** ____ Workforce Development
Grant Administrator: **Name:** Gabriela Boscaja **Title:** Budget Analyst **Telephone:** 978-656-3477 **E-mail:** boscaja@middlesex.mass.edu	**Institution:** Middlesex Community College **Mailing Address:** 33 Kearney Square Lowell, MA 01852

Program Information			
Total Number of Students Served Upon Implementation:	**20**	**Target Population:**	**Long-term unemployed, underemployed and new to employment**
Brief Summary of Project Outcomes: **Each participant will receive 105 hours of workforce readiness courses including math, computer skills and business communication and 130 hours of hands-on training on Advance Manufacturing equipment from a local technology provider. In addition, participants will have exposure to an Advanced Manufacturer worksite for tours, interaction with staff and career pathway discussions. Program will be independently evaluated for effectiveness and quantifiable outcomes.**			

Budget		
Total Funds Requested: **$126,225 (includes indirect)**	**Total Matching Funds (XX%):** **$10,000**	**Total Project Cost:** **$136,225 (includes indirect of $11,475)**

Authorizing/Fiscal Agent:	**For DHE Office Use:**
Name: James Mabry **Title:** President **Phone:** 978-656-3100 **Email:** mabryj@middlesex.mass.edu	

I certify that the information reported herein is accurate and complete.

James C. Mabry

Authorized Agent Signature: _____ **Date:** 9/20/18

A. **Project Abstract: Lead Applicant Information**: Contact, Judy Burke, Middlesex Community College, 33 Kearney Square, Lowell, MA 01852; Tel: 978-656-3134; email: burkej@middlesex.mass.edu

Committed Partner Organizations: Workplace: Joanna Dowling, Director, Custom Group Center for Manufacturing Technology, LLC. Role: Joanna will serve as the contact for MCC to schedule and enroll participants on-site. Custom Machine is a precision manufacturer of medical, semi-conductor and commercial components. Related to Custom Machine, the Custom Group Center for Manufacturing Technology (CMT) offers training on advanced manufacturing machines and skill development for the industry. The businesses are co-located in Woburn, MA. One Stop Career Center (OSCC): Shannon Norton, Executive Director, MassHire Lowell Career Center (LCC). Role: Shannon will assist with referrals and recruiting candidates for the 20 person cohort for the training program. Her work at the LCC brings her into contact with the long-term unemployed, the under-employed and those new to the workforce.

Summary description of project: Middlesex Community College (MCC) plans to recruit a pool of candidates and establish a cohort of 20 individuals as enrollees in an Advanced Manufacturing Training Program consisting of academic coursework and hands-on manufacturing technology skill development. Academic and workplace readiness courses (total of 105 hours) will include mathematics, computer skills, technical communication and OSHA/Safety standards. Participants will alternate classroom learning with two days on site at the CMT in Woburn as students in an intensive "*Introduction to Machine Shop Practices"* which will include learning manual and automatic mills and lathes, blueprint reading and Computer Numerical Control (CNC) operations. These skills are the stepping-stones into the world of Advanced Manufacturing and high wage employment. Each participants will receive 130 hours of a combination of instruction and hands-on machining at the CMT. Target outcomes include certificates of completion of coursework including OSHA/Safety certification as well as readiness to take the National Incident Management System (NIMS) credentialing in two AM areas. **Project timeline:** Upon grant receipt, recruitment efforts will begin utilizing the local MassHire affiliates, with emphasis on individuals who have been long-term unemployed. The academic and experiential learning will total 10 weeks. MCC academic and experiential learning will be weekdays from 9:00 a.m.to 2 p.m. Evaluation of the program will follow and all activity will be completed by June 2019. **Key project personnel**: MCC: Lisa Tuzzolo, Program Manager, Corporate Education and Training Division; Custom Group: Joanna Dowling (see above). Employer and /or campus matching funds: $10,000 in matching funds is estimated, representing daily oversight and implementation by MCC. Amount of request: $114,750; Indirect: $11,475.

A. Project Narrative

Recruiting: Working with the MassHire affiliates representing the Greater Lowell area (please see Letters of Support), both the Lowell Career Center (LCC) and the Greater Lowell Workforce Development Board (GLWDB) will aid MCC in recruiting individuals for the Advanced Manufacturing Training Program (AMTP). In the GLWB Northeast Labor Market Blueprint, Advanced Manufacturing ranks #1 in the top three industries that are the most important to the region's economic success. In a recent (August) Regional Scan, Manufacturing held the second place position with jobs available, with Raytheon topping the list of employers seeking skilled labor. The need for training in this area is great and salaries at this level are in the $75,000 range. Individuals seeking employment will be attracted to this high wage as it offers a sustainable income for a family. Recruitment will focus seeking the long-term unemployed, the under-employed and new entrants to the workforce. Generally, introductory courses for Basic Machine Shop Skills that include CNC training cost over $7,000 and run over 300 hours. People seeking this training would normally bear this expense out of pocket and any other work readiness courses, credit or non-credit, would drain personal funds. The recruitment message will highlight the course offerings free of charge to individuals participating in the AMTP and outcomes that secure several certifications and prepares students for national credentials attained through submitting documentation of skills through a federal online portal. Currently, the CMT training program, which does not include the MCC academic and work readiness counterpart, enjoys a placement rate of 84% of graduates directly into the industry.

MCC will recruit though several programs, including Adult Basic Education, which enrolls members of immigrant and refugee populations attempting to break into the workforce as new entrants, as well as individuals seeking improvement in their academic skills after being out of school for a prolonged period. People inquiring about or enrolling in MCC non-credit courses aimed at those seeking career changes or learning new skills due to being laid-off or the loss of a former job, will also be targeted. MCC recruits will be referred to the Lowell Career Center for assessment.

Academic, workplace readiness and Experiential Learning/industry skills training: The program design integrates the hands-on learning on-site at CMT with the academic and work-readiness classroom courses at MCC. Experience with workplace training has shown that retention of students is higher if they are able to apply what they have learned immediately. Being able to alternate days with working at CMT's Advanced Manufacturing site with classroom learning will promote cohort cohesion and improve outcomes.

Objectives: The overall objective is for the cohort to complete the coursework and hands-on instruction at CMT and be in position of immediate hiring by the industry and/or ready to enter the pipeline to Advanced Manufacturing. In general, all participants will have attained: 1) Improved skills in communication, ability to write and speak with familiarity with technical terms and be able to do reports; 2) Increased math skills and the ability to apply mathematics in a work-situation; 3) Explored career options and have an of the AVM industry and what job titles mean and expected skill sets; and 5) Achieved OSHA Standards Certification after coursework completion. About the Advanced Manufacturing instruction and hands on learning, all participants will have been instructed in Understanding of the Basics of Manual Milling, Basics of Engine Lathe, Blueprint Reading, Basics of Tolerance, Structure of Metals, Grinding Processes, Mechanics of CNC, Basics of CNC Machining, and Basics of CNC Turning and Intro to CMM.

Instructional Format and Student Needs: At MCC, courses will be in a classroom format, with Computer Skills (Word, Excel, Email) taught in a computer lab for improved learning. On-site at CMT will have instructors in hybrid situations of demonstrated skills using machines or diagrams and then hands-on learning. At the CMT facility, the cohort will be divided into two groups of 10 for more personal instruction. Students may be tested for level of ability before classes such as math and computer skills before assignments begin to best design content. Instructors will address adult student learning challenges and referrals may be made to Adult Basic Ed and other MCC resources.

Start and End Dates: Program will be able to begin upon receipt of funding. Recruiting will begin and the cohort assembled by January of 2019. Courses and experiential learning at CMT will be completed in a 10-week module and end before June 30, 2019. Evaluation and reporting will conclude by the end of September 2019.

Courses will be non-credit. Planned schedule of Foundational courses (FD)/Work Readiness (WR) at MCC and Advance Manufacturing (AVM) at CMT. *May be subject to change*:

Week	Monday 9 a.m. – 2 p.m.	Tuesday 9 a.m. – 2 p.m.	Wednesday 9 a.m. – 2 p.m.	Thursday 9 a.m. – 2 p.m.	Friday 9 a.m. – 2 p.m.
1	MCC FD: Computer Skills	CMT AVM: Blueprint reading	MCC FD: Computer Skills	CMT AVM: Blueprint reading	MCC FD: Computer Skills
2	MCC FD: Math	CMT AVM: Blueprint reading	MCC FD: Math	CMT AVM: Manual Milling	MCC FD: Math

3	MCC FD: Math	CMT AVM: Manual Milling	MCC FD: Math	CMT ADV: Engine Lathe	MCC FD: Math
4	MCC FD/WR: Tech Communication (oral and written)	CMT ADV: Engine Lathe	MCC FD/WR: Tech Communication (oral and written)	CMT ADV: Engine Lathe	MCC FD/WR: Tech Communication (oral and written)
5	MCC FD/WR: Tech Communication (oral and written)	CMT ADV: Metals and Tolerances	MCC FD/WR: Tech Communication (oral and written)	CMT ADV: Metals and Tolerances	MCC FD/WR: Tech Communication (oral and written)
6	MCC WR: OSHA Standards	CMT ADV: Metals and Tolerances	MCC WR: OSHA Standards	CMT	MCC WR: OSHA Standards
7	MCC WR: Career Readiness	CMT ADV: Grinding Processes	MCC WR: Career Readiness	CMT ADV: Grinding Processes	MCC WR: Career Readiness
8	CMT ADV: Grinding Processes	CMT ADV: CNC Related training	CMT ADV: CNC Related training	CMT ADV: CNC Related training	
9	CMT ADV: CNC Related training	CMT ADV: CNC Related training	CMT ADV: CNC Related training	CMT ADV: CNC Related training	
10	CMT ADV: CNC Related training	CMT ADV: CNC Related training	CMT ADV: CNC Related training	CMT ADV: CNC Related training	

In total, 105 hours will be in Foundational and Work Readiness course work and 130 hours in Advanced Manufacturing training will be provided to 20 individuals.

Credentials earned will include Certificates of Completion by both MCC and CMT, and OSHA/Safety Certification. After CMT instruction, students will be ready to log onto the National Incident Management System (NIMS) and inquire about their credentialing in two areas: 1) Management, Materials and Safety and 2) the Job Planning, Benchwork and Layout. All of these credentials boost employment appeal.

As mentioned earlier, the role of MassHire partners will be in the recruiting, and after completion, available for career placement. The Custom Group will continue association as a trainer for more

specialized instruction. Program graduates may also seek employment with the Custom Group Manufacturing division as well.

Advanced Manufacturing ranks #1 in the top three industries that are the most important to the region's economic success. The MCC AMTP will provide skilled employees for this sector in the Merrimack Valley area. In addition to Raytheon, which was seeking over 90 employees over the summer, other large Advanced Manufacturers are in the area and poised for growth in the medical and semiconductor vendor market.

Wrap Around Support Services: AMTP students will be able to use all MCC campus facilities such as the library and cafeteria and the Wellness Center. Tutoring and other support services will also be available. The AMTP coursework will aid in certification preparation and credentialing as described above.

Experiential Learning at CMT involves hands-on skill development that is transferable to other Advanced Manufacturing settings as the machining and CNC operations are standards of the industry. All coursework on site will prepare participants to meet the program objectives and improve their employment prospects to 100%.

Program measures and outcomes: The cohort will be 20 individuals and all are expected to complete the training. All will be placed in the experiential learning opportunity and receive career placement advice and counseling. The direct grant cost per participant is estimated at $5,738 per participant.

Evaluation and reporting:

The program narrative describes the essential elements of the project including the number to be recruited and begin the program, the number of program completers and their progress (with benchmarks) including certification obtained, the number of participants placed in experiential learning and the nature of that experience, as well as the number of participants and/or completers who receive full-time employment within 6 months as a result of the training and exposure to employers.

Evaluation:

MCC will use an external evaluator to measure and assess the effectiveness of the Advanced Manufacturing Training Program. While this is something that Middlesex frequently does, an evaluator dedicated solely to this project will be hired to design and conduct an evaluation specifically related to the elements of this project and the impact of these elements on the participants. Measures and benchmarks

will be identified at the beginning of the project and the evaluator will use protocols to gauge both formative progress and summative results. The evaluation will include qualitative tools such as surveys and interviews as well as quantitative data that captures the profiles of the participants, their involvement with the training features, and their outcomes. The evaluation will also focus on the trainer actions including modification that occur as a result of formative information. It is anticipated that an evaluation design specifically geared towards this project, as opposed to a pro forma protocol, will be the best way to fully describe the challenges, best practices, and insights related to this program for long-term unemployed participants seeking to enter the high demand field such as manufacturing. The required reporting will be derived primarily from this evaluation.

TRAIN Grant

State

Expense	Requested Funds	Matching Funds	Total Requested & Matching Funds	Budget Narrative
Salaries	**0**	**10,000**	**$10,000**	
Administrative		2,500	$2,500	Oversight @ $50/hr 2 hrs for 25 wks
Support Staff		7,500	$7,500	2 staff est. at $30/hr for 5 hours a week for 25 weeks
Instructional/Professional				
Other (Describe)			$0	
Payroll Tax*			**$0**	
Indirect**	**11,475**		**$11,475**	
Travel			**$0**	
Supplies and Materials	**5,000**	**0**	**$5,000**	
Curriculum Books	3,000		$3,000	books and manuals @ $150 per student
Class Suppliments	2,000		$2,000	Blue prints, other materials @ $100 per student
Other (Describe)			$0	
Subcontracts	**26,250**	**0**	**$26,250**	
Non-Credit basic skills -Faculty	26,250		$26,250	Corp Ed instructors for classrooms at $250/hr for 105 hrs
Presenters			$0	
Consultants	**3,500**		**$3,500**	Evaluation, new implementation
Tuition and Fees	**78,000**		**$78,000**	Center for Manufacturing Technology @ $300/hr for 2 sessions of 130 hrs
Equipment		**0**		
Tablets, Computers			$0	
Trade Tools	2,000		$2,000	CMT tools for machining course @ $100/student
Food			**$0**	
Transportation			**$0**	
Other INDIRECT ADDED HERE	**11,475**	**0**	**$11,475**	
			$0	
TOTALS:	**$126,225**	**$10,000**	**$136,225**	

** This program is funded by state appropriation. Indirect costs are allowed up to 10%. If funds are transferred to awardees via a child account in MMARS, applicants should plan to charge overhead expenses to this funding source up to the dollar value that is equivalent to the cost calculated by applying the

Authorizing Signature:	Frank Morello R.E.	**Date:**	9/21/18

CENTER MANUFACTURING TECHNOLOGY

30 Nashua St
Woburn, Ma 01801
P. 781-935-4940 F. 781-935-3904
www.customtrainingcenter.com

September 20, 2018

Ms. Lisa Tuzzolo

Program Manager

Corporate Education and Training

Middlesex Community College

33 Kearney Square

Lowell, MA 01852

Dear Lisa,

The Custom Group, consisting of Custom Machine, LLC and the Center for Manufacturing Technology, is looking forward to collaborating with Middlesex Community College (MCC) to provide both experiential learning opportunities and hands on training for 20 individuals enrolled in the *Advanced Manufacturing Job Training Program* coordinated by MCC.

Custom Machine, LLC, founded in 1969, currently operates a state of the art facility and manufactures quality components and assemblies for the medical, semi-conductor and other commercial markets. Efficient production is essential to meeting consumer demand and Custom Machine will provide worksite tours and discuss training needs and potential placements in the industry with participants. The Center for Manufacturing Technology will provide on-site training for participants in an introductory course in general machine shop practices. Exposure to manual milling, the engine lathe and the mechanics of CNC as well as other topics covered in this course will prepare the students for future job opportunities in the high demand field of Advanced Manufacturing.

The Custom Group has a successful history as both a regional employer and as an industry training partner. In addition to having a workforce of over 50 individuals, the Center for Manufacturing Technology has a placement rate of 84% of its graduates hired in the Advanced Manufacturing sector. Together, the companies have the capacity to partner with MCC on this exciting venture.

Sincerely,

Joanna Dowling

Director

The Custom Group Center for Manufacturing Technology, LLC

MASSHIRE
LOWELL CAREER CENTER

107 Merrimack Street • Lowell, MA 01852 • 978.458.2503

September 20, 2018

Massachusetts Department of Higher Education
TRAIN
One Ashburton Place, Room 1401
Boston, MA 02108

To Whom It May Concern:

As the Executive Director of the MassHire Lowell Career Center, I send this letter of commitment to you in regards to the proposed *Advanced Manufacturing Job Training Program* to be coordinated by Middlesex Community College. The MassHire Lowell Career Center (LCC) and MCC have a long history of collaboration. Workforce development is a core activity for both organizations and we share the goal assisting the unemployed with finding fulfilling career paths.

The MassHire Lowell Career Center provides comprehensive services for job-seekers, including career counseling, job-search workshops, case management and job placement. I understand the focus of this grant-funded initiative is to enroll people who have been among the long-term unemployed, the under-employed and those new to the workforce into courses to develop the skills necessary to pursue work in the Advanced Manufacturing field. The LCC will assist in recruiting efforts for participants and will refer potential candidates to MCC. The LCC works with several organizations in the Lowell area that work with the long-term unemployed and under-employed.

Currently, the LCC works with customers who were in manufacturing jobs but whose job skills may be outdated and will benefit from this program.

Sincerely,

Shannon Norton
Executive Director
MassHire Lowell Career Center

MASSHIRE
GREATER LOWELL
WORKFORCE BOARD

107 Merrimack St
Lowell, MA 01852
978.937.9816

September 20, 2018

Massachusetts Department of Higher Education
TRAIN Program
One Ashburton Place, Room 1401
Boston, MA 02108

To Whom It May Concern:

The MassHire Greater Lowell Workforce Board enthusiastically supports the grant application from Middlesex Community College for the Department of Higher Education's Training Resource and Internship Networks (TRAIN) grant program.

The MassHire Greater Lowell Workforce Board (GLWB) is a collaborative involving employers, educational institutions, labor groups, municipal and state officials, and community-based organizations that provides leadership, policy direction, and accountability for the local workforce development system. Working in partnership with the Chief Elected Official (Lowell City Manager), the board provides policy guidance for workforce development initiatives and is dedicated to improving and promoting economic sufficiency for the residents of Greater Lowell. By securing and allocating public and private funds for high quality, innovative, and collaborative workforce development programs, the GLWB promotes a skilled and educated workforce, meets the workforce needs of employers, and supports and sustains economic development, business competitiveness, and job creation in our region.

In the Northeast Labor Market Blueprint, advanced manufacturing is identified as one of the three priority industries in Northeast Massachusetts. The priority industries were identified through several determining factors including high number of job openings, high wages, a demonstrated skills gap, and clearly identified career pathways. The need for training in advanced manufacturing and the program described in the application will be a great opportunity for long-term unemployed and under-employed individuals.

Growth in the manufacturing sector is critical to our regional economy and supporting the offering of varied training opportunities will ensure a solid foundation to retain, attract and further develop a skilled workforce. If you have questions or require additional information, please contact me.

Sincerely,

Peter Farkas
Executive Director