



Catalog Year Fall 2015

# EAST CENTRAL COLLEGE

ARTICULATED THROUGH SOUTHEAST MISSOURI STATE UNIVERSITY

# ENGINEERING TECHNOLOGY

ASSOCIATE OF ARTS DEGREE

## East Central College

1964 Prairie Dell Road  
Union, Missouri 63084  
636-584-6588  
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## Admissions Office

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## Division

Mathematics and Physical  
Science  
636-584-6773

East Central College is  
accredited by the Higher  
Learning Commission of the  
North Central Association of  
Colleges and Schools  
30 N. LaSalle St., Suite 2400  
Chicago, Illinois 60602-2504  
800-621-7440

## THE CAREER

Engineering technology emphasizes the application of scientific and engineering techniques to a variety of real-world problems. Application is the key word in this definition, in that engineering technology emphasizes practical applications as well as theory. Engineering technologists work in the job spectrum between the engineer and the skilled technician, with responsibilities closest to those of the engineer.

The work of technologists is usually focused on product improvement, manufacturing, construction and engineering operational functions. Technologists are employed in a large and wide-array of industries including: manufacturing, construction, industrial, maintenance and management.

Entry-level positions in product design, testing, development, systems engineering, field engineering, technical operations and quality control are common for engineering technology graduates. Programs prepare their graduates to apply others' designs.

## PROFESSIONAL TRAITS

Those pursuing a career in this field should:

- Be able to anticipate and prevent problems
- Provide fair but firm guidance
- Be enthusiastic and constantly alert
- Possess good communication and organizational skills
- Work well independently and on a team
- Be able to analyze, compare and interpret detailed information

## THE PROGRAM

ECC offers its engineering technology students a complete two-year program which includes the basic calculus, physics and chemistry classes as well as the hands on mechanical and electrical classes in state-of-the-art facilities. ECC students participate in classroom design projects. Class sizes are small, giving students the opportunity to receive individual help when necessary.

## ADMISSIONS REQUIREMENTS

To enter the program, students must have completed:

- ✓ High school diploma or the equivalent (documentation must be sent to the registration office)
- ✓ Application for admission
- ✓ A placement test as specified by the college (some coursework requires minimum placement results)

## TRANSFER OPTIONS

Engineering Technology students benefit from an articulation agreement between East Central and Southeast Missouri State University. They transfer to four-year, bachelor of science programs with a very high completion rate.

Please note that transferring credit is decided solely by the bachelor degree-granting institution, not ECC. Students are advised to make early contact with the four-year college or university of their choice so that they can take the appropriate coursework at East Central.

## EMPLOYMENT OPPORTUNITIES AND SALARY INFORMATION

The number of positions in the engineering technology field is expected to remain steady, with no or little change by the year 2022, reports the U.S. Bureau of Labor Statistics. Here are the median annual salaries for the main career types in this field as of 2014:

Aerospace Engineering and Operations Technicians	\$64,310
Electrical and Electronic Engineering Technicians	\$60,330
Industrial Engineering Technicians	\$55,660
Electromechanical Technicians	\$55,600
Mechanical Engineering Technicians	\$55,470
Environmental Engineering Technicians	\$51,030
Civil Engineering Technicians	\$50,290

■ **ROLLA**  
573-466-4100

■ **SULLIVAN**  
573-468-8287

■ **UNION**  
636-584-6588

■ **WASHINGTON**  
636-239-0598

WWW.EASTCENTRAL.EDU

# ENGINEERING TECHNOLOGY

## ASSOCIATE OF ARTS DEGREE

### PROGRAM OF STUDY

This program of study is for a full-time student; part-time study is also available. Please contact an academic advisor for full course options. For the most current academic schedule (which is subject to change), visit the college Web site at [www.eastcentral.edu](http://www.eastcentral.edu).

AA program (64-67 credit hours)

### YEAR 1

#### FALL SEMESTER

COURSE	HOURS
FS 1000 Campus Orientation/	
FS 1001 Foundation Seminar	1
EN 1223 English Comp I or	
EN 1233 Honors English Comp I	3
MT 1505 Pre-Calculus	5
IE 1121 Industrial Power Systems Lecture	1
IE 1112 Industrial Power Systems Lab	2
PE 1081 Intro Fitness & Wellness	1
Art/Music/Theater Appreciation Elective	3
Total Hours	16

#### SPRING SEMESTER

COURSE	HOURS
EN 1333 English Comp II or	
EN 1343 Honors English Comp II	3
MT 1605 Analytic Geometry & Calculus I	5
CS 1093 C# Programming	3
IE 1123 Industrial Computer Applications	3
PS 1000 Constitutions Study Module	0
PS 1203 U.S. Government I: Nation & State or	
PS 1303 State & Local Government	3
Total Hours	17

### YEAR 2

#### FALL SEMESTER

COURSE	HOURS
SC 1000 Laboratory Safety for Students	0
CH 1105 Intro to Chemistry Lecture/Lab	5
Technical Elective *	3
Technical Elective *	2-3
CT 1003 Oral Communications or	
CT 1103 Public Speaking	3
Psychology/Ethics Elective	3
Total Hours	16-17

#### SPRING SEMESTER

COURSE	HOURS
Technical Elective *	3-5
BI 1203 Introduction to Life Science or	
ES 1023 Introduction to Environmental Science	3
Civilization/History Elective	3
Literature Elective	3
Geography/Sociology/Anthropology Elective	3
Total Hours	15-17

### \*ADDITIONAL TECHNICAL ELECTIVES

#### FALL SEMESTERS

##### RECOMMENDED ELECTIVES:

PH 1703 College Physics I Lecture	3
PH 1712 College Physics I Lab	2

##### MECHANICAL:

IE 1152 Industrial Electricity Lecture	2
IE 1151 Industrial Electricity Lab	1
IE 2123 Metals and Metallurgy	3
MA 2163 Solidworks	3

##### ELECTRICAL AND MECHANICAL:

IE 2213 PLC-Programmable Logic Controllers	3
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#### SPRING SEMESTERS

##### RECOMMENDED ELECTIVES:

PH 1803 College Physics II Lecture	3
PH 1812 College Physics II Lab	2

##### MECHANICAL:

MA 1013 Print Reading & Design	3
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##### ELECTRICAL:

IE 2183 Process & Control Systems	3
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##### ELECTRICAL AND MECHANICAL:

IE 1333 Industrial Robotics	3
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