

# ENGINEERING TECHNOLOGY

## Program Description

The program trains students to be specialists in the practical application and implementation of existing technology within the field of engineering. This degree will prepare highly skilled and needed workers for area manufacturers. The Engineering Technology program includes areas of specialization in Automation, Electro-Mechanical and Process Control.

A sequence of calculus courses is available for those students wishing to transfer on for their Bachelor's degree. Offered at Clinton, Muscatine and Scott Community Colleges the program will provide delivery options that will allow individuals who are currently working to complete the degree through flexible scheduling, hybrid courses (a combination of in-class and online learning), and a model of eight-week modules which allows for numerous start times during the year.

## Award Options

Engineering Technology AAS

- Specialization Areas: Automation, Electromechanical or Process Control

Engineering Technology Electromechanical Diploma

Basic Electricity Certificate

Basic Electronics Certificate

Electrical Systems Certificate

Process Control Technology Certificate

## Job Outlook

Employment of engineering technicians is expected to grow 5 percent from 2012 to 2022, which is slower than the average for all occupations. Employment in this occupation depends on the overall state of manufacturing. Median annual wages of engineering technicians were \$51,980 in May 2012. The lowest 10 percent earned less than \$33,370, and the top 10 percent earned more than \$76,660.

For details, please visit this link <http://www.bls.gov/oco/>



**THE** *Community's College*



**CLINTON, MUSCATINE  
AND SCOTT COMMUNITY  
COLLEGES**

### Program Faculty

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Toll-free 1-888-336-3907

### Our Web Links:

[www.eicc.edu/apply](http://www.eicc.edu/apply)

[www.eicc.edu/visit](http://www.eicc.edu/visit)

[www.eicc.edu/programs](http://www.eicc.edu/programs)

[www.eicc.edu/daretocompare](http://www.eicc.edu/daretocompare)

[www.eicc.edu/financialaid](http://www.eicc.edu/financialaid)

[www.eicc.edu/catalog](http://www.eicc.edu/catalog)

Since the colleges of EICC are continually reviewing programs, information in the course catalog may change. Please visit [www.eicc.edu/catalog](http://www.eicc.edu/catalog) for any program updates which have occurred since the most recent edition of the catalog.

Tuition and fees subject to change by the EICC Board of Trustees.

# ENGINEERING TECHNOLOGY

## A.A.S. Degree

### TERM 1 – ALL TRACKS

#### Session I

ELE:101	Industrial Safety	1.00
ELE:216	DC Circuit Analysis	3.00
MAT:705	Industrial Math & Measurement I	2.00

#### Session II

ELE:217	AC Circuit Analysis	3.00
IND:134	Industrial Print Reading	2.00
MAT:706	Industrial Math & Measurement II	2.00

Credits

13.00

**Basic Electricity Certificate Total.....13.00**

(Note: MAT:128 PreCalculus or MAT:210 Calculus I should be substituted for MAT:705 and MAT:706 if planning Bachelor's Degree transfer)

### TERM 2

#### Session I

CSC:112	Computer Fundamentals for Technicians I/A	2.00
ELE:225	Electrical Motor Control & Power Distribution	3.00
ELT:312	Solid State Devices & Systems	3.00

#### Session II

CSC:113	Computer Fundamentals for Technicians I/B	2.00
ELT:309	Digital Circuits & Systems	3.00
PHY:185	Conceptual Physics Fundamentals I	2.00

14.00-15.00

**Basic Electronics Certificate Total.....27.00-28.00**

(Note: CSC:110 may be substituted for CSC:112 and CSC:113)

### TERM 3 – SUMMER

ECN:120	Principles of Macroeconomics OR	3.00
ECN:130	Principles of Microeconomics OR	3.00
HUM:105	Working in America OR	3.00
HUM:110	Changes and Choices OR	3.00
POL:111	American National Government OR	3.00
PSY:111	Introduction to Psychology OR	3.00
SOC:110	Introduction to Sociology	3.00
ENG:105	Composition I OR	3.00
ENG:107	Composition I: Technical Writing	3.00
PHY:186	Conceptual Physics Fundamentals II	2.00

8.00

**Engineering Technology Electromechanical Diploma Total .....35.00-36.00**

### TERM 4 – ALL TRACKS

#### Session I

EGT:117	Fluid Power Fundamentals	2.00
ELT:123	Programmable Logic Controllers	3.00

#### Session II

ELT:125	Advanced PLC	3.00
IND:143	Motors and Drives	3.00
MFG:505	Lean Manufacturing	1.00

12.00

## Clinton Community College

1000 Lincoln Boulevard,  
Clinton, IA 52732  
(563) 244-7001  
1-800-638-0559

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### Admissions Officer

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## Muscatine Community College

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## Scott Community College

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It is the policy of Eastern Iowa Community Colleges not to discriminate on the basis of race, color, national origin, sex, disability, age (employment), sexual orientation, gender identity, creed, religion, and actual or potential parental, family or marital status in its programs, activities, or employment practices as required by the Iowa Code §§ 216.6 and 216.9, Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d and 2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.) Title IX (Educational Amendments, 20 U.S.C. §§ 1681 - 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and Title II of the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.).

If you have questions or complaints related to compliance with the policy, please contact Debora J. Sullivan, Equity Coordinator, 306 W. River Drive, Davenport, Iowa 52801, 563/336-3487, [djsullivan@eicc.edu](mailto:djsullivan@eicc.edu) or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 West Madison, Suite 1475, Chicago, IL 60661, phone number 312/730-1560, fax 312/730-1576.

## Automation

### TERM 5

#### Session I

ATR:105	Industrial Robotics	3.00
ATR:106	Motion Control	3.00
ELT:177	Microcontrollers	3.00

#### Session II

Must select two from below for at least six hours:

CHM:122	Introduction to General Chemistry OR	4.00
EGT:137	Fluid Power Control OR	4.00
EGT:145	Fluid Power Maintenance OR	4.00
IND:136	Process Control I OR	3.00
IND:137	Process Control II	3.00
		<hr/>
		15.00

**A.A.S. Total**.....**62.00-63.00**

## Electromechanical

### TERM 5

#### Session I

ATR:106	Motion Control	3.00
EGT:137	Fluid Power Control	4.00
EGT:145	Fluid Power Maintenance	4.00

#### Session II

Must select two from below for at least six hours:

ATR:105	Industrial Robotics OR	3.00
CHM:122	Introduction to General Chemistry OR	4.00
ELT:177	Microcontrollers OR	3.00
IND:136	Process Control I OR	3.00
IND:137	Process Control II	3.00
		<hr/>
		17.00

**A.A.S. Total**.....**64.00-65.00**

## Process Control

### TERM 5

#### Session I

CHM:122	Introduction to General Chemistry	4.00
IND:136	Process Control I	3.00

#### Session II

IND:137	Process Control II	3.00
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Must select two from below for at least six hours:

ATR:105	Industrial Robotics OR	3.00
ATR:106	Motion Control OR	3.00
EGT:137	Fluid Power Control OR	4.00
EGT:145	Fluid Power Maintenance OR	4.00
ELT:177	Microcontrollers	3.00
		<hr/>
		16.00

**A.A.S. Total**.....**63.00-64.00**

### Credits

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## Electrical Systems Certificate

### TERM 1

#### Session I

ELE:101	Industrial Safety	1.00
CSC:112	Computer Fundamentals for Technicians I/A	2.00
CSC:113	Computer Fundamentals for Technicians I/B	2.00
ELE:216	DC Circuit Analysis	3.00

#### Session II

ELE:217	AC Circuit Analysis	3.00
MAT:075	Industrial Math and Measurement I	2.00
MFG:505	Lean Manufacturing	1.00
		<u>14.00</u>

### TERM 2

#### Session I

ATR:105	Industrial Robotics	3.00
ELE:225	Electrical Motor Control and Power Distribution	3.00

#### Session II

ELT:123	Programmable Logic Controllers	3.00
ELT:309	Digital Circuits and Systems	3.00
ELT:312	Solid State Devices and Systems	3.00
		<u>15.00</u>

### TERM 3 - SUMMER

ATR:106	Motion Control	3.00
ELT:125	Advanced PLC	3.00
IND:143	Motors and Drives	3.00
		<u>9.00</u>

Certificate Total.....**38.00**

## Process Control Technology Certificate

### TERM 1

#### Session I

ELE:101	Industrial Safety	1.00
ELE:216	DC Circuit Analysis	3.00
MAT:705	Industrial Math and Measurement I	2.00

#### Session II

ELE:217	AC Circuit Analysis	3.00
IND:134	Industrial Print Reading	2.00
MAT:706	Industrial Math and Measurement II	2.00
		<u>13.00</u>

### TERM 2

#### Session I

CHM:122	Introduction to General Chemistry	4.00
ELE:225	Electrical Motor Controls and Power Distribution	3.00

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## Session II

IND:136	Process Control I	3.00
ELT:123	Programmable Logic Controllers OR	3.00
ELT:309	Digital Circuits and Systems OR	3.00
ELT:312	Solid State Devices and Systems OR	3.00
EGT:117	Fluid Power Fundamentals OR	2.00
EGT:137	Fluid Power Control	4.00
		<u>13.00</u>

## TERM 3 - SUMMER

IND:137	Process Control II	3.00
EGT:902	Coop/Internship (Recommended Optional)	(2.00)
		<u>3.00</u>

**Certificate Total.....29.00**

The Engineering Technology Program is funded in part by the Trade Adjustment Assistance Community College and Career Training (TAACCT) Grant program which is in partnership with the Department of Labor and the Department of Education. Through these multi-year grants, the Department of Labor is helping to ensure that our nation's institutions of higher education are helping adults succeed in acquiring the skills, degrees, and credentials needed for high-wage, high-skill employment while also meeting the needs of employers for skilled workers.

Gainful employment information for the Engineering Technology program is located at [www.eicc.edu/gainfulemployment](http://www.eicc.edu/gainfulemployment)

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