



## Engineering Technology – Precision Machining Certificate

**START here**

1

SEMESTER 1 – FALL	CREDITS	MILESTONE	COMPLETED
ADM 101 – Introduction to Manufacturing	3		<input type="checkbox"/>
ADM 110 – Precision Machining I	6		<input type="checkbox"/>
ADM 111 – Precision Machining II	6		<input type="checkbox"/>

\*Courses held at Center for Manufacturing Technology, Woburn, MA

TOTAL CREDITS 15

**Milestone Courses**  
should be taken in the order shown. This will help you stay on track and graduate on time.

2

SEMESTER 2 – SPRING	CREDITS	MILESTONE	COMPLETED
ENG 101 – English Composition I	3		<input type="checkbox"/>
CAD 110 – Engineering Graphics I	3		<input type="checkbox"/>
CAD 169 – Solid Modeling I	3		<input type="checkbox"/>
CAP 103 – Computers for Technology	3		<input type="checkbox"/>

TOTAL CREDITS 12

**You've FINISHED!**

### Career and Transfer Outlook

The Massachusetts Department of Higher Education Advanced Manufacturing Workforce Plan notes that there is a need to more than double the number of students completing advanced manufacturing programs in order to meet current demand. Graduates of the program are qualified to pursue entry-level jobs in the precision machining industry. These positions include: Machinist, CNC Operator, and CNC Machinist among others. In addition to being able to fill entry-level positions, graduates are prepared to understand the functional components of the advanced equipment used by the industry, which provides a foundation for further specialized training on company specific equipment and processes. This specialized training prepares individuals for such positions as CNC Set-up Programmer, Machine Tool Mechanic, Mold Maker, Tool and Die Maker, Quality Technician, and Cell Leader. The industry values promotion from within, so strong job performance can lead to promotional opportunities on the shop floor and open up career pathways in manufacturing support positions, such as quality, safety, engineering and management. Advancement within the industry may require additional college level or outside training.

### General Advising Notes

- First semester courses will be held at the Center for Manufacturing Technology in Woburn, Massachusetts. Most courses will be held Monday through Thursday, with some on Saturdays. Please connect with Admission staff or Academic Advisors regarding course availability.
- Most courses in the program require placement into or above Math Module 80. Students should take courses in the prior term if they do not meet this requirement.
- The college offers accelerated math and English courses during the summer to help students meet entrance requirements for the fall. Connect with an Academic Advisor to review availability.
- Students who place into ENG 092 should take this course in the summer prior to the fall program start.
- Students who place into ENG 109/ENG101 may take this course in the spring semester.

To learn more, call us at **1-800-818-3434** or visit [www.middlesex.mass.edu](http://www.middlesex.mass.edu)



## Engineering Technology and Transfer

The **Engineering Technology and Transfer** programs at Middlesex Community College offer a clear pathway so you can meet your educational and career goals. There are multiple entrance, exit and continuation points along this pathway. Each program offers courses that prepare you for the next level of study, as well as for employment opportunities. Your job options grow with completion of each extra step, as does earning potential! **Program Outcome skill competencies** can be found on the individual program pages of the MCC Academic Catalog at [www.middlesex.mass.edu/catalog](http://www.middlesex.mass.edu/catalog).

### ENGINEERING TECHNOLOGY: PRECISION MACHINING CERTIFICATE

**Competencies:** Prepares students for employment in a variety of entry-level advanced manufacturing machining positions.

Learn more about the competencies at [www.middlesex.mass.edu/catalog](http://www.middlesex.mass.edu/catalog)

### JOB OPTIONS

- CNC Machine Programmer
- CNC Tool Operator
- Quality Assurance/Control Inspector
- Manufacturing Production Technician

### SALARY RANGE

**\$38,565-\$48,204**  
(\$18.54 - \$23.18 / hr)



### ENGINEERING TECHNOLOGY: COMPUTER AIDED DESIGN CERTIFICATE

**Competencies:** Prepares students for employment in a variety of architectural, mechanical and CAD drafting and designer positions.

Learn more about the competencies at [www.middlesex.mass.edu/catalog](http://www.middlesex.mass.edu/catalog)

### JOB OPTIONS

- Architectural Drafter
- Civil CAD Drafter
- Millwork Drafter
- Staff Structural Detailer
- Electrical Drafter

### SALARY RANGE

**\$30,540-\$38,180**  
(\$14.68 - \$18.36 / hr)



### ENGINEERING TECHNOLOGY: COMPUTER AIDED DESIGN ASSOCIATE DEGREE

**Competencies:** Prepares students for careers with emphasis on Mechanical Computer Aided Design (CAD) Drafting and Design, basic Electro/Mechanical and Printed Circuit Board layout and entry level Architectural CAD.

Learn more about the competencies at [www.middlesex.mass.edu/catalog](http://www.middlesex.mass.edu/catalog)

### JOB OPTIONS

- Architectural and Civil Drafter
- Electrical and Electronics Drafter
- Mechanical Drafting Technician

### SALARY RANGE

**\$37,811-\$43,651**  
(\$18.18 - \$21.00 / hr)





## ENGINEERING SCIENCE TRANSFER: MECHANICAL ENGINEERING A.S.

**Competencies:** Prepares students for transfer to an engineering bachelor degree program and employment in a variety of technical positions.

Learn more about the competencies at [www.middlesex.mass.edu/catalog](http://www.middlesex.mass.edu/catalog)

### JOB OPTIONS

- Mechanical Technologist
- Mechanical Engineering Technician
- Electrometrical Engineering Technician
- Industrial Engineering Technician
- Robotics Technician

### SALARY RANGE

**\$39,985-\$40,985**  
(\$19.22 - \$19.70/ hr)



## ENGINEERING SCIENCE TRANSFER: CIVIL/ENVIRONMENTAL ENGINEERING A.S.

**Competencies:** Prepares students for transfer to an engineering bachelor degree program and employment in a variety of positions.

Learn more about the competencies at [www.middlesex.mass.edu/catalog](http://www.middlesex.mass.edu/catalog)

### JOB OPTIONS

- Civil Engineering Technician
- Surveying Technician
- Construction and Building Inspector

### SALARY RANGE

**\$41,130-\$42,360**  
(\$19.77 - \$20.37 / hr)



### CAREER GROWTH

Job opportunities for those with a Bachelor's degree, depending upon the major, include: Mechanical Engineer, Materials Engineer, Industrial/Manufacturing Engineer, Civil Engineer, Construction Engineer, Transportation Engineer, City /Town Engineer.



Learn more about Advanced Manufacturing, CAD and Engineering jobs, salaries, required education, and employment outlook by visiting <http://www.bls.gov/ooh/> or [http://lmi2.detma.org/lmi/lmi\\_oes\\_a.asp#3](http://lmi2.detma.org/lmi/lmi_oes_a.asp#3).



Average **starting salary** for students earning a **Bachelor's degree** is **\$57,830-\$68,000 \***

\*Depending on the major

To learn more, call us at **1-800-818-3434** or visit [www.middlesex.mass.edu](http://www.middlesex.mass.edu)