

East Central College

1964 Prairie Dell Road
Union, Missouri 63084
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Admissions Office

ECC Campus
636-584-6563
admissions@eastcentral.edu

Program Location

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

Division

Richard Hudanick
Division Chair
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Business and Industry
(636) 584-6139

Program Faculty

Nathan Esbeck
Instructor, Program Coordinator
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East Central College is accredited by the Higher Learning Commission and a participant in the Academic Quality Improvement Program (AQIP)
30 N. LaSalle St., Suite 2400
Chicago, Illinois 60602-2504
1 (800) 621-7440

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)

ADDITIONAL PROGRAM INFORMATION

Standard Occupational Classification (SOC)
17-3026.00

Tuition and Required Fees
\$5,455 (In-District)
\$7,468 (Out-of-District)

Books and Supplies
\$1908.30

Other
\$311

INDUSTRIAL ENGINEERING TECHNOLOGY

CERTIFICATE OF ACHIEVEMENT

CERTIFICATE OF ACHIEVEMENT COURSEWORK

COURSE	HOURS
FS 1000/ FS 1001 Campus Orientation/ Foundation Seminar	1
IE 1103 Introduction to Manufacturing Processes	3
IE 1151/ IE 1152 Industrial Electricity Lecture/ Lab	3
IE 2113 Maintenance Practices	3
IE 1112/ IE 1121 Industrial Power Systems Lecture/ Lab	3
IE 1123 Industrial Computer Applications	3
IE 1172/ IE 1171 Process & Control Systems Lecture/ Lab	3
IE 2153 Motor Controls	3
IE 2123 Materials and Metallurgy	3
IE 2213 PLC-Programmable Logic Controllers	3
IE 1163 Industrial & Control System Wiring	3
IE 2173 Industrial Systems Troubleshooting	3
MA 1202/ MA 1212 Machine Tool I Lecture/ Lab	4
General Education Requirement*	3
Program Elective**	3
Program Elective**	3
Program Elective**	3
Total Hours	50

TO CONVERT THIS CERTIFICATE OF ACHIEVEMENT INTO AN ASSOCIATE DEGREE, STUDENTS WILL NEED THE FOLLOWING:

COURSE	HOURS
EN 1223 English Comp I # or	
EN 1233 English Comp I (Honors) #	3
MT 1083 Applied Algebra & Trigonometry	3
COM 1003 Oral Communications# or	
COM 1103 Public Speaking#	3
PH 1104 Introduction to Physics Lecture/Lab#	4
EN 1403 Technical Writing#	3
HI 1000 Constitutions Study Module	0
PS 1000 History or Political Science Requirement#	3
Ethics and Social Responsibility Elective	3

**PROGRAM ELECTIVE OPTIONS

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

* Choose one of the marked courses from the list to the right

Courses can be used as General Education Requirement