

East Central College

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Admissions Office

ECC Campus
636-584-6563
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Program Location

The Business & Industry Center
42 Prairie Dell Plaza Drive
Union, Missouri 63084

Division

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Business and Industry
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Program Faculty

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East Central College is accredited by the Higher Learning Commission and a participant in the Academic Quality Improvement Program (AQIP)

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THE CAREER

Industrial engineering technicians use the principles of science, engineering and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection and maintenance. Their work is more narrowly focused and application-oriented than that of scientists and engineers.

Many engineering technicians assist engineers and scientists, especially in research and development. Others work in quality control, conducting tests or collecting data. In manufacturing, they assist in product design, development or facilities maintenance. Job titles include maintenance engineer, engineering technician and field service technician.

PROFESSIONAL TRAITS

Those pursuing a career in industrial engineering technology should:

- Have problem solving skills and be creative
- Possess good communication skills
- Be able to work well with others

EMPLOYMENT AND SALARY

Nationwide, the median annual earnings* of industrial engineering technicians were \$52,020 in May 2013. The five industries employing the largest number of these positions and their median yearly earnings were:

Aerospace Product and Parts Manufacturing	\$64,030
Semiconductor & Other Electronic Component Manufacturing	\$54,560
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	\$55,110
Motor Vehicle Parts Manufacturing	\$48,540
Plastics Product Manufacturing	\$48,540

*according to the U.S. Bureau of Labor Statistics

THE PROGRAM

The ECC Industrial Engineering Technology program prepares students to function as technical assistants to engineers performing installation, maintenance and modification of advanced manufacturing equipment. The program is accredited by ATMAE (Association of Technology, Management, and Applied Engineering).

Students receive training in machinery maintenance and repair; basic electrical principles, motor controls and process control systems; hydraulic and pneumatic control systems; programmable controls, robotics and industrial computers; welding and basic machine shop equipment; safety practices; and basic HVAC systems. Students also learn the problem-solving, teamwork and self-management skills demanded by business and industry today.

ADMISSIONS REQUIREMENTS

Students must have completed:

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

TRANSFER OPTIONS

Associate of Applied Science degrees are designed for students seeking employment immediately upon graduation. Many of the credits, particularly the general education electives earned with this program, however, are also accepted as transfer credit by four-year colleges and/or universities.

Please note that transferring credit is decided solely by the bachelor degree-granting institution. Students are advised to contact the four-year school of their choice regarding transferability before beginning a program and/or reviewing other AAS or AA degrees offered through East Central College.

INDUSTRIAL ENGINEERING TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE

PROGRAM OF STUDY

AAS Program (69 credit hours)

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. All academic schedules are subject to change. Many of these courses are also part of the Certificate of Achievement program (CA). For the most current schedule or to view our Certificate Program, visit www.eastcentral.edu.

YEAR 1

FALL SEMESTER

COURSE	HOURS
FS 1000/ FS 1001 Campus Orientation/ Foundation Seminar ^{CA}	1
IE 1103 Introduction to Manufacturing Processes ^{CA}	3
IE 1172/ IE 1171 Process & Control Systems Lecture/ Lab ^{CA}	3
IE 1151/ IE 1152 Industrial Electricity Lecture/ Lab ^{CA}	3
IE 2113 Maintenance Practices ^{CA}	3
MT 1083 Applied Algebra & Trigonometry	3
Total Hours	16

SPRING SEMESTER

COURSE	HOURS
IE 1112/ IE 1121 Industrial Power Systems Lecture/ Lab ^{CA}	3
IE 1123 Industrial Computer Applications ^{CA}	3
EN 1223/ EN 1233 English Comp I or Honors English Comp I	3
COM 1003 Oral Communications or COM 1103 Public Speaking	3
PH 1104 Introduction to Physics Lecture/Lab	4
Total Hours	16

SUMMER SEMESTER

COURSE	HOURS
Program Elective* ^{CA}	3
Ethics and Social Responsibility Elective	3
Total Hours	6

^{CA} Course is part of the Certificate of Achievement program

YEAR 2

FALL SEMESTER

COURSE	HOURS
EN 1403 Technical Writing	3
IE 2123 Materials and Metallurgy ^{CA}	3
IE 2213 PLC-Programmable Logic Controllers ^{CA}	3
MA 1202/ MA 1212 Machine Tool I Lecture/ Lab ^{CA}	4
Program Elective * ^{CA}	3
TOTAL HOURS	16

SPRING SEMESTER

COURSE	HOURS
IE 1163 Industrial & Control System Wiring ^{CA}	3
IE 2173 Industrial Systems Troubleshooting ^{CA}	3
IE 2153 Motor Controls ^{CA}	3
HI 1000/ PS 1000 Constitutions Study Module	0
History or Political Science Requirement	3
Program Elective * ^{CA}	3
Total Hours	15

*PROGRAM ELECTIVE OPTIONS

COURSE	HOURS
AI 1302/ 1301 Introduction to HVAC Lecture/ Lab	3
BU 1003 Introduction to Business	3
BU 1193 Dynamics/Leadership	3
MA 1221/ 1223 Machine Tool II Lecture/ Lab	4
WL 1011/ 1014 Welding I Lecture/ Lab	5
IE 2313 Advanced Programmable Logic Controllers	3
IE 1333 Industrial Robotics	3
IE 2403 Industrial Engineering Technology Internship	3