



# Associate Degree in MEMS & Microelectronics Earn and Learn Train OH!



## About MEMS & Microelectronics

**Micro Electrical Mechanical Systems (MEMS)** and sensor technology is a growing field. Now is the time to enter into the field of microelectronics manufacturing.

### What is MEMS?

Microelectronics – microchips, microcircuits – very small electronic components that are driving the development of smaller, faster, cheaper devices that are changing how we work, how we communicate, and how we are entertained.

Microelectronics are used in innovative products everywhere, including the next generation of mobile and Internet of Things devices, enabling smarter driving, smarter factories, cities and homes.

**TRAIN OH** is a new program at Lorain County Community College that is developing highly trained and educated talent for the microelectronic manufacturing industry. As the link between industry and education, LCCC combines a hands-on college degree with a paid internship to build the necessary skills sets for students to enter Ohio's microelectronics job market.

### Key Principles for Students:

- **Pathways to an Associate Degree**
- **1,900 hours of PAID on-the-job training and work experience**
- **The potential for zero student loan debt**
- **An opportunity for full-time employment with a sponsoring company**
- **Dedicated Academic Advisor**
- **Financial Aid Eligible**

## Earnings/Occupations

In 2016 median hourly earnings in Ohio ranged from \$24.87 to \$31.52 as an Electro-Mechanical Technician to \$44.22 to \$62.57 as a Materials Engineer.

(Source EMSI)

## INDUSTRY PARTNERS



**NanoBio Systems (NBS)**

**SMART**  
MICROSYSTEMS

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## Earn and Learn with TRAIN OH!

### PROGRAM OVERVIEW:

Students have the opportunity to earn a short-term or one-year technical certificate that all credits lead to an associate degree. The TRAIN OH Earn and Learn program has a paid internship built into the program where students attend class two days a week and work 3 days a week with one of LCCC's industry partners. This program allows students to work in the field of microelectronics and apply the knowledge learned in the classroom.

### CURRICULUM GUIDE:

Semester	Credit	Course Number	Credit Course Title	Credit Hours
FALL SEMESTER 1	ELCT	111	Electrical Circuits I	3
	ENGL	161	College Composition I	3
	SDEV	101	College 101	1
	TECN	111	Technical Problem Solving	3
	MEMS	122	Intro to Microelectrical Mechanical Systems	4
SPRING SEMESTER 2	CADD	111	Intro to Computer Aided Design	2
	ELCT	121	Digital Electronics	4
	MTHM	121	Technical Math I	4
	MEMS	132	MEMS Packaging	3
SUMMER SEMESTER 3	CADD	216	Intro to 3D Modeling	1
	AETC	192	Intro to Personal Fabrication	1
	MEMS	287	Work-Based Learning I	1
	ELCT	115	Fabrication Processes of Electronics	2
	MTHM	168	Statistics	3
FALL SEMESTER 4	ELCT	233	Electronic Devices I	4
	CHMY	171	General Chemistry I	5
	MEMS	288	Work-Based Learning II	1
	MEMS	211	Micro-Fabrication Processing	3
SPRING SEMESTER 5	ENGL	164	College Composition II with Technical Topics	3
			Arts and Humanities Elective	3
			Social Science Elective	3
	MEMS	289	Work-Based Learning III	1
	MEMS	221	Micro-Systems Capstone Project	3
Total Semester Credit Hours				61

### PROGRAM REQUIREMENTS:

- High School Diploma or GED

### WHO SHOULD ATTEND?

- Unemployed workers
- Under-employed workers
- Recent High School or GED graduates
- Veterans

Visit [www.lorainccc.edu/MEMS](http://www.lorainccc.edu/MEMS)  
for more information or call

Tracy Check: 440-366-7737

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