East Central College

Articulated through Southeast Missouri State University

Engineering Technology

Associate of Arts Degree

East Central College
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East Central College is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools
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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 2020, reports the U.S. Bureau of Labor Statistics. Here are the median annual salaries for the main career types in this field as of 2012:

Aerospace Engineering and Operations Technicians	$62,260
Electrical and Electronic Engineering Technicians	$57,240
Mechanical Engineering Technicians	$52,810
Industrial Engineering Technicians	$51,850
Electromechanical Technicians	$48,480
Civil Engineering Technicians	$48,910
Environmental Engineering Technicians	$43,390

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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.

Year 1

Fall Semester

Course		Hours
FS 1000 FS 1001	Campus Orientation/ Foundation Seminar	1
EN 1223 EN 1233	English Comp I or 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 EN 1343	English Comp II or 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 PS 1303	U.S. Government I: Nation & State or State & Local Government	3
	Total Hours	17

Year 2

Fall Semester

Course		Hours
SC 1000	Laboratory Safety for Students	0
CH 1105	Introduction to Chemistry Lecture/Lab	5
PH 1703	College Physics I Lecture	3
PH 1712	College Physics I Lab	2
CT 1003 CT 1103	Oral Communications or Public Speaking	3
	Psychology/Ethics Elective	3
	Total Hours	16

Spring Semester

Course		Hours
PH 1803	College Physics II Lecture	3
PH 1812	College Physics II Lab	2
BI 1203 ES 1023	Introduction to Life Science or Introduction to Environmental Science	3
	Civilization/History Elective	3
	Literature Elective	3
	Geography/Sociology/Anthropology Elective	3
	Total Hours	17

*Additional Technical Electives

Fall Semesters

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

Spring Semesters

MECHANICAL:

MA 1013	Print Reading & Design	3

ELECTRICAL:

IE 1172	Process & Control Systems Lecture	2
IE 1171	Process & Control Systems Lab	1

ELECTRICAL AND MECHANICAL:

IE 1333	Industrial Robotics	3

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