

East Central College INDUSTRIAL ENGINEERING TECHNOLOGY

Associate of Applied Science Degree And Certificates

Catalog Year Fall 2015

East Central College

1964 Prairie Dell Road Union, Missouri 63084 636-584-6500 www.eastcentral.edu

Admissions Office

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

Program Location

ECC- Washington Located at the Four Rivers Career Center 1978 Image Drive Washington, MO 63090 636-239-0598

Program Faculty/Coordinator

Nathan Esbeck 636-239-0598 Nathan.Esbeck@eastcentral.edu

Division Chair

Ann Boehmer
636-584-6679
Ann Boehmer@eastcentral.edu

Division

Mathematics and Physica 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

Industrial engineering techicians 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 narrosly focused and application-oriented than that of scientists and engineers. Many engineering technicians assist engineersm and scientists, especially in research and development. Others work in quality control, conducting tests or collecting data. In manufacturing, they may assist in product design, development or facilities maintenance.

PROFESSIONAL TRAITS

Those pursuing a career in industrial engineering technology should:

- · Have a certain degree of creativity
- · Possess good communication skills
- Be able to work well with others

EMPLOYMENT AND SALARY INFORMATION

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

Aerospace Product and Parts
Manufacturing \$64,030

Semiconductor and 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

Special Funding Available

Scholarships and grants are available for those who qualify through the Missouri Manufacturing WINs grant. Please contact Financial Aid for more details.

THE PROGRAM

The Industrial Engineering Technology program is offered at the ECC site in Washington (Four Rivers Career Center). The program is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

Technicians install, troubleshoot and maintain complex manufacturing and processing equipment. Job titles include maintenance engineer, engineering technician and field service technician.

This program prepares students to function as technical assistants to engineers performing installation, maintenance and modification of advanced manufacturing equipment.

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 (please note: some coursework requires minimum placement results)

TRANSFER OPTIONS

The AAS degree is designed for students seeking employment immediately upon graduation. However, many of the credits, particularly the general education electives received with this degree, may qualify as transfer credit by four-year schools.

Please note that these decisions are made solely by the bachelor degree-granting institution, not East Central College. Students seeking to transfer are advised to contact the institution of their choice before beginning a program or reviewing other degrees and coursework offered through ECC.

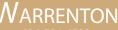
ROLLA 573-466-4100













Industrial Engineering Technology

ASSOCIATE OF APPLIED SCIENCE DEGREE AND CERTIFICATES

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.

AAS Program (68 credit hours)

- A Course that is also part of the Certificate of Achievement program (47 credit hours)
- S Course that is also part of the Certificate of Specialization program (32 credit hours)

YEAR 1

FALL SEMESTER

Course		Hours
FS 1000 FS 1001	Campus Orientation/ Foundation Seminar	1
EN 1223 EN 1233	English Comp I or English Comp I (Honors)	3
IE 1103	Introduction to Manufacturing Processes A, S	3
IE 1151/52	Industrial Electricity Lecture/Lab A, S	3
IE 2113	Maintenance Practices A, S	3
MT 1083	Applied Algebra & Trigonmetry	3
	PE Requirement	1
	Total Hours	17

Spring Semester

Course		Hours
IE 1112/21	Industrial Power Systems Lecture/Lab ^{A, S}	3
IE 1123	Industrial Computer Applications A,	s 3
IE 1171/72	Process & Control Systems Lecture/Lab ^A	3
CT 1003 CT 1103	Oral Communications or Public Speaking	3
PH 1104	Introduction to Physics Lecture/Lab	4
	Total Hours	16

SUMMER SEMESTER

Course		Hours
	Program Elective A, S	3
	Total Hours	3

YEAR 2

FALL SEMESTER

Course		Hours
EN 1403	Technical Writing	3
IE 2153	Motor Controls A, S	3
IE 2123	Materials and Metallurgy A, S	3
IE 2213	PLC-Programmable Logic Controllers ^A	3
MA 1202/12	Machine Tool I Lecture/Lab A, S	4
	Total Hours	16

Spring Semester

Course		Hours
IE 1163	Industrial & Control System Wiring	^{1, S} 3
IE 2173	Industrial Systems Troubleshooting	^A 3
ED 2991	Career Management A, S	1
HI 1000/		
PS 1000	Constitutions Study Module	0
	History or Pol. Science Requirement	3
	Program Elective ^A	3
	Program Elective ^A	3
	Total Hours	16

PROGRAM ELECTIVES

Course		Hours
AI 1302/11	Introduction to HVAC Lecture/Lab	3
BU 1003	Introduction to Business	3
BU 1193	Dynamics/Leadership	3
MA 1221/23	Machine Tool II Lecture/Lab	1
WL 1011/14	Welding I Lecture/Lab	1
IE 2313	Advanced Programmable Logic	
	Controllers	3
IE 1333	Industrial Robotics	3
IE 2403	Industrial Engineering Technology Internship	3

