



Affiliate Plans for Launch of AFT/Micron Advanced Technical Framework

Note: To launch the teaching and learning portion of the Advanced Technical Framework in which students in 10 districts in New York are exposed to the foundational and technical skills to enter careers in advanced manufacturing, Micron provided union affiliates \$30,000 per site to launch this school year. Below are snapshots of how they will use these initial investments. Additional public and private funding support will follow.

Baldwinsville

The Baldwinsville Teachers' Association will use grant funding to enhance its current Computer Integrated Manufacturing and Digital Electronics course. The grant will enable the Baldwinsville school district to acquire robotics stations with sensor kits, 3D printers and Raspberry Pi modules. These purchases will reach over 150 students through project-based learning and hands-on experience in programming and coding. The grant will foster student-led research and innovative projects within the Advanced Technical Framework. Future plans include establishing dedicated workstations equipped with the latest hardware and software; facilitating design, build and test phases for student projects; and funding workshops and training sessions conducted by industry experts, offering students valuable real-world insights and skills.

Chittenango

The Chittenango Teachers' Association and its district will advance STEM (science, technology, engineering and math) programming by integrating the Advanced Manufacturing and Semiconductor Framework across all grades. Elementary students will have access to robotics programs that introduce foundational concepts and allow students to explore and build original designs, develop custom code, and engage in game theory and strategy through competitive robotics challenges. Middle school students will further their skills in design, coding, testing and strategic problem-solving with more advanced and competitive robotics programming. And high school students will have specialized classes such as Principles of Engineering, Robotics and Project-Based Physics. Funds will support a summer "manufacturing camp" where students can design and produce various products and opportunities to earn CompTIA Tech+ micro-credentials.

East Syracuse Minoa

ESM United and the East Syracuse Minoa school district will use funds to acquire essential equipment to enhance its high school computer science curriculum. These supplies will support teachers in fully implementing the programming courses they designed over the summer. The purchased devices, chosen for their user-friendliness, will directly benefit students by providing hands-on learning experiences. This investment aligns with the district's commitment to providing for students' learning and development needs, by equipping them with the tools they need to succeed in computer science.

Liverpool

The United Liverpool Faculty Association will utilize the grant funds to support the purchase of consumable supplies, materials and equipment for the Liverpool CSD High School manufacturing course (grades 10-12) and middle school manufacturing elective course (grades 6-8). These resources will provide students with hands-on experiences in manufacturing using a variety of materials, helping them develop essential safety skills in accordance with Occupational Safety and Health Administration standards. Additionally, the equipment will enable students to practice professional skills across engineering, construction, carpentry, manufacturing, and technology. A portion of the funds will also be allocated for teacher stipends to enhance the current curriculum, including the development of a unit focused on meeting the needs of the semiconductor industry.

New York City—Brooklyn STEAM Center

The United Federation of Teachers (UFT), with the Brooklyn STEAM Center, will support the development of an advanced technology course aligned with advanced manufacturing. Funds will be used to purchase advanced technology kits and materials, providing students with hands-on experience in modern manufacturing practices. Students will have the opportunity to work with industry-standard tools, supported by grant-funded software licenses to design and simulate manufacturing processes. Additionally, funds will be used for teacher stipends to develop and refine the curriculum, ensuring it meets both industry standards and educational goals. Teachers and staff at the Brooklyn STEAM Center will participate in professional development, allowing educators to attend workshops, conferences and training sessions related to advanced manufacturing.

New York City—Thomas Edison High School

Thomas Edison High School, through the UFT, will support the development of an advanced technology course aligned with advanced manufacturing, playing a crucial role in preparing students for future careers in the field. Grant funds will be leveraged to purchase state-of-the-art advanced technology kits and materials, providing hands-on experiences in advanced manufacturing. To ensure proficiency with industry-standard tools, funds will be dedicated to acquiring software licenses for designing and simulating these processes. To ensure the curriculum is relevant and effective, funds will support teacher stipends for the development and refinement of the curriculum. Educators will receive professional development opportunities through workshops, conferences and training sessions related to advanced manufacturing technologies.

Niagara Falls

The Niagara Falls affiliate and district will launch a comprehensive STEM curriculum for the 2024-25 school year, with a strong focus on preparing students for careers in technology and advanced manufacturing. The funding will be strategically allocated across three key areas: (1) Introduction to Technology and Advanced Manufacturing: will develop engaging, hands-on lessons that introduce students to the core principles of technology and manufacturing processes. (2) Raspberry Pi Programming: to encourage creativity and practical programming skills, the grant will support the acquisition of Raspberry Pi kits for the classrooms. Students will engage in project-based activities, learning to code while building their own mini-computers and creating custom applications. (3) Industrial Electricity: equipment and materials for hands-on learning in industrial electricity. The grant will empower educators to deliver a dynamic and practical STEM education, providing students with the skills and knowledge needed to excel in the ever evolving fields of technology and advanced manufacturing.

North Syracuse

The association and school district of North Syracuse commit to a focused strategy to enhance STEM-based programs and boost student engagement. Their approach targets different educational stages: introducing foundational concepts at the P-4 grade levels, fostering exploration at the 5-7 levels, and providing in-depth experiences at the 8-12 levels. The resources outlined in the North Syracuse proposal are crucial for expanding their efforts within the school for workforce development. They will support the acquisition of essential materials that engage students, such as drone kits and STEAM camps, and the hiring of personnel, ensuring North Syracuse can effectively elevate its programs and enrich student learning experiences to the benefit of 3,000 students throughout their K-12 experience.

Onondaga-Cortland-Madison BOCES

OCM BOCES and its union affiliate will support robust implementation of the Advanced Technology Framework. The funding will be used to acquire equipment and materials essential for introducing and advancing STEM concepts in their classrooms. This includes tools for certifications in Raspberry Pi and other relevant programs. Additionally, the grant will fund community events that highlight STEM opportunities, and promote OCM BOCES initiatives to other school districts and the broader community. Finally, funds will invest in relevant STEM professional development and mileage reimbursement for the dedicated teachers, ensuring they have the resources and training needed to effectively implement these advancements.

Syracuse City

The Syracuse Teachers Association and the Syracuse City School District will utilize grant funds to support development of class lessons and activities at Nottingham High School related to the Micron Semiconductor Framework. Students will be able to complete the Arduino Certification or CompTIA Tech+ certification course, and will learn about the Internet of Things and its applications in advanced manufacturing and the connected world we live in. The students' experience will range from the practical skills and knowledge learned in the classroom to being able to physically see how the process happens at the Onondaga Community College advanced manufacturing facility.

Watertown

The Watertown Education Association budget proposal outlines that the grant funds will be used exclusively for acquiring essential equipment to meet the curricular needs of the classroom, including (but not limited to) computers, digital literacy modules and tactical supplies to teach basic electrical skills. This approach is identified as a crucial first step for the Watertown City School District, given the current lack of this fundamental equipment. By addressing this need, the Watertown district and teachers union will establish a solid foundation for enhancing the educational experience and ensuring that students have access to the tools necessary for their learning and development.