



Madison College Press Release

For immediate release:

Madison College Electronic & Electrical Engineering Technology Programs get boost from \$4.6M federal grant

**Students gain apprenticeship and scholarship opportunities
with exposure to Advanced Electronic Manufacturing**

Madison College, in collaboration with its industrial and educational partners, is establishing a state-of-the-art training center focused on emerging electronic manufacturing technologies, including semiconductor fabrication, automated PCB assembly, and quantum photonics.

This initiative will enhance hands-on learning experiences and technical skills for students in electronic and electrical engineering technology, support faculty professional development, and create pathways for underrepresented populations within the Madison College District. The training center will not only expand opportunities in high-tech emerging technologies for the community but contribute to the creation of an economic development zone for advanced electronics.

In partnership with the State University of New York and NY Creates (<https://ny-creates.org>), and supported by a four-year, \$4.6 million National Science Foundation Advanced Technology Education (NSF ATE) federal grant, the Educational Alliance for Semiconductor Experiential Learning (EASEL) will offer Madison College electronic and electrical engineering students a unique opportunity to participate in a summer internship program in New York. This program includes housing, a meal plan, and a stipend, and provides hands-on training in integrated circuit manufacturing. With a \$400,000 grant funding portion, 120 scholarships will be awarded at Madison College (600 nationwide), with a focus on supporting underrepresented populations while making the opportunity available to anyone with an interest in the semiconductor field.

Dr. Alberto Rodriguez, Program Director for Electrical Engineering Technology, is motivated to expand opportunities for underrepresented students in the high-tech sector.

"This grant allows us to introduce important technologies to students who might not otherwise have access or who might believe that a career in high-tech is not possible," Rodriguez said. "It also supports our ongoing efforts to engage K-12 students, providing them with paid experiences that expand access to the fields of electronics and electrical engineering within our district."

Through this funding initiative, Madison College faculty will receive training in integrated circuit manufacturing. The multidisciplinary nature of semiconductor manufacturing will benefit not only electronics faculty but faculty across the college.

Grant Emmel, a Madison College Electronics & Electrical Engineering faculty member, has been leading this initiative for the last two years. His vision is to strategically expand the college's workforce offerings, thereby catalyzing robust economic development within the region.

"This grant unequivocally validates our efforts to revolutionize the workforce in a multi-disciplinary manner by unifying various trades including industrial maintenance, robotics, HVAC, as well as more liberal arts transfer areas such as chemistry and physics. These competencies are essential, particularly in the semiconductor field," Emmel said.

Emmel is spearheading a collaborative effort with industry and local educational partners to create a strategic plan for a state-of-the-art facility on the Madison College campus designed to accommodate students from K-12 to graduate level for comprehensive education. This facility has the potential to become a driving force for economic development, and companies poised to take the next step from research into the commercial marketplace, Emmel said.

The Research Foundation for The State University of New York (SUNY), is the principal recipient, with Madison College as one of four sub-awardees. The other sub-awardees have existing semiconductor programs, so this is a special opportunity for Madison College to put itself "on the map" in this important technological area. This grant is a response to the 2022 CHIPS &

Science Act that initiated a \$52 billion investment in the U.S. semiconductor industry, aiming to create 42,000 fab manufacturing jobs and additional opportunities in IC equipment, materials, and facilities support companies.

Madison College was also awarded a \$400,000 Enabling Partnerships to Increase Innovation Capacity (EPIIC) NSF grant titled Collaborations with High-Tech Industry Partners (CHIP). The initiative aims to foster partnerships with the private sector, government agencies, and technical consortiums to bring to Madison College a center for high-tech emerging technologies including quantum and photonics, advanced circuit assembly and manufacturing, and semiconductor circuit manufacturing.

The Micro-Nano Technology Education Center, an NSF ATE Center, recently invited Madison College to participate in a grant that will fund an Advanced Technology Technician Training program designed to expose technical education students to the knowledge, skills and abilities essential for a successful career as a technician in the micro and nano industries. The virtual program runs from October through May. Students will participate in hands-on learning sessions, gain insights from industry partners, earn up to \$3,000 in stipends, and receive application support for internship opportunities. Ten Madison College students have already applied, with Emmel and Rodriguez looking to add more.

For more information on the grants, training opportunities, or to discuss the strategic goals of this work, please contact Grant Emmel (gemma@madisoncollege.edu).

For more information on Madison College Electronic & Electrical Engineering Technology Programs, please contact Alberto Rodriguez (ARodriguez5@madisoncollege.edu).

Madison College Media Contact:

Jennifer Fetterly

Strategic Communications Specialist

jfetterly1@madisoncollege.edu