East Central College

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THE CAREER

Generally, careers in mathematics are chosen by people who are analytical by nature and approach problems thinking critically. Many employers value these traits and the skills developed and demonstrated by mathematics majors.

A career in this field can take many forms from banking, finance, actuarial work and insurance to programming, software/systems engineering, teaching and government. Mathematics graduates also have a good record of being admitted to professional law, business and medical schools.

PROFESSIONAL TRAITS

Those pursuing a career in this field should:
- Be able to analyze, compare and interpret facts and figures quickly
- Have solid problem-solving and critical-thinking skills
- Be good at working with people, business systems and computers
- Have strong written, verbal and interpersonal communication skills

EMPLOYMENT INFORMATION

The number of mathematics jobs nationwide is increasing by at least an average rate compared to all other occupations, per the U.S. Bureau of Labor Statistics. For example, by 2022, statistician jobs are expected to increase by 27 percent and actuary positions by 26 percent.

As of May 2012, the median annual salary for four main mathematics careers (requiring at least a bachelor's degree) were:

Operation Research Analyst	$72,100
Statistician	$75,560
Actuary	$93,680
Mathematician	$101,360

THE PROGRAM

ECC students who earn their Associate of Arts Degree in Mathematics are prepared to enter an undergraduate major leading to further training and careers in this field. Through this AA degree program, students develop the foundational skills in mathematics, flexibility in thinking and intellectual sophistication necessary for career advancement.

Students have several course options and electives available. Assuming appropriate placement scores, mathematics is a two-year degree, with flexibility to customize the program toward the student's chosen career path.

This academic plan consists of the 42-credit hour general education core required of all transfer degrees plus the necessary electives in traditional mathematics, the calculus sequence, statistics, differential equations and more. In addition, the college provides various student activities, organizations and practicum experiences related to the discipline.

GENERAL EDUCATION REQUIREMENTS

East Central College requires each transfer student complete a 42 hour general education block. General education at ECC is organized around the institution's common learning objectives and coursework. A student is required to demonstrate skills in each of the following three areas:

- **Communicating:** Improve written and oral communication skills; adapt and apply communication to academic and professional purposes, audiences and contexts; demonstrate the use of technology to analyze and communicate information; and use active listening and reading skills.
- **Creative/Critical Thinking:** Improve the application of relevant knowledge and theory to new ideas, positions or solutions; assess and analyze concepts and data; formulate meaningful questions; and interpret and evaluate evidence and arguments.
- **Ethics and Social Responsibility:** Develop cross cultural awareness and an understanding of global interconnectedness; apply multiple worldviews, analyze ethical choices and consequences; and understand the core values and accountability of citizenship in a democratic society.

ADMISSIONS REQUIREMENTS

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

This curriculum is intended for students planning to transfer to a four-year institution. Many of the credits, particularly the general education electives earned with this degree, are accepted as transfer credits by four-year colleges and universities. These decisions are made solely by the bachelor degree-granting institution.

Students seeking to transfer should communicate often with their faculty advisors and the East Central College transfer advisor. They should also make early contact with the four-year institution of their choice regarding the transferability of ECC credits and coursework.

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636-584-6588

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February 23, 2016

PROGRAM OF STUDY

AA program 62-69 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. For the most current schedule visit 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 1605	Analytic Geometry & Calculus I	5
SC 1000	Laboratory Safety for Students	0
BI 1305/ BI 1325	General Biology Lecture/Lab or Principles of Biology Lecture/Lab	5
	Ethics and Valuing Requirement	3-4
Total Hours		**17-18**

SPRING SEMESTER

Course		Hours
EN 1333/ EN 1343	English Comp II or Honors English Comp II	3
HI 1000/ PS 1000	Constitutions Study Module	0
HI 1103/ HI 1203/ HI 1303	U.S. History to 1865, U.S. History 1865 to 1945 or U.S. History 1945 to Present	3
MT 2105	Analytic Geometry & Calculus II	5
	Physical Science Requirement with Lab	5
Total Hours		**16**

SUMMER SEMESTER

Course		Hours
	Global and Cross Cultural Requirement	3-4
Total Hours		**3-4**

YEAR 2

FALL SEMESTER

Course		Hours
MT 2205	Analytic Geometry & Calculus III	5
COM 1003/ COM 1103	Oral Communications or Public Speaking	3
	Ethics and Social Responsibility Elective	3-4
	Program Elective	3-5
Total Hours		**14-17**

SPRING SEMESTER

Course		Hours
MT 2303	Differential Equations	3
MT 2103/ MT 2213 MT 2223/	Statistics, Linear Algebra or Engineering Statistics	3
	Ethics and Social Responsibility Elective	3-4
	Communication Elective	3-4
Total Hours		**12-14**

RECOMMENDED ELECTIVES

Course		Hours
Students will work with ECC advisor and the baccalaureate institution of their choice to enroll in electives that will best transfer.		
CH 1305	General Chemistry I Lecture/Lab	5
CH 1405	General Chemistry II Lecture/Lab	5
EG 2003	Engineering Mech - Statistics	3
EG 2203/ EG 2211	C++ Program Engineers Lecture/Lab	4
EG 2303	Introduction to Circuit Theory	3
MT 2103	Statistics	3
MT 2213	Linear Algebra	3
MT 2223	Engineering Statistics	3
PH 2103/ PH 2112	General Physics I Lecture/Lab	5
PH 2203/ PH 2212	General Physics II Lecture/Lab	5