

## Project Abstract

**1. Applicant Name** – Macomb Community College on behalf of the Michigan Coalition for Advanced Manufacturing (M-CAM)

**2. Applicant City/State** – Warren, Michigan

**3. Consortium Member(s) and Consortium Member State(s)** – Macomb Community College, Bay de Noc Community College, Grand Rapids Community College, Kellogg Community College, Lake Michigan College, Lansing Community College, Mott Community College, and Schoolcraft College all in Michigan

**4. Areas Served by Grant – State:** Michigan. **Counties:** Southern Michigan counties, including Berrien, Van Buren, Allegan, Kent, Ionia, Clinton, Shiawassee, Genesee, Eaton, Ingham, Livingston, Oakland, Macomb, Calhoun, Barry, Branch, Wayne, and Monroe, and Upper Peninsula counties, including Iron, Marquette, Dickinson, Menominee, Delta, Alger, and Schoolcraft. **Cities:** Flint, Grand Rapids, Lansing, as well as the rural north and sections of metropolitan Detroit

**5. Total Funding Level Requested**

**6. Sub-Total Requested Funding Amount by Consortium Member (as applicable)**

Consortium Member
Macomb Community College
Bay de Noc Community College
Grand Rapids Community College
Kellogg Community College
Lake Michigan College
Lansing Community College
Mott Community College
Schoolcraft College

**7. Project Name** – Michigan Coalition for Advanced Manufacturing (M-CAM)

**8. Project Description and List of Credentials to be Developed and Awarded** – Following extensive industry input, M-CAM will focus on the four job sectors of: 1) CNC Machining, 2) Welding/Fabrication, 3) Multi-Skilled Technician, and 4) Production Operations. M-CAM will feature an advanced manufacturing competency model that promotes job readiness skills, basic skill development, pathways to certificates/degrees, employer involvement, online/hybrid courses, education plans, prior learning assessments, and career services. Participants enter the program at multiple points based on skills and education needs. Member colleges plan to create 13 new industry-focused credentials and upgrade/modify 63 certificate and degree programs.

**New certificate programs:** Welding/Fabrication: Basic Welding, Robotic Welding and Welding Fabrication (Lansing); CNC Machining: Machine Tool Technology (Mott); Multi-Skilled Technology: Electricity and Basic Electronics, Basic Control, Fluid Power, PLC and SCADA (Bay de Noc); Mechatronics (Bay de Noc, Grand Rapids, Lansing, Mott); Multi-Skilled Technology, Multi-Skilled Technology Associate Degrees (Kellogg), Certified Production Technician (Lansing), Production (Mott).

Coalition members also will update 63 certificate and associate degree programs in the four occupational areas.

**Welding:** AWS Level 1, TIG, MIG, and Stick/Arc Welding; Welding Process Qualification, Fabrication Technician, Welding Technology, Industrial Welding, Industrial Machining Technology, General Technology, Maintenance Technology, Welding/Joining Technology.

**CNC/Machining:** Machinist CNC Technician, Tooling and Manufacturing Technology Certificate, Industrial Machining Technology Certificate, Machine Tool Numerical Control, Manufacturing Technology Machining, Machine Tool Technology Certificate, CNC Fundamentals, Advanced Manufacturing Skills Certificate, Advanced Manufacturing Certificate. Associate Degrees: Tooling and Manufacturing Technology, Industrial Welding, Machine Tool Technology, Manufacturing Technology, Mechanical Occupations Technology, Advanced Manufacturing.

**Multi-Skilled Technology:** Industrial Maintenance Technician, Battery Manufacturing Technician, Industrial Technology Certificate, Fluid Power Industrial Computing Technician, High School Vocational Program, AMTEC Certificate of Completion, Mechatronics, Operations and Process Technology, Electronics and Electrical Technology, CAD Technical Certificate, Electronic Technology Skills Certificate, Electronic Technology Certificate, Metallurgy Applied Physical Certificate, Manufacturing Electives for Associate Degree in Business. Associate Degrees: Industrial Maintenance, Industrial Technology, General Technology, Automated Systems Technology, Mechanical Occupations Technology, Electronics and Electrical Technician, CAD-Mechanical, Electronic Technology, Metallurgy and Materials Science, Materials Science, Advanced Manufacturing.

**Production Operations:** Battery Manufacturing Technician, Production Technician, Advanced Energy Storage Certificate, MSSC-CPT, Manufacturing Production, Manufacturing Skills Employment Program Certificate, Advanced Manufacturing Skills Certificate, Advanced Manufacturing Certificate. Associate Degrees: Tooling and Manufacturing, General Technology, Advanced Manufacturing.

**Proposed outcomes:**

Total Unique Participants Served: 2,738

Total Participants Completing a TAACCCT-Funded Program of Study: 1,619

Total Number of Participants Still Retained in Program of Study: 1,188

Total Number of Participants Completing Credit Hours: 1,336

Total Number of Credentials: 2,034

Total Number Enrolled in Further Education after TAACCCT Completion: 246  
Total Number Employed after TAACCCT Program of Study Completion: 1,619  
Total Number Retained in Employment after Program of Study Completion: 1,323  
Total Number Employed Who Received a Wage Increase: 360

**9. Populations to be Served** – TAA-eligible and dislocated workers, veterans, incumbent workers and others

**10. Targeted Industry(s)** – Advanced Manufacturing

**11. Employer Partner(s)** – Hanson Mold, Lovejoy-Inc., Fab Masters, Riveer, Food Tools Inc., CIM Products, Autocam Corp., Pidgeon & Clay, Roman Manuf., Kay Manufacturing, Linear Engineering, Ameriforge, NYX, Thai Summit America, Airlift Company, Carmeuse, Loadmaster, Marinette, NewPage Corporation, Talascend, AGS Automotive, I.F. Metalworks, US Manufacturing Corp., Ideal Technology Corporation, Geislinger, Leprino Foods, Kellogg's, Jamesville Acoustics, Denso, Stanley Automotive Lighting and Electrics, Gestamp, Demmer, Alpha USA, U.S. Manufacturing, Avon Gear, LPNP Inc.

**12. Public Workforce System Partner(s)** – Michigan Works! agencies (workforce investment boards) in all college regions; Department of Licensing and Regulatory Affairs, Workforce Development Agency

**13. Other Key Partner(s)** – National Association of Manufacturers, Gates Foundation's Breaking Through Initiative, Northern Virginia Community College, National STEM Consortium, Flint STRIVE, Michigan Manufacturing Association, Grand Rapids Urban League, Michigan Center for Student Success, Battle Creek Unlimited, Goodwill of Greater Grand Rapids, National 4C Collaborative, Talent, 2025, Delta County Economic Alliance

**14. Public Contact Information** – Robert Stevens, Director of Grant Support Services, Macomb Community College, 14500 E. 12 Mile Road, Warren, Michigan 48088, (516) 445.7863, [stevensr@macomb.edu](mailto:stevensr@macomb.edu)

**15. Percentage of OER Program Materials Developed vs. Percentage of Licensed or Purchased Program Materials** – Approximately 80% of program materials will be developed as open educational resources, and the remaining 20% will be licensed or purchased.

**16. Data Tags** – Career Pathways, Certificate Attainment, Degree Attainment, Developmental Education, Digital Materials, Dual Degrees, Employer Partnership, Enhanced Course Articulation, Enhanced Student Services, Industry-Driven Competencies, Industry- Recognized Credentials, Job Placement, Learning Communities, Online Community of Practice, Online Teaching/Learning, Paid Internships, Registered Apprenticeships, Retention Strategies, Self-paced Learning, Skill Assessments, Stackable Credentials, Technology Enabled Learning, Virtual Environments, Web-based Training.