



Engineering Technology - Computer Aided Design (CAD)

Associate in Science

START here**1**

SEMESTER 1 – FALL	CREDITS	MILESTONE	COMPLETED
MAT 120 – Math Modeling –OR– MAT 177 – Statistics –OR– other college-level math	3		<input type="checkbox"/>
ENG 101 – English Composition I	3		<input type="checkbox"/>
CAD 110 – Engineering Graphics I	3		<input type="checkbox"/>
CAD 169 – Basic Solid Modeling I	3		<input type="checkbox"/>
FYE – First-Year Experience and two additional IDS Electives	3		<input type="checkbox"/>

TOTAL CREDITS 15

2

SEMESTER 2 – SPRING	CREDITS	MILESTONE	COMPLETED
CAD 130 – Engineering Graphics II	3		<input type="checkbox"/>
ENG 102 – English Composition II: Introduction to Literature	3		<input type="checkbox"/>
CAD 227 – Advanced CAD Applications	3		<input type="checkbox"/>
CAD 180 – Solid Modeling II	3		<input type="checkbox"/>
CAP 101 – Computer Applications	3		<input type="checkbox"/>

TOTAL CREDITS 15

3

SEMESTER 3 – FALL	CREDITS	MILESTONE	COMPLETED
CAD 225 – Solid Modeling III	3		<input type="checkbox"/>
CAD 220 – PCB/EM Layout	3		<input type="checkbox"/>
CAD 230 – Architectural CAD	3		<input type="checkbox"/>
Science Elective	3		<input type="checkbox"/>
Approved Elective – Recommended: EGR 101 – Introduction to Engineering	3/4		<input type="checkbox"/>

TOTAL CREDITS 15/16

4

SEMESTER 4 – SPRING	CREDITS	MILESTONE	COMPLETED
CAD 228 – Practicum in CAD Technology –OR– CAD 231 Engineering Technology/CAD Internship	3		<input type="checkbox"/>
CAD 205 – Geometric Dimensioning and Tolerancing	3		<input type="checkbox"/>
CAD 270 – Design for Manufacturing	3		<input type="checkbox"/>
Humanities Elective	3		<input type="checkbox"/>
Behavioral Science Elective	3		<input type="checkbox"/>

TOTAL CREDITS 15

**Milestone Courses**

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



Make Your Summer Matter. Summer is a great time to take some elective courses and get ahead.

Helpful Hints

- Students are advised to fulfill their math requirements as early as possible.
- Students considering CAD as a pathway to engineering should consider the following:
 - If not testing into college-level math, taking the "80 series" modules of Preparation for College Math.
 - If testing into college-level math, taking MAT 195 – Precalculus for Engineering and Science or MAT 196 – Accelerated Precalculus and Trigonometry
 - Selecting chemistry or physics as the science elective.

Career and Transfer Outlook

Graduates of the program are qualified to pursue jobs in several CAD career fields, especially mechanical and printed circuit board design. Graduates work in various industries with departments in mechanical design, printed circuit design, manufacturing or architectural design.

Many graduates of the CAD associate degree program have continued their studies toward a bachelor's degree in engineering or engineering technology at a four-year college.

You've FINISHED!

To learn more, call us at **1-800-818-3434** or visit **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.

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

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

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

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

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

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.



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

*Depending on the major

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