ASSET MAPPING FOR MANUFACTURING EDUCATION PROGRAMS IN THE AUSTIN REGION



Austin Metro Master Community Workforce Plan

OBJECTIVE

Help 10,000 residents who are living at or below 200% of poverty secure middle-skill jobs by 2021



Major Takeaways From The ARMA 2017 Central Texas Manufacturing Workforce Study

- 19,000 new workers needed in next 10 years for replacement and growth
- \$16.94 average hourly wage for production workers
- 88% of employers surveyed indicated that recruiting qualified workers was a challenge
- Not enough relevant training programs / seats available in existing programs

Occupations With Highest Reported Demand

OCCUPATION TITLE	SOC CODE	AREA OF STUDY
Assemblers and Fabricators	51-2031 & 51-2041	Mfg. Tech.
Computer-Controlled Machine (CNC) Tool Operators, Metal and Plastic	51-4011	Mfg. Tech.
Electrical and Electronic Equipment Assemblers	51-2022	Electrical & Electronics
Electrical and Electronics Engineering Technicians	17-3023	Electrical & Electronics
Engineers (Manufacturing)	17-2199.04	Engineering
First-Line Supervisors of Production and Operating Workers	51-1011	Leadership
Inspectors, Testers, Sorters, Samplers, and Weighers	51-9061	Quality
Machinists	51-4041	Mfg. Tech.
Maintenance and Repair Workers, General	49-9071	Maintenance
Production Workers, Helpers	51-9198	Mfg. Tech.
Sales Reps., Wholesale & Manufacturing, Technical & Scientific Products	41-4011	Sales
Semiconductor Processors	51-9141	Semiconductor
Software Developers, Applications	15-1132	Software
Welders, Cutters, Solderers, and Brazers	51-4121	Welding

The Standard Occupational Classification (SOC) system is utilized by the US government to classify occupations.



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National Center for Construction Education and Research (NCCER) Manufacturing Skill Standards Council (MSSC) Manufacturing Skills Institute (MSI) North American Die Casting Association (NADCA) Fabricators and Manufacturers Association, International (FMA) Precision Sheet Metal Operator (PSMO) Certified Fluid Power Specialist Certified Fluid Power Technician Certified Fluid Power Devendent Certified Fluid Power Technician Certified Fluid Power Devendent Certified Fluid Power Devendent Certified Accredited Instructor Certified Accredited Instructor Certified Accredited Instructor Certified Accredited Instructor National Career Readiness Certification (NCRC)	utomation		Certification
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Association for Operations Management (APICS) • Production and Inventory Management (CPIM) • Certified Supply Chain Professional (CSCP)		Association for Operations Management (APICS)	 Certified Supply Chain Professional (CSCP)
✓ elding American Welding Society (AWS) • Certified Welder		American Welding Society (AWS)	Certified Welder

Organizations Included In Research

- K-12. Career Academies and Dual Enrollment Courses
- Community-Based Organizations. Certificate Courses and Programs
- Community Colleges. Continuing Education, Certificate, Degree, and
 Specialized Workforce Courses and Programs
- Labor Organizations. Pre-apprenticeships and Apprenticeships



- **Industry Associations.** Certificate Courses and Programs
- TWC Eligible Training Provider System. Courses and Programs Listed
- Universities. Continuing Education and Certificate Courses and Programs



CATEGORIZED FINDINGS

CATEGORY 1

In-demand education and training programs are not filled

CATEGORY 2

In-demand
education and
training programs
do not have
capacity

CATEGORY 3

In-demand education and training programs do not exist

CATEGORY 1 PROGRAMS ARE NOT FILLED

CNC Tool Operators, Metal & Plastic
Electrical & Electronic Equip. Assess.
Electrical & Electronics Engineering Tech.
Engineers (Mfg)
First-Line Supervisors
Inspectors, Testers, Sorters, Samplers, &
Weighers
Semiconductor Processors
Welders, Cutters, Solderers, & Brazers

Under-Utilized

A variety of manufacturing courses and and programs, including dual credit, preapprenticeships, certificate, credit, and workforce development were identified as available in and around the Austin area.

CATEGORY 2 PROGRAMS DO NOT HAVE CAPACITY

Logistics & Supply Chain Management

Filled/ Over-Filled

- ACC has limited capacity for its continuing education programs for Logistics & Supply Chain Mgt.
- Texas State University has an online freight brokering class. However, capacity unknown.

(Note: Although these occupations were not specifically cited in the ARMA Workforce Study, they were included in the analysis because they offer a NAM-Endorsed Skills Certification.)

CATEGORY 3 PROGRAMS DO NOT EXIST

Assemblers & Fabricators
Machinists, General
Maintenance & Repair Workers, General
Production Workers, Helpers
Sales Reps, Wholesale & Mfg. Tech &
Scientific Products
Software Developers

Nonexistent

- ACC is creating courses geared towards
 Assemblers & Fabricators that are scheduled to begin in Fall 2018.
- TSTC and Texas State University have some programs that appear to be appropriate for General Machinists and Maintenance & Repair Workers; however, capacity is unknown.
- Courses were identified for general sales and software development, but none for manufacturing-specific occupations.
- Manufacturing-specific Career Academies do not exist.

Challenges

Recruitment

- Manufacturing employment has a stigma associated with it
- Manufacturing employment is not actively promoted in schools
- Manufacturing training programs are not actively marketed in the community

Training Disconnection

- Not all available programs and courses are included on the ETPS
- Some information on the system was not correct

• Instruction Limitations

 May be more difficult to attract and retain instructors for credit-based programs due to educational requirements

Opportunities

- Special Populations
 - Opportunity Youth
 - Ex-Offenders
- Demand-Driven
 - New programs and courses being developed to meet identified needs
 - Manufacturers can work with entities to develop business-specific courses
- Related Occupations
 - Skilled trade programs and courses available for truck driving, HVAC, construction, electrical, plumbing, etc. which are related to manufacturing

Recommendations – Awareness & Recruitment

Outreach Plan and Budget

- General Population
 - Social Media and Website
 - Brochures
 - Workforce Center Staff and Providers
 - Manufacturing Career Fairs and Manufacturing Training Fairs
- Opportunity Youth
 - High Schools (and Middle Schools)
 - Targeted Brochures
 - Peer-to-Peer
 - Foster Care
 - Component of Youth Programs and Field Trips
 - School Career Fairs and Manufacturing Day Promotion
- Ex-Offenders
 - Justice System
 - Targeted Brochures
 - Peer-to-Peer

Recommendations – Training

- Training Disconnection
 - Corrections and updates to ETPS
 - Dedicated staff to assist
 - Skilled Trades review
- New Mechanisms
 - Work-based training for Machinists and Maintenance Workers
 - Specific curricula for Sales and Software Developers
 - Manufacturing-specific track for Career Academies
 - Prior Learning Assessment
 - Feasibility of four-year advanced manufacturing degree

Post Project Thoughts

- Strategies for Retaining and Advancing Existing Workers
 - Creating a new or expanded apprenticeship programs
 - Re-purposing tuition reimbursement programs
 - Utilizing prior learning assessments
 - Expanding the use of stackable credits
 - Designing on-the-job training programs that provide credit or certifications
 - Attracting workers from low-wage jobs in other sectors

Post Project Thoughts

- Strategies for Creating Interest in Younger Youth
 - Sponsoring Maker Fairs in early grades
 - Creating internships for students under the age of 18
 - Hosting counselors, teachers, administrators, and students at career expos
 - Creating Manufacturing Day events
 - Employing high-quality videos
 - Working with Texas FAME for "signing day" events
 - Researching the Dallas Promise initiative to determine replicability

USDOL Apprenticeship Grant Opportunity

 Accelerate the expansion of apprenticeships to new industry sectors, including information technology, advanced manufacturing, banking and finance, and healthcare

• Competitive grants of \$1 to \$12 million

• Due October 16, 2018

Questions and Discussion



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