

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)

OCCUPATION AND TRAINING OUTLOOK

MACOMB COUNTY | JANUARY 2020

INTRODUCTION

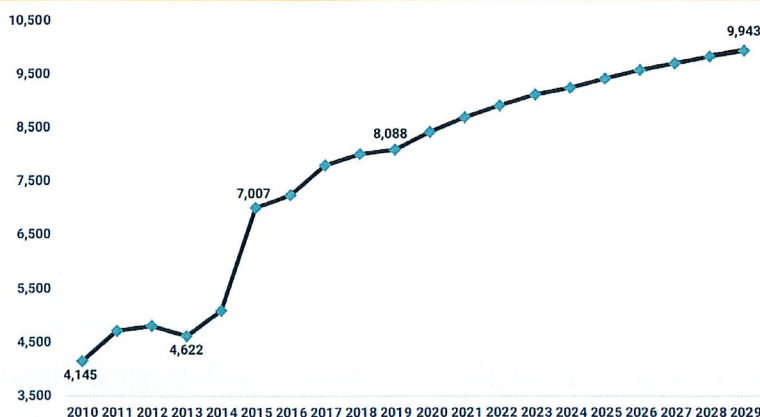
Science, technology, engineering, and mathematics workers do scientific research in laboratories and in the field. Other STEM workers plan or design products and systems. In Macomb county and across southeast Michigan, STEM workers are in high demand by manufacturers and research and development operations.

**8,088
WORKERS
EMPLOYED**

WAGE DISTRIBUTION AND JOB OPENINGS

	ENTRY	MEDIAN	EXPERIENCED	ANNUAL OPENINGS
Materials Engineers	\$27.39	\$39.99	\$60.74	16
Mechanical Engineers	\$31.18	\$45.79	\$65.49	602
Electrical and Electronics Engineering Technicians	\$17.62	\$31.80	\$41.28	34
Electro-Mechanical Technicians	\$18.07	\$29.82	\$38.54	5
Chemists	\$19.09	\$31.72	\$54.19	10

EMPLOYMENT OVER TIME



TOP POSTING EMPLOYERS

- General Motors Company
- General Dynamics Corporation
- BAE SYSTEMS PLC
- ALTAIR ENGINEERING, INC.
- DCS Corporation
- Walton Corporation
- Advantage Resourcing
- ZF Inc
- Kforce Inc.
- Moseley Technical Services, Inc

INDUSTRY EXPERTISE

Top posting employers for STEM workers include Manufacturing, Professional, Scientific, and Technical Services, Administrative and Support Services, and Information firms. With the high focus on robotics engineers, many of these are related to automotive companies and suppliers.

TECHNICAL SKILLS

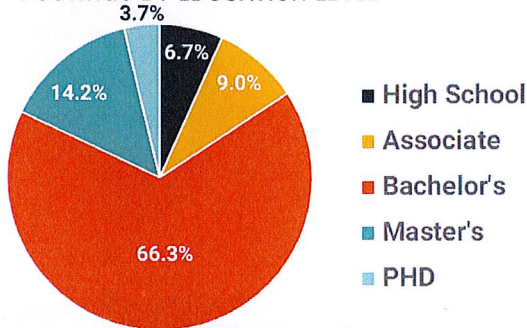
- Mechanical Engineering
- Computer-Aided Design
- New Product Development
- Tooling
- Electrical Engineering
- Systems Engineering
- Creo Elements/Pro
- Engineering Design Process
- Electronics
- Machining

SOFT SKILLS

- Communications
- Integration
- Problem Solving
- Management
- Microsoft Office
- Leadership
- Written Communication
- Interpersonal Skills
- Presentations
- Troubleshooting

EDUCATION AND CREDENTIALS

POSTINGS BY EDUCATION LEVEL



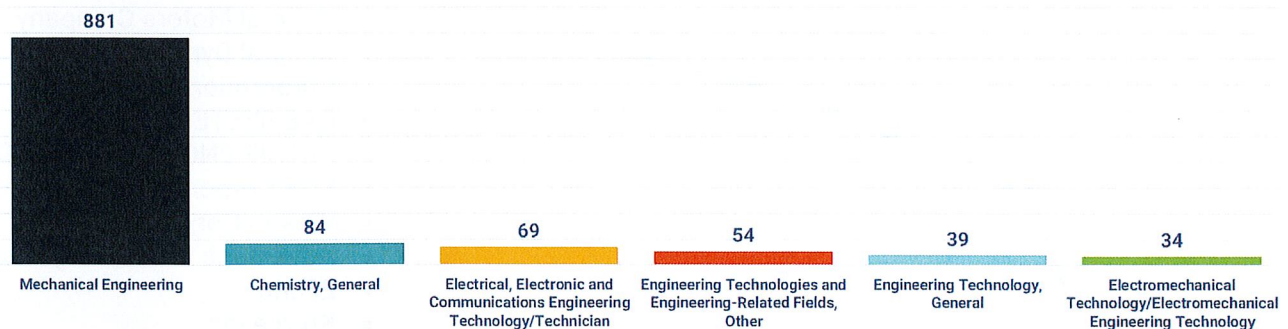
JOB OPENINGS VS COMPLETIONS



TOP POSTED CERTIFICATIONS

- Six Sigma Green Belt Certification
- Six Sigma Black Belt Certification
- Professional Engineer
- Quality Certification
- Certified Welding Inspector
- IBM Rational Team Concert (Collaboration Tool)
- LEED Accredited Professional (AP)
- Product Certification
- Project Management Professional Certification
- Certified Business Manager

MACOMB, WAYNE, AND OAKLAND COUNTY 2018 PROGRAM COMPLETIONS



Schools Offering Programs: Macomb Community College • UM Dearborn • Lawrence Technological University



CTE Course Offerings in the Science, Technology, Engineering, and Math (STEM) Pathway

- Design Engineering I CAD
- Design Engineering II CAD
- CTE Design Engineering CAD
- Design Engineering Capstone
- Computer Science I
- Computer Science II
- Advanced Computer Science Principles
- Advanced Placement Computer Science A

At Stevenson MADE

- Automation I
- Automation II

At Utica Center for Science and Industry (CSI)

- Mechatronics I
- Mechatronics II
- Engineering Technology I
- Engineering Technology

Senior year option of School to Work placement



STEM Pathway



School to Work