

East Central College

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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

The career of a physical scientist is geared toward those students who are fascinated by the way natural systems impact their daily lives and want to have a greater understanding of these systems. Physical science is the study of multiple scientific areas including geology, meteorology, chemistry, materials science and astronomy.

ECC students who complete their associate degree in physical science are prepared to enter an undergraduate major leading to training in these areas. Although a bachelor's or master's degree is necessary to be a physical scientist, the ECC program provides students with strong foundational skills to pursue these advanced degrees and their chosen career.

EMPLOYMENT OPPORTUNITIES

The study of science in school appears to be dropping in the U.S. Consequently, there is currently a large demand for qualified candidates to fill physical science positions ranging from technicians to research scientists.

In 2011, median wage and salary earnings* were:

Chemistry:	\$74,780
Physics:	\$112,090
Astronomy:	\$101,630
Hydrology:	\$79,070
Atmospheric/Space Sciences:	\$90,860
All Other Physical Sciences:	\$96,290

* Data provided by the U.S. Bureau of Labor Statistics

PROFESSIONAL TRAITS

Those pursuing a career in this field should:

- Have an aptitude for math and science
- Be able to analyze, compare and interpret facts and figures quickly
- Clearly communicate the results of their work to clients and managers both verbally and in writing
- Be good at working with people, business systems and computers

TRANSFER OPTIONS

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, not ECC.

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 East Central College's credits and coursework.

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.

THE PROGRAM

This curriculum is intended for students planning to transfer to a four-year institution. Students at East Central College who express an interest in physical science have several course options and electives available. Assuming appropriate placement scores, physical science is a two-year degree, with flexibility to customize the program of study toward the student's chosen career.

The program consists of the 42-credit hour general education core required of all transfer degrees plus the necessary electives in chemistry, physics, environmental science and more. In addition, the college provides various student activities and organizations related to the discipline--such as the Green Falcons--and practicum experiences.

It is helpful if students pursuing the physical science degree make early contact with a transfer institution in planning their program of study. They may wish to choose electives based on that institution's criteria.

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)

PHYSICAL SCIENCE

ASSOCIATE OF ARTS

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. 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
CH 1305 General Chemistry I Lecture/Lab	5
Total Hours	14

SPRING SEMESTER

COURSE	HOURS
PH 2013 General Physics I Lecture	3
PH 2112 General Physics I Lab	2
MT 2105 Analytic Geometry & Calculus II	5
PH 2000 Physics Recitation	0
EN 1333/ EN 1343 English Comp II or Honors English Comp II	3
PR 2103 Ethics	3
Total Hours	16

SUMMER SEMESTER

COURSE	HOURS
CT 1103 Public Speaking	3
Total Hours	3

YEAR 2

FALL SEMESTER

COURSE	HOURS
BI 1203 Intro to Life Science or Environmental Science	3
*Program Elective	5
Any course within Ethics and Valuing	3
Any course within Global and Cross Cultural	3
Total Hours	14

SPRING SEMESTER

COURSE	HOURS
HI 1000/ PS 1000 Constitutional Study Module	0
History or Political Science Requirement	3
EN 1403 Technical Writing	3
*Program Elective	5
Any course in Ethics or Social Responsibility	3
TOTAL HOURS	14

*PROGRAM ELECTIVES

COURSE	HOURS
CH 1405 General Chemistry II	5
MT 2205 Analytic Geometry & Calculus III	5
PH 2203/ PH 2212 General Physics II Lecture/Lab	5