

The Department of

Applied Engineering, Safety & Technology

Millersville University of Pennsylvania



Leadership



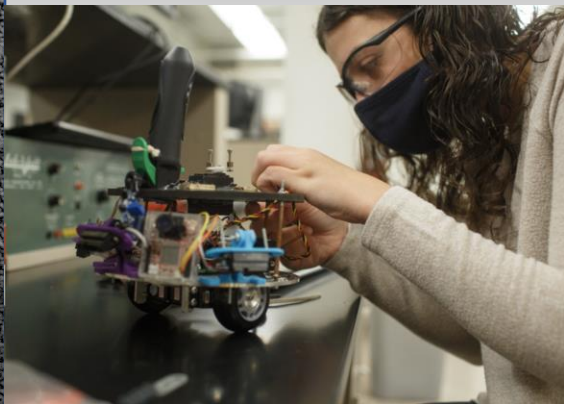
Innovation



Professionalism



Teamwork



Applied Engineering, Safety & Technology

Bachelor's Degrees



TECE

Technology &
Engineering Education



AETM

Applied Engineering &
Technology Management



OSEH

Occupational Safety &
Environmental Health



AURO

Automation & Robotics
Engineering Technology



MFET

Manufacturing
Engineering Technology



Technology & Engineering Education

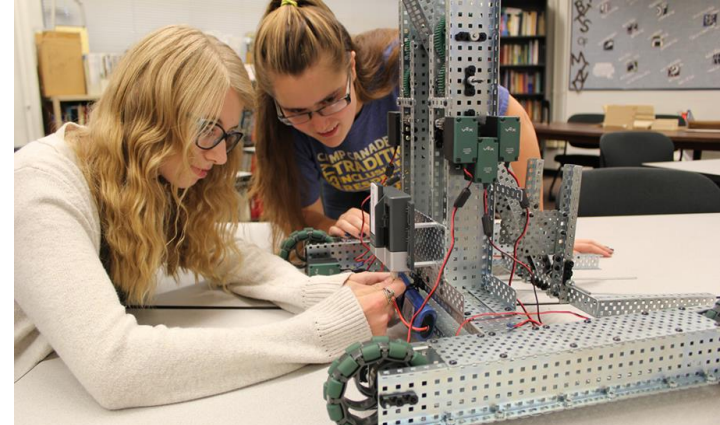
- 4-year program for students who are seeking Pennsylvania certification to teach Technology & Engineering Education.
- Pre-K through grade 12 certification earned in Technology & Engineering Education and STEM Education.

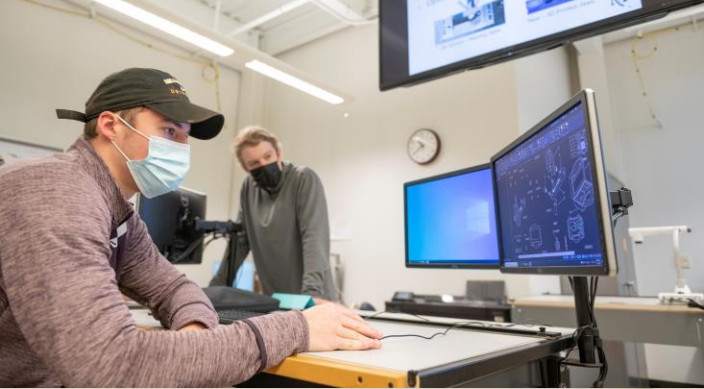
Concentrations:

- Standard Technology & Engineering Education Certification.
- Engineering Design Education (deeper emphasis in STEM Education).

Top three reasons to choose Technology & Engineering Education:

- Humongous number of jobs available for Technology & Engineering Education teachers with more positions offered than there are graduates to fill them!
- Teachers make a difference. A good Technology & Engineering Education teacher can positively influence thousands of students in a lifetime.
- Technology & Engineering Education teachers work in a creative and dynamic learning environment with opportunities to solve problems, build solutions, and inspire others.





Computer-Aided Drafting & Design

- The 4-year Bachelor's (AETM) program provides students with theoretical and practical skills in drafting & design.
- The 2-year Associate's (AET) program provides the same basic technical coursework, but without the management courses.
- An 18 credit minor is available.

Emphases:

- Drafting & Design
- Technical Freehand Drawing
- Design Methodology
- Design for Manufacture
- Technical Illustration & Rendering
- 3D Printing (additive manufacturing)

Sample Job Titles:

- CAD Designer
- Drafting Engineer
- Mechanical Design Engineer
- Product Designer
- Product Specialist
- Project Design Engineer
- Senior Design Engineer
- Tooling Design Engineer

Top three reasons to choose Computer-Aided Drafting & Design:

- Enjoy a blend of theoretical, technical and hands on education.
- Become highly competent in multiple industry standard CADD software applications.
- Obtain excellent employment opportunities in various engineering industries.





Construction Management

- The 4-year Bachelor's (AETM) program provides students with theoretical knowledge and leadership skills for success in construction management.
- The 2-year Associate's (AET) in construction technology provides the same basic technical coursework, but without the management courses.
- An 18 credit minor is available.

Emphases:

- Computer-Aided Drafting & Design
- Architectural Design
- Construction Methods
- Construction Planning
- Construction Scheduling
- Supervision
- Estimation
- Construction Contracts

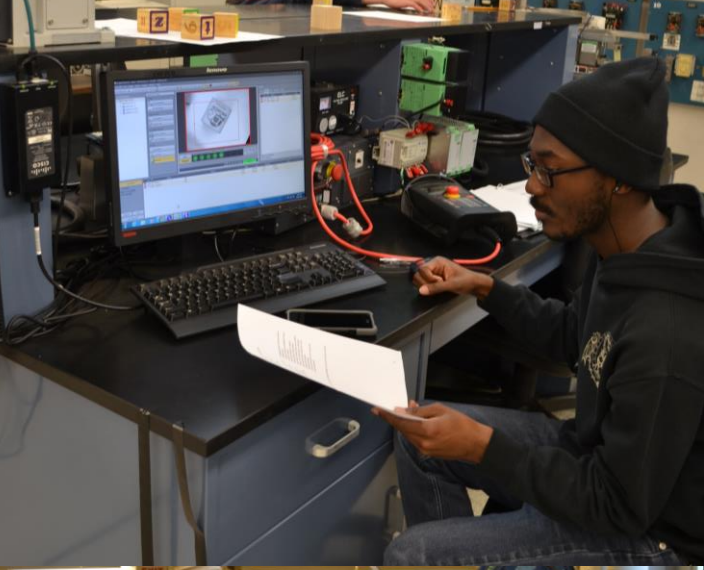
Sample Job Titles:

- Assistant Project Manager
- Estimator
- Market Coordinator
- Project Manager
- Remodeling Contractor
- Specialty Service Manager

Top three reasons to choose Construction Management:

- Construction careers incorporate a wide range of skills and challenge workers to think creatively and solve problems.
- Construction employment is growing!
- According to Associated General Contractors of America, Pennsylvania added 12,700 construction jobs during the past year.





General Technology

- The 4-year Bachelor's (AETM) program provides students with practical skills in broad-based industrial technologies.
- Courses included in this option provide survey experiences in electricity/electronics, mechanics, manufacturing, drafting/design, and graphic communication technologies.

Emphases:

- Drafting & Design
- Product Design
- Graphic Design
- Manufacturing Processes
- Electrical/Electronics Systems
- Fluid Systems
- Control Systems
- Troubleshooting

Sample Job Titles:

- Process Engineer
- R&D Engineering Technician
- Sales Engineer
- Applications Engineer
- Mechanical Engineer
- Tool Design Engineer

Top three reasons to choose General Technology:

- Generalist positions in industry are important, sought-after career choices.
- Good choice for people who know they want to work in technical management but are unsure of which specialty area.
- Ideal option for those who wish to pursue self-employment in a technical area in a technical area we do not offer.





Graphics & Packaging Technology

- The 4-year Bachelor's (AETM) program provides students with theoretical knowledge and practical skills relevant for careers in graphic communication and packaging industries.
- The 2-year Associate's (AET) program provides the same basic technical coursework without the management courses.
- An 18 credit minor is available.

Emphases:

- Print Media
- Web-based Publishing
- Color Theory
- Digital Imaging
- Package Prototyping
- Graphic and Structural Design
- Print for Packaging
- Industry Regulations

Sample Job Titles:

- Design Engineer
- Director of Sales
- Graphic Services Coordinator
- Prepress Technician
- Print Support Manager
- Project Manager
- Service Quality Analyst
- Structure & Graphic Engineer

Top three reasons to choose Graphics & Packaging Technology:

- Pennsylvania is one of the top-ten leading states in total number of graphic communication employees.
- Printing is the second largest manufacturing industry in the United States with regard to number of establishments.
- The graphic communication and packaging industry offer competitive starting salary packages compared to other fields.





Occupational Safety & Environmental Health

- The 4-year Bachelor's (OEH) program strives to develop well-rounded professionals uniquely capable of protecting employees and the general public from work-related injuries and illnesses, while also protecting company assets and interests.
- OSEH majors may enroll for a fully funded minor from the Lombardo College of Business.

Emphases:

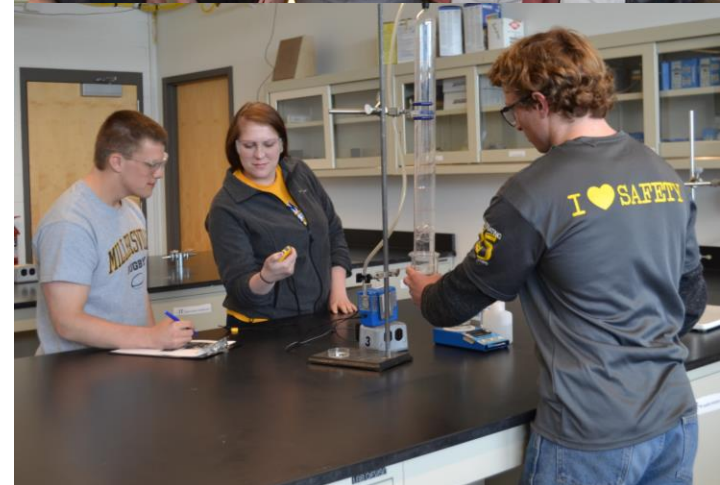
- Injury and Illness Prevention
- Environmental Protection
- Ergonomics
- Fire Protection
- Industrial Hygiene
- Safety Engineering
- System Safety
- Safety Management

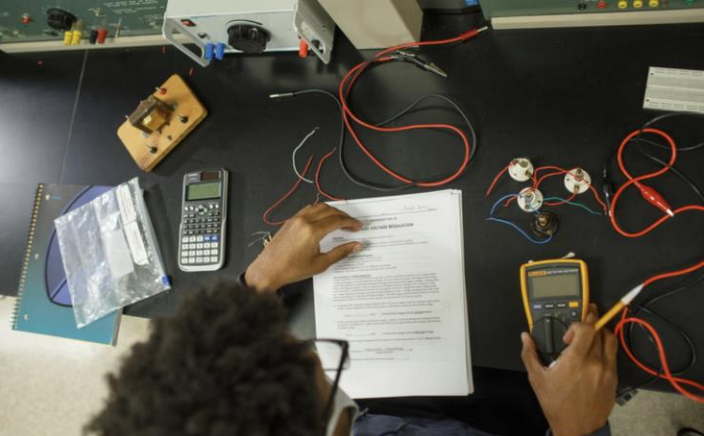
Sample Job Titles:

- Health & Safety Manager
- Risk Manager
- Safety Representative
- Safety Manager
- Safety Engineer
- Industrial Hygienist
- Safety & Health Consultant
- Ergonomist

Top three reasons to choose OSEH:

- An opportunity to protect people and the environment. If you enjoy working with people, you will find a home in OSEH.
- High job satisfaction with built-in flexibility. You can work in any industry, including; construction, manufacturing, healthcare, insurance.
- Excellent employment opportunities and high starting salaries - \$70K





Automation & Robotics Engineering Technology

- The 4-year Bachelor's (AURO) program introduces students to the fundamentals of power, electronic systems and formal programming techniques common in industry.
- The curriculum is supported jointly by the departments of Applied Engineering, Safety & Technology and Computer Science.

Emphases:

- Electronics & Controls
- Automation & Robotics
- Mechanical/Fluid Systems
- Machine Vision
- Industrial Networking
- Computer/Software Programming

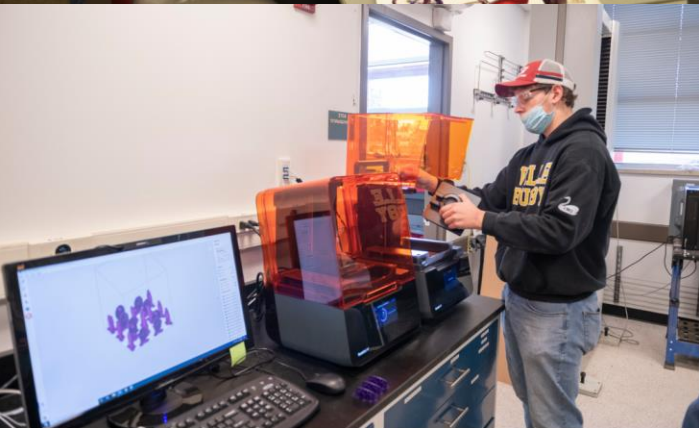
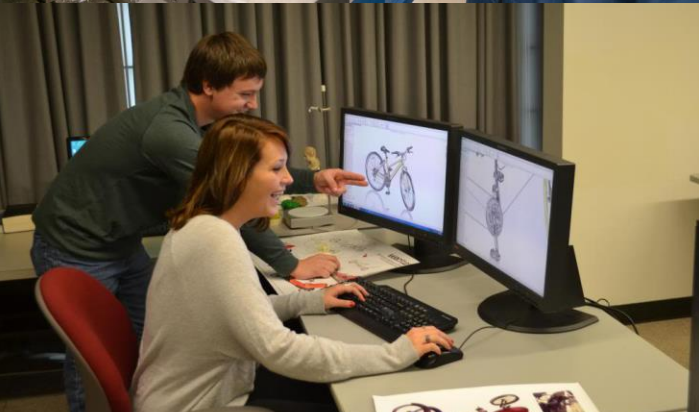
Sample Job Titles:

- Automation Engineer
- Control Systems Engineer
- Process Control Engineer
- Plant Service Engineer
- Project Manager
- Software Application Engineer
- Validation Lead
- Engineering Supervisor

Top three reasons to choose Automation & Robotics Engineering Technology:

- Learn relevant, in-demand automation, robotics, artificial intelligence, computer programming and system control engineering skills.
- The demand for robots has never been stronger, as more industries look to automation to increase productivity.
- Among the highest starting salaries after graduation!





Manufacturing Engineering Technology

- The 4-year Bachelor's (MFET) program introduces students to the fundamentals of engineering, materials, and production processes used within industry.
- The program provides in-depth technical content in advanced manufacturing with an emphasis on automated manufacturing and computer integrated manufacturing.

Emphases:

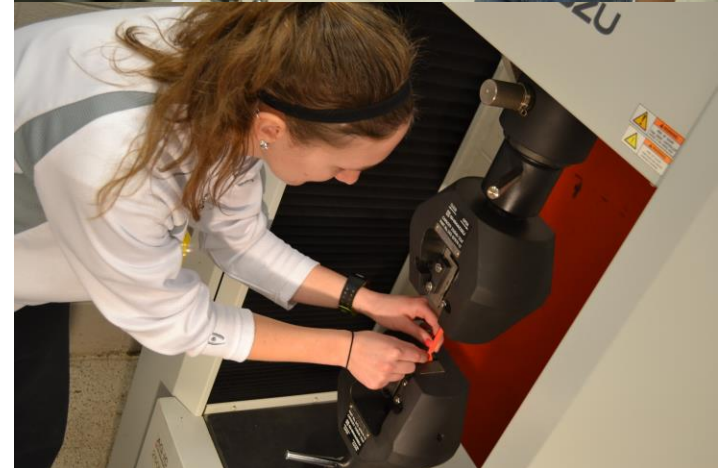
- Industrial Materials
- Manufacturing Processes
- Robotics
- Electronics & Controls
- Material Selection
- Design for Manufacturing

Sample Job Titles:

- Director of Manufacturing
- Engineering Technician
- Fabrication Manager
- Project Engineer
- Purchasing Supervisor
- Quality Manufacturing Supervisor
- Safety Supervisor
- Systems Engineer

Top three reasons to choose Manufacturing Engineering Technology:

- The National Association of Manufacturers estimates there are 12 million jobs in manufacturing in the U.S., with a forecasted need for 2.1 million additional positions by the year 2030.
- Manufacturing in PA accounts for 12% of the state output, employing 10% of all Pennsylvanians.
- Regional demand for the skill sets of MFET graduates is exceptional!



Applied Engineering, Safety & Technology

Other opportunities...

Associate Degrees & Minors

Associate's Degrees:

- Advanced Manufacturing
- CADD Technology
- Control Systems
- Construction Technology
- Graphic Communication
- Safety Technology

Minors Available:

- Advanced Manufacturing
- CADD Technology
- Construction Technology
- Control Systems
- Graphic Communication
- Integrative STEM Methods
- Occupational Safety

Graduate Studies

Master of Science in Technology & Innovation

Concentrations:

- Education (for teachers)
- Enterprise (for everybody)

Stay on after your Bachelor's degree and earn your Master's Degree while you're here!

Graduate Assistantships Available!

Industrial Internships

We work with regional companies to arrange internships for motivated students.

Some examples:



Applied Engineering, Safety & Technology

Getting you employed

AEST wants you to be successful!

- Internships are available for most motivated students, and often result in full-time employment after graduation.
- Local companies regularly visit AEST for lunch-and-learn recruiting events and live interview sessions.
- AEST faculty members are familiar with regional employers and can be an amazing resource.
- Millersville University's Career Services counselors are always available to help you prepare to land your perfect job!

INSTITUTIONAL EMPLOYMENT DATA

Department of AEST	College of Science & Tech	Millersville University
FULL-TIME EMPLOYMENT		
100%	100%	100%
FULL-TIME EMPLOYMENT IN YOUR MAJOR		
93.6%	89.9%	81.3%
AVERAGE ANTICIPATED STARTING SALARY		
\$65K	\$49K	\$39K
EMPLOYMENT ACCEPTED PRIOR TO GRADUATION		
23.3%	12.1%	10.5%

Student Organizations

AEST has a variety of student organizations

- America Society of Safety Professionals Student Section
- Association of Technology Management & Applied Engineering Student Chapter
- CADD Club
- Construction Club
- Marauder Graphics
- National Society for Black Engineers
- Society of Manufacturing Engineers
- Technology & Engineering Education Collegiate Association



Thank you for coming to preview AEST today!

A tour of Osburn Hall will begin shortly.

Next Steps:

- **Ask questions:** your tour guide or any staff member will be happy to assist you.
- **Get to know us:** visit the AEST Web site.
millersville.edu/aest
- **Start the application process:** visit the MU admissions page and follow the instructions.
millersville.edu/admissions
- **Come back and see us again:** in-person tours are available.
Please email us at AEST@millersville.edu



Millersville University
Applied Engineering
Safety & Technology