

EMPLOYERS

## M-Powered

### EJ Ajax Metalforming Solutions

**Erick Ajax**  
Vice President and Co-Owner

Since inception, over 50% of the EJ Ajax frontline workforce has participated in its apprenticeship programs.

EJ Ajax Metalforming Solutions is a third generation contract manufacturer of progressive metal stampings with 50+ full-time employees located in Minneapolis, Minnesota.

EJ Ajax developed and offered its first apprenticeship program in the early 1990s. The company now offers 4-year registered apprenticeships in Sheet Metal Fabrication, Tool and Die Making, Punch Press Operation and Machine Maintenance. Additionally, multiple Class A Journey Worker certificates can be obtained along the way.

---

## 2005: FOUNDED M-POWERED, A FAST-TRACK MANUFACTURING TRAINING PROGRAM

### **The program consists of a 12-week, industry-specific course.**

Students attend class at a branch of Hennepin Technical College and are supported with career counseling, mentoring and job-placement assistance from HIRED.

### **Specifically, EJ Ajax has made a special effort to educate and employ underserved populations and returning veterans and supports many of them through a tuition and reimbursement program.**

EJ Ajax invests over 5.5% of their payroll in education and workforce development, up to \$5,000 per colleague per year. EJ Ajax and other local manufacturers contribute to developing the criteria for enrollment and the curriculum for the M-Powered program to ensure that its graduates' capabilities match the current demand for new employees. The competencies are largely determined by employer Subject Matter Experts (SMEs) and aligned with corresponding NIMS credentials. The program selects for foundational skills, which are regarded as crucial, at enrollment.

## Mechatronics Apprenticeship Program

### Siemens and Siemens Foundation

#### Pooja Anand

Head of Strategic Projects and  
Talent Acquisition in the U.S.  
and Americas, Siemens

#### Crystal Bridgeman

Head of Workforce Development,  
Siemens Foundation

The apprenticeship program spans three and a half years of training and includes two tracks: mechanical and electrical emphasis.

Siemens and Siemens Foundation run and participate in a large variety of programs, one being the Mechatronics Apprenticeship program in Charlotte, North Carolina.

---

## 2012: BEGAN MECHATRONICS APPRENTICESHIP PROGRAM

**The Mechatronics Engineering Technology curriculum prepares individuals for jobs requiring the electrical, mechanical and computer skills necessary to work on complex systems found in manufacturing environments.**

Students graduate with an AAS degree in Mechatronics Engineering Technology or Computer-Integrated Machining and are awarded a Journeyman's Certificate by the North Carolina Department of Commerce and a certificate from the U.S. Department of Labor.

The Associate of Applied Science in Mechatronics Engineering Technology degree is awarded upon completion of the program. Short of the degree, there are Level 1 and Level 2 certificates aligned with content from the Siemens Mechatronics Systems Certification Program.

## The Wacker Institute

### Wacker Polysilicon LLC

**Dr. Erika Burk**  
Senior Director,  
Human Resources

Each apprenticeship program is a work/study that combines academic and practical experiences with paid, on-the-job training over the course of five semesters.

Wacker Polysilicon LLC is a greenfield site located in Charleston, Tennessee, that will employ more than 650 people when complete.

Wacker Polysilicon North America has partnered with Chattanooga State Community College (ChSCC) to form the Wacker Institute in order to produce chemical process-engineering technicians for Wacker and other employers in the region.

---

### **3 APPRENTICESHIP PROGRAMS: CHEMICAL OPERATIONS, ELECTRICAL & INSTRUMENTATION AND MECHANICAL SYSTEMS MAINTENANCE**

**The occupational competencies for each apprenticeship program were determined by a job task analysis, which ChSCC used to develop the curriculum.**

Foundational competencies are generally selected for during admission to the programs, although various work behaviors are also learned on the job. Graduates receive an Associate of Applied Science in Engineering Technology, Engineering Systems Technology or Mechatronic Systems and there are also embedded technical certificates associated with each program.

## Northern Kentucky FAME AMT Program

Robert Bosch Automotive  
Steering LLC

Mary Grace Cassar  
Organizational Development  
Process Manager

Within the Northern Kentucky FAME Chapter, the dual career track program hires students three days a week and pays for tuition as they go.

Robert Bosch Automotive Steering LLC (Bosch AS) led the chapter initiative for the Northern Kentucky FAME Advanced Manufacturing Technician (AMT) program under the direction of Mike Hirsch, Vice President of Operations. Cassar oversees the Bosch AS AMT program and collaborates with other Northern Kentucky Company Chapter members and Tri-Ed corporation, developing processes for program success.

---

### 2015: 24 PARTICIPANTS ACROSS 8 COMPANIES, 10 OF WHICH ARE AT BOSCH AS

**Bosch AS sees the AMT program as a foundation for career paths within the company, leading to other jobs in operations, maintenance, process engineering and administration.**

The students attend college classes two days a week and work an eight-hour shift three days a week. There is a three-year work commitment, and new hires may continue to pursue a bachelor's degree.

The admissions process selects for foundational competencies and applying high school graduating students are expected to be high performers in math, science and English. SMEs determine the selection criteria. Besides an Advanced Manufacturing degree, AMT students at Bosch AS will also earn a B-level German Certification. Assessment of occupational competencies is handled by the educational institutions in connection with KY State, the German Embassy and the FAME chapter. Bosch AS is continuing to grow the program.

## Alcoa Certification/Co-Op Program

Alcoa Howmet  
Power and Propulsion

Amy Heisser  
Director, Human Resources

The program combines a work/study with two-year needs forecasting to engage in continuous hiring of qualified candidates.

The Howmet Alcoa plant located in Whitehall, Michigan, has a partnership with Muskegon Community College in order to supply automation, robotics and electronics technicians.

### 20 HOURS PER WEEK: THE AMOUNT STUDENTS WORK WHILE THEY CONTINUE STUDIES

**The Alcoa certification is offered in connection with a co-op program.**

A degree is awarded at two years and candidates may then be hired full-time. After the first year internships, tuition is covered for students who the company wishes to employ if the selected students also make a three-year work commitment beyond graduation.

The required occupational competencies were determined by meetings between the top technical leaders, hiring managers and college professors, as well as more detailed SME sessions that led to the development of the curriculum. Foundational skills are not assessed as part of the certification, but they are assessed as part of the degree.

## Technician Apprenticeship Program

### Pepperidge Farm

**Jennifer Lannom**  
Corporate Manager of HPO  
and Operational Excellence

### Campbell's Soup Company

**Joe Johnston**  
America's HPO and Training  
Network Leader Manager

The apprenticeship program aims to effect a cultural transformation by standardizing knowledge, skills and abilities (KSAs).

Pepperidge Farm and its parent company, Campbell's Soup Company, were recently recognized by the White House for their efforts in launching a new apprenticeship program (soon to be recognized by the Department of Labor) for production technicians in their U.S. manufacturing facilities.

---

## 2016: BEING PILOTED AT A U.S. PLANT, WITH A GOAL OF GROWING THE PROGRAM TO OTHER U.S. BASED LOCATIONS

**The program aims to create a more participative and flexible structure by developing leadership, operations and maintenance skills in employees.**

The program provides core training for associates to develop skills required to succeed in Campbell's technician system and contains both in-classroom and on-the-job experiences. It standardizes the development approach across all U.S. operations and provides associates with a career development pathway.

**The program seeks to develop a broad career path that focuses on the development of flexible foundational and occupational skills.**

ACT WorkKeys profiled jobs and created task lists on the basis of a set of jobs that were grouped under a "production tech" job family. They put together a model of the required soft skills, a leadership model and descriptions of the more technical pieces of jobs. The credentialing began internally and now there are external partners including ACT WorkKeys, the Manufacturing Skills Standards Council (MSSC) and others for both occupational and foundational skills.

## Ingalls Apprentice School

### Huntington Ingalls Shipbuilding

#### Garry Mercer

Apprentice Program Manager;  
Vice President, American  
Apprenticeship Roundtable

The registered program involves a comprehensive two- to four-year curriculum for students interested in shipbuilding careers.

Since 1952, the Ingalls Apprentice School has produced more than 4,000 graduates in support of Ingalls' operational needs.

## MORE THAN 1,500 APPRENTICE ALUMNAE FILL APPROXIMATELY 50 DIFFERENT TYPES OF JOBS.

**Ingalls has developed successful career pathways, with half of its graduates having gone from journeyman into management or leadership roles.**

Apprentices in each program rotate through process areas, designated by their respective standards of apprenticeship, gaining skills and experiences unique to that area. Over 60 members of the faculty and staff deliver instructions in 13 programs with over 120 course offerings that enable apprentices to gain the knowledge and skills, as well as the educational foundation and personal qualities needed to fully meet the challenges of a shipbuilding career.

Ingalls Apprentice School covers 13 job families including Electrical, Pipe, Shipfitting, Welding, Sheetmetal, Paint, Carpenter and more. Joint apprentice and training committees meet monthly to discuss apprentice performance, discipline, curriculum or changes in the standards of apprenticeship.

Through the Haley Reeves Barbour Maritime Training Academy, Ingalls is entering into a new phase of partnership with Mississippi Gulf Coast Community College and will soon offer a path into bachelor's degree programs.

## Right Skills Now

### Permac Industries

#### Darlene Miller

Founder, Right Skills Now;  
CEO/Owner, Permac Industries

This is a 16 to 24-week, fast-tracked and hands-on CNC operator training program.

Right Skills Now is an innovative program to help math-qualified candidates get the skills they need to start their career in CNC operations. Right Skills Now was founded by the President's Council for Jobs and Competitiveness as a way to help employers find, and potential employees get, the 'Right Skills Now' to be successful in precision machining.

---

## 12-16 WEEKS OF CLASS AND SHOP EXPERIENCE PLUS AN 8-WEEK FOR-CREDIT INTERNSHIP = JOB OFFER

**Right Skills Now uses a modular curriculum to provide an accelerated route to credentials with immediate value in the workplace.**

The hiring employers emphasize continuing education for working employees so that employees can advance within their career pathway.

**Right Skills Now is a focused training experience that ensures graduates have skills that are in high demand by local employers.**

Local Minnesota community colleges (13 total) provide the curriculum and training outlined by their partner employers and local employers provide paid shop experience internships after training. Leading employers include shops from the Precision Machined Products Association (PMPA) and Right Skills Now founding partner, the National Association of Manufacturers (NAM). The program offers career credentials that are recognized by employers nationwide including credentials from NAM, NIMS, ACT WorkKeys and the National Career Readiness Certificate (NCRC). The credentials are stackable and can be credited in future academic work towards an associate degree.

## RIGHT SKILLS NOW FOR MANUFACTURING ENROLLMENT:

2012: 51 | 2013: 99 | 2014: 230 | 2015: 279

AVERAGE STARTING SALARY: \$35,330

EMPLOYMENT RATE: 99%

# SPOTLIGHT ON A WORKFORCE PROFESSIONAL

## MIKE HUNTER

*"I would have never experienced a good paying career in manufacturing without Right Skills Now. It changed my life and gave me so much opportunity to continue to advance my skills with on-the-job training."*

Mike used the Right Skills Now program through Dunwoody College of Technology. Prior to enrolling in the Right Skills Now program, he worked in construction, an industry that was feast or famine on account of weather conditions and/or seasonal layoffs. There was no paid time off nor any way he could begin to put away money. These challenges made it feel impossible to plan for the future, so Mike was extremely excited to start this new endeavor.

## Advanced Manufacturing Career Pathways Program

### Toyota

#### Dennis Dio Parker

Program Developer, AMCP;  
Assistant Manager, Toyota Motor  
North America

AMCP is a work/study program based in a school-learning environment that emulates a manufacturing operation. The program allows candidates to graduate from school debt-free while gaining more than 1,200 hours of experience on the floor per year.

Parker leveraged his 36 years of experience in technical, occupational and leadership development in the automotive industry and nuclear power field to develop the Advanced Manufacturing Career Pathways (AMCP) program.

---

## 2016: IN 8 STATES AT 19 COLLEGES AND 2 UNIVERSITIES

**AMCP operates in coordination with the Federation for Advanced Manufacturing Education (FAME), which includes over 150 companies including Toyota, GE, Hitachi, 3M, Jack Daniels, Bosch AS and Stanley Black & Decker.**

AMCP primarily consists of the Advanced Manufacturing Technician (AMT) hub program for General Maintenance or Tool & Die, which then can continue on to Advanced Manufacturing Engineer (AME) and Business (AMB) career paths.

The AMT hub program is a five-semester, multi-skilled associate degree program with three core components: occupational competencies, LEAN practices and professional behaviors.

AMCP uses a rigorous DACUM job analysis and conducts SME sessions to define job families and competency requirements. It also collaborates with the Automotive Manufacturing Technical Education Collaborative (AMTEC). AMCP is a pull-style program that typically accepts top-tier high school students. These students tend to already possess the basic foundational competencies, but ACT/SAT scores serve as a rough measure for competencies like reading and math and various professional behaviors are learned on the job.

**70%** OF STUDENTS WHO BEGIN THE 2-YEAR COLLEGE PHASE GRADUATE.

**95%** OF GRADUATES ARE ACCEPTED INTO AN INTERNSHIP OR DIRECTLY HIRED INTO EMPLOYMENT WITH SPONSORING COMPANIES.

**100%** OF GRADUATES HAVE BEEN PLACED OVER THE PAST 5 YEARS, INCLUDING PLACEMENT WITH NON-SPONSORING COMPANIES.

## SPOTLIGHT ON A WORKFORCE PROFESSIONAL

### SARAH JENKINS

*"It's so exciting. All the projects we started are done now and they're starting new projects. My sister is over there, so I hear all about it. And my brother will be there next year."*

Sarah is a "star" employee for AutoGuide, a growing Georgetown manufacturer. She is one of the first graduates of the Bluegrass Community and Technical College's Advanced Manufacturing Training program. She is charged with training employees on how to build and assemble automated guided vehicles used in manufacturing and material handling.

*"She's one of our superstars. She just has her cape tucked in. As opposed to getting a team member off the street, we know these guys came through a program that had specific disciplines prior to graduation. It's a win-win for both the students and the companies they are working for."*

- Scott McElmurray, Vice President, AutoGuide