AUTOMATION & INTELLIGENT ROBOTICS ENGINEERING TECHNOLOGY



"The new trend in our field is the integration of computer science, robotics and controls engineering, and this degree will undoubtedly help meet this trend."

--- Chris Roush, VP of Business Development, Multi-Dimensional Integration

DEGREES

BACHELOR OF SCIENCE (B.S.)

Automation & Intelligent Robotics Engineering Technology (ARET)

Students in the ARET degree program are introduced to the fundamentals of power, electronic systems and formal programming techniques common in industry. The curriculum, supported jointly by the departments of Applied Engineering, Safety & Technology and Computer Science, includes in-depth technical content of electronics, control systems, mechanical systems, and computer programming and applications to prepare professionals equipped to design, improve, maintain, and manage robotic and automated process and control systems. Laboratory courses require students to design, program, develop and construct projects independently and in small teams.

The study of robotics and controls involves the design, modeling, optimization, documentation and automation of advanced control problems. This major is designed to produce graduates prepared to work with multiple types of technology to design and implement projects that have advanced programming needs. Typical entry-level professions include software engineers, research & development engineers, systems engineers, computer engineers, process engineers, control systems engineers, controls technicians, field engineers, manufacturing engineers, robotics programmers and robotics technicians.



TOP 3 REASONS TO CHOOSE AUTOMATION & INTELLIGENT ROBOTICS

- 1. Learn relevant, in-demand automation, robotics, artificial intelligence, computer programming and system control engineering skills.
- 2. "[The] demand for robots has never been stronger, as more industries look to automation to increase productivity and alleviate ongoing labor shortages"¹
- 3. Excellent starting salaries for automation/controls/robotics engineers (\$65,000 \$75,000 per year).

¹ Source: John Lewis. Apr. 18, 2022. What's needed to get started for an automation career. Industry Insights, A3 Association for Advancing Automation.

Millersville University

Department of Applied Engineering, Safety & Technology • 717-871-7237 www.millersville.edu/aest



CLUBS AND ACTIVITIES

Association of Technology, Management & Applied Engineering (ATMAE) Student Chapter (a.k.a. MU Robotics Team)

The Ville Robotics Team has earned more than 40 (1st–3rd place) awards since 2001 in national or international robotics competitions. The team boasts winning six national championships to date.

Epsilon Pi Tau (EPT) – **Beta Phi Chapter.** EPT is an international honor society for professions in technology. At Millersville, this includes Technology & Engineering Education, Applied Engineering & Technology Management, and Occupational Safety & Environmental Health majors.



Pictured above is the 2019 Intelligent Ground Vehicle Competition team.

ABOUT OUR GRADUATES

The study of robotics and automation involves the design, modeling, optimization, documentation and automation of advanced control problems. This major is designed to produce graduates prepared to work with multiple types of technology to design and implement projects that have advanced programming needs. Typical professions include:

- Software Engineers
- Systems Engineers
- Control Systems Engineers
- Controls Technicians
- Field Engineers
- Computer Engineers
- Process Engineers
- Manufacturing Engineers
- Robotics Technicians
- Robotics Programmers
- Research &
 Development Engineers

ACCREDITATION

The Automation & Intelligent Robotics Engineering Technology degree is a hybrid study of applied engineering and computer science. Millersville's Applied Engineering & Technology Management (AETM) degree is accredited by the Association of Technology Management and Applied Engineering (ATMAE), and Millersville's computer science degree is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

FACILITIES

There are multiple laboratory facilities dedicated to supporting the Automation & Intelligent Robotics Engineering Technology degree:

- Adaptive Computing
- Automation/Robotics
- CADD
- Electronics
- Fluid Power

- Humanoid
- Intelligent Machines
- Materials Processing
- Rapid Prototyping
- Robotics R&D



Dr. John Haughery is the program coordinator for the Automation & Intelligent Robotics Engineering Technology degree.

For more information or if you have questions about this program, email John.Haughery@Millersville.edu.

FOR INFORMATION, CONTACT:

Department of Applied Engineering, Safety & Technology P.O. Box 1002 • Millersville, PA 17551 www.millersville.edu/aest AEST@millersville.edu | 717-871-7237

Millersville University

Department of Applied Engineering, Safety & Technology • 717-871-7237 www.millersville.edu/aest

Millersville University is an Equal Opportunity/Affirmative Action institution. A member of Pennsylvania's State System of Higher Education. 8614A-CST-0822