



# Engineering and Science Technologies Career Pathway

Certificate

Associate Degree,  
Engineering Technology

Bachelor's Degree,  
Mechanical Engineering

## Start Pre-Engineering

As early as grade 7  
(based on readiness)

## Industrial Machinery Mechanic

Median Salary: \$44,650  
Job Growth (10 yr): 18.4%  
Annual Openings: 529  
Average Tuition (1 yr): \$0 –  
\$3,900/yr

## Engineering Technician

Median Salary: \$49,260  
Job Growth (10 yr): 1.3%  
Annual Openings: 48  
Average Tuition (2 yrs): \$3,900/yr

## Mechanical Engineer

Median Salary: \$71,140  
Job Growth (10 yr): 5.4%  
Annual Openings: 447  
Average Tuition (4 yrs): \$9,600/yr



Workplace Visits  
Job Shadow  
Internship  
Work

Supervised Experience  
---  
Work

Supervised Experience  
Internship  
---  
Work

Internship  
---  
Work

Provided by middle schools, high schools, employers, Ohio Tech Centers, and colleges.

**Preparing students for multiple options after high school:**

gainful employment and/or postsecondary study.

Ohio In-demand Occupations

Data reflects 2014 Ohio labor statistics and public institutions of higher education for 2013-2014. For specific tuition costs, visit [ohiohighered.org](http://ohiohighered.org).



# Engineering and Science Technologies Career Pathway

Secondary Pathway: **Engineering and Design**

Postsecondary Program: **Mechanical Engineering Technology**

## An Example of Courses with Secondary and Postsecondary Credits

Secondary	7 8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Pre-Engineering Technologies		
	9 10	English II	Algebra II	Biology	World History	Health (.5) PE (.5)	Engineering Principles	Engineering Design	World Languages
	11	English III	Geometry	Chemistry	U.S. History	Manufacturing Operations	Digital Electronics	World Languages	
	12	English IV	Trigonometry/ Calculus	Physics	U.S. Government	Robotics	Alternative Energy		
Postsecondary	Year 1 1st Semester	Computer Applications	Technical Math	Intro to Engineering Technology	Manufacturing Materials & Processes	Engineering Graphics			
	Year 1 2nd Semester	English Composition	Statics	Physics	CAD I	Machine Tools Lab			
	Year 2 1st Semester	Interpersonal Communication	Strength of Materials	Basic Mechanisms and Drives	CAD II	Ethics	Motors and Control Logic		
	Year 2 2nd Semester	Technical Writing	Machine Design/CAM	Engineering Statistics	CNC	Robotics	Micro Economics		

### High School Career-Technical Education Program Courses

High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

Required Courses

Recommended Electives

Visit [education.ohio.gov/CareerConnections](http://education.ohio.gov/CareerConnections) for reference information.

Course titles and sequences will vary between schools.

11/2014